Dublin San Ramon Services District
Water, wastewater, recycled water

Board of Directors

AGENDA

NOTICE OF REGULAR MEETING
TIME: 6 p.m.
PLACE: Teleconference

DATE: Tuesday, June 1, 2021

Pursuant to Governor Newsom's Executive Orders N-25-20, N-29-20, and N-33-20, and local county health orders issued to address the COVID-19 pandemic, the Board meeting will be held via Teams Teleconference. The District Boardroom will be closed to the public.
The public may observe and comment by electronic means as described on Page 3.

See Page 3 of the Agenda Packet for Teams Teleconference Access Information

Our mission is to protect public health and the environment by providing reliable and sustainable water, recycled water, and wastewater services in a safe, efficient, and fiscally responsible manner.

1. CALL TO ORDER

2. PLEDGE TO THE FLAG

3. ROLL CALL – Members: Goel, Halket, Johnson, Rubio, Vonheeder-Leopold

4. SPECIAL ANNOUNCEMENTS/ACTIVITIES

5. PUBLIC COMMENT (MEETING OPEN TO THE PUBLIC)
At this time those on the teleconference call are encouraged to address the Board on any item of interest that is within the subject matter jurisdiction of the Board and not already included on tonight's agenda. Comments should not exceed five minutes. The President of the Board will recognize each speaker, at which time the speaker should introduce him/herself, and then proceed with his/her comment. Written comments of five minutes or less and received by 5 p.m. on the day of the meeting will be read into the meeting record.

6. AGENDA MANAGEMENT (CONSIDER ORDER OF ITEMS)

7. CONSENT CALENDAR
Matters listed under this item are considered routine and will be enacted by one Motion, in the form listed below. There will be no separate discussion of these items unless requested by a Member of the Board or the public prior to the time the Board votes on the Motion to adopt.

7.A. Approve Regular Meeting Minutes of May 18, 2021
Recommended Action: Approve by Motion

8. BOARD BUSINESS

8.A. Approve Continuation of District's State of Emergency in Response to COVID-19 Pandemic by General Manager and Find that the Need for the District's State of Emergency Still Exists
Recommended Action: Approve by Motion

8.B. Adopt Initial Study/Mitigated Negative Declaration for the Tassajara Hills Pipeline Project in the City of Dublin
Recommended Action: Adopt by Resolution

8.C. Public Hearing: Receive Presentation and Public Comments on Draft 2020 Urban Water Management Plan (UWMP), Draft Water Shortage Contingency Plan (WSCP), and Draft Addendum to the 2015 UWMP, and Provide Direction
Recommended Action: Hold Public Hearing and Provide Direction

8.D. Public Hearing: Adopt Operating Budget for Fiscal Years Ending 2022 and 2023
Recommended Action: Hold Public Hearing and Adopt by Resolution

8.E. Public Hearing: Approve Capital Improvement Program (CIP) Ten-Year Plan for Fiscal Years 2022 through 2031 and Adopt CIP Two-Year Budget for Fiscal Years 2022 and 2023
Recommended Action: Hold Public Hearing and Adopt by Resolution

8.F. Receive Presentation on Residential Recycled Water Fill Station and Provide Direction
Recommended Action: Receive Presentation and Provide Direction

9. REPORTS

9.A. Boardmember Items
- Joint Powers Authority and Committee Reports
  LAVWMA – May 19, 2021
- Submittal of Written Reports for Day of Service Events Attended by Directors
- Request New Agenda Item(s) Be Placed on a Future Board or Committee Agenda

9.B. Staff Reports
- Event Calendar
- Correspondence to and from the Board

10. ADJOURNMENT

All materials made available or distributed in open session at Board or Board Committee meetings are public information and are available for inspection during business hours by calling the District Secretary at (925) 828-0515. A fee may be charged for copies. District facilities and meetings comply with the Americans with Disabilities Act. If special accommodations are needed, please contact the District Secretary as soon as possible, but at least two days prior to the meeting.

Teams Teleconference Access Information

Dublin San Ramon Services District
Regular Board Meeting
Tuesday, June 1, 2021

If the public wishes to provide comments during Agenda Item 5 – Public Comment, or on any of the agendized items, please join the meeting using the teleconference instructions below, or email written comments to the Board of Directors at board@dsrsd.com by 5 p.m., Tuesday, June 1, 2021. Written comments, of five minutes or less, will be read into the meeting record during the public comment portion of the agenda or during discussion of the subject of the comment.

To Join by Computer or Device:

1. Click **Join Meeting**.
2. Select how you want to join the Teams meeting.
3. Click "**Join now**." You can personalize your video and audio preferences before or after joining.
4. Public participants would wait for the meeting host to admit you.
5. You must unmute yourself when you wish to speak by clicking the microphone icon, which is also used to mute yourself when you finish speaking.

To Join by Phone Only:

1. Dial **(831) 256-7773** USA Toll from any telephone.
2. Enter Conference ID **340 380 497#** when prompted. DO NOT PRESS *.
3. Wait for the meeting host to admit you. If you are unsuccessful in joining, hang up and dial in again.
4. You must unmute yourself when you wish to speak by pressing *6, which is also used to mute yourself when you finish speaking.

Video Teleconference Meeting Instructions and Information:

- Stay muted unless speaking.
- Listen for prompts to know when public comments are solicited.
- You must unmute yourself when you wish to speak during Public Comment or during discussion of a particular agenda item. The meeting host can mute but cannot unmute participants.
- Announce yourself and speak slowly and clearly when commenting.
- Call (925) 875-2224 if you experience any technical difficulties.

Boardmembers and staff will be attending the meeting via teleconference. The Board will convene any Closed Sessions on a separate teleconference line and return to the open teleconference meeting for the next agenda item when the Closed Session is completed. The open teleconference meeting will be muted during this time and will resume for the Closed Session report and meeting adjournment.

The Boardroom is closed to the public.

All votes during the meeting will be taken by roll call vote.

DUBLIN SAN RAMON SERVICES DISTRICT
MINUTES OF A REGULAR MEETING OF THE BOARD OF DIRECTORS

May 18, 2021

Pursuant to Governor Newsom's Executive Orders N-25-20, N-29-20, and N-33-20, and local county health orders issued to address the COVID-19 pandemic, this Board meeting was held via Teams teleconference. The District Boardroom is closed to the public; however, the public may observe and comment by calling in to the teleconference meeting per the instructions provided on page 3 of the agenda. As required by the Brown Act, all votes were taken by roll call vote due to the attending Directors participating via teleconference.

1. CALL TO ORDER

   A regular meeting of the Board of Directors was called to order at 6 p.m. by President Johnson.

2. PLEDGE TO THE FLAG

3. ROLL CALL

   Boardmembers present at start of meeting:
   President Ann Marie Johnson, Vice President Richard M. Halket, Director Marisol Rubio, Director Arun Goel, and Director Georgean M. Vonheeder-Leopold.

   District staff present: Dan McIntyre, General Manager; Jan Lee, Assistant General Manager; Carol Atwood, Administrative Services Director/Treasurer; Judy Zavadil, Engineering Services Director/District Engineer; Jeff Carson, Operations Director; Douglas E. Coty, General Counsel; and Nicole Genzale, Executive Services Supervisor/District Secretary.

4. SPECIAL ANNOUNCEMENTS/ACTIVITIES – None

5. PUBLIC COMMENT (MEETING OPEN TO THE PUBLIC) – 6:01 p.m.

   Speaker: Mr. Levi Fuller (DSRSD Operations Superintendent) – Mr. Fuller addressed the Board and stated he will be retiring from the District next month. He expressed he had a wonderful career at DSRSD spanning over 21 years and thanked the Board, DSRSD staff, and the community for the opportunity to serve at such a smart and innovative agency.

6. AGENDA MANAGEMENT (CONSIDER ORDER OF ITEMS) – No changes were made.

7. CONSENT CALENDAR

   Director Rubio MOVED for approval of the items on the Consent Calendar. Director Vonheeder-Leopold SECONDED the MOTION, which CARRIED with FIVE AYES per roll call vote.

   7.A. Approve Regular Meeting Minutes of May 4, 2021 – Approved

   7.B. Accept Regular and Recurring Reports: Quarterly Financial Reports and Utility Billing - Receivables by Cycles – Approved

7.C. Approve and Authorize Execution of Purchase Agreement with and Grant of Easement to City of Pleasanton for Johnson Drive and Stoneridge Drive Roadway Improvements – Approved – Resolution No. 29-21

7.D. Approve and Authorize Execution of First Amendment to Telecommunications Site Lease Agreement with New Cingular Wireless PCS, LLC – Approved – Resolution No. 30-21

7.E. Approve and Authorize Execution of Amendment No. 1 to the Agreement with the Livermore-Amador Valley Water Management Agency (LAVWMA) for Maintenance of LAVWMA Facilities – Approved – Resolution No. 31-21

7.F. Approve and Authorize Execution of an Agreement with the East Bay Dischargers Authority Regarding the Discharge of Brine from the Zone 7 Water Agency – Approved – Resolution No. 32-21

8. BOARD BUSINESS

8.A. Approve Continuation of District's State of Emergency in Response to COVID-19 Pandemic by General Manager and Find that the Need for the District's State of Emergency Still Exists

Director Rubio MOVED to Approve Continuation of District's State of Emergency in Response to COVID-19 Pandemic by General Manager and Find that the Need for the District's State of Emergency Still Exists. Director Vonheeder-Leopold SECONDED the MOTION, which CARRIED with FIVE AYES per roll call vote.

8.B. Approve the Levy of Delinquent Water and Sewer Charges on the Alameda County and Contra Costa County Property Tax Rolls and Set a Public Hearing for June 15, 2021

Administrative Services Director Atwood reviewed the item for the Board.

The Board and staff discussed the status of delinquent charges and some impact from the COVID emergency, current collection methods and payment options (i.e., payment plans and low-income program), and responsibility for outstanding charges should a property change hands. General Counsel Coty explained that because the District is subject to Proposition 218, using customer-based revenues to subsidize other customers' outstanding charges is not permissible, and so cannot be offered as a relief option to customers in arrears. Ms. Atwood recommended the District send delinquent charges to the property tax rolls this year and each year going forward to streamline collection efforts and ensure the District receives the delinquent amounts.

Director Goel MOVED to Approve Resolution No. 33-21, to Levy the Outstanding (over 90 Days) Delinquent Utility Billing Water and Sewer Receivables on the Alameda County and Contra Costa County Property Tax Rolls, and Hold a Public Hearing on June 15, 2021. Director Halket SECONDED the MOTION, which CARRIED with FIVE AYES per roll call vote.

8.C. Receive Presentation on the Operating Budget for Fiscal Years Ending 2022 and 2023 and Provide Direction

Administrative Services Director Atwood, Financial Services Manager Herman Chen, and Financial Analyst Mayette Bailey reviewed the item for the Board and provided a presentation that described the budget process, policy and operational issues, revenue and expense assumptions, operating fund health, department overviews, and 10-year planning models. The presentation will be added as supplemental materials to the agenda on the District website.

The Board and staff discussed various aspects of the proposed operating budget including internships, election re-districting timeline and costs, Information Technology (IT) security, prior year budget adjustments due to workers' compensation claims coming in after year-end, and the rapid rise in credit card fees paid by the District due to popularity of this bill pay option. During the discussion, the Board provided the following direction to staff:

- Prioritize funding for IT security and add a performance measure
- Consider planning for storing emergency assets in the District's service area on the west side of Interstate 680
- Consider adding identifying labels to District asset and location pictures
- Present a final budget to Mike Misheloff since the budget is dedicated to the memory of late DSRSD Director Maddi Misheloff
- Consider the addition of trend graphics in future documents
- Clarify the basis for the fluctuation of election costs in the Legislative budget

The Board complimented staff on an excellent presentation and beautifully completed draft budget that provides great analysis, planning, and guidance to the Board. Staff stated they had the necessary direction from the Board to finalize the budget for the Board's approval at the June 1 Board meeting.

The Board took a short recess at 7:30 p.m. and reconvened at 7:36 p.m. for Item 8.D.

8.D. Receive Presentation on the Capital Improvement Program (CIP) Ten-Year Plan for Fiscal Years 2022 through 2031 and Two-Year CIP Budget for Fiscal Years 2022 and 2023 and Provide Direction

Engineering Services Director Zavadil, Principal Engineer Steve Delight, and Management Analyst II Corinne Ferreyra reviewed the item for the Board and provided a presentation that explained the three capital funds (Local, Regional, and Water), how they are funded, expenditures by fund, replacement and expansion forecasting, 30-year fund modeling, and 10-year working capital trends. Staff highlighted some of the capital projects currently in progress. They also explained that project costs are allocated in accordance with the District's Project Cost Allocation policy. The presentation will be added as supplemental materials to the agenda on the District website.

The Board and staff discussed various aspects of the proposed capital budget projects, including the District Office Backup Generator Replacement and the Gleason Drive Property Planning Study. Staff noted the Gleason Drive property, which was purchased in 2007, was intended to consolidate several District facilities. Currently, there is no plan

to develop or sell the property, but retain it as an investment. General Counsel Coty confirmed that the land would be subject to the California Surplus Lands Act at such time the District may wish to sell it.

Director Goel requested, for the record, that staff explain how projects are prioritized. Ms. Zavadil explained prioritization is based first on outside forces such as regulatory requirements, then time-based projects done in conjunction with other agencies, then those that manage operational risk, and then what makes sense to more efficiently run operations.

The Board did not direct staff to make any changes to the draft capital budget. Staff will finalize the budget for the Board's approval at the June 1 Board meeting.

9. REPORTS

9.A. Boardmember Items

- Joint Powers Authority and Committee Reports
  DERWA – May 17, 2021

  President Johnson invited comments on recent JPA activities. Directors felt the available staff reports adequately covered the many matters considered at the JPA meetings and made a few comments about some of the JPA activities.

- Submittal of Written Reports for Day of Service Events Attended by Directors

  Director Vonheeder-Leopold submitted written reports to Executive Services Supervisor/District Secretary Genzale. She reported that she attended the Alameda County Special Districts Association chapter meeting on May 12 and the California Association of Sanitation Agencies Board of Directors meeting on May 13. She summarized the activities and discussions at the meetings.

  President Johnson congratulated Director Vonheeder-Leopold on her re-election to the Alameda LAFCO Special District Alternate Member seat on May 12.

- Request New Agenda Item(s) Be Placed on a Future Board or Committee Agenda – None

9.B. Staff Reports

- Event Calendar – General Manager McIntyre reported on the following:
  - A LAVWMA Board meeting will be held tomorrow (May 19) at 6 p.m.
- Correspondence to and from the Board on an Item not on the Agenda – None

10. ADJOURNMENT

President Johnson adjourned the meeting at 8:35 p.m.

Submitted by,

Nicole Genzale, CMC
Executive Services Supervisor/District Secretary

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: June 1, 2021

TITLE: Approve Continuation of District's State of Emergency in Response to COVID-19 Pandemic by General Manager and Find that the Need for the District's State of Emergency Still Exists

RECOMMENDATION:

Staff recommends the Board of Directors approve, by Motion, a continuation of the State of Emergency response to the COVID-19 pandemic, as declared by the General Manager and confirmed and ratified by Resolution No. 26-20, and find that there exists a need for continuing the District's COVID-19 emergency which the Board last confirmed on May 18, 2021.

DISCUSSION:

On March 16, 2020, the first Bay Area Shelter-in-Place (SIP) orders were issued to meet the challenges of the COVID-19 pandemic. Governor Newsom issued a statewide SIP order on March 19, 2020. The SIP orders, which continue to be modified in response to changing conditions, limit the operations of certain businesses and activities to protect public health and slow the spread of the virus. The SIP orders provide an exception for the operations and maintenance of "Essential Infrastructure," which includes, but is not limited to, water, wastewater, and recycled water service.

On March 16, 2020, the General Manager, as the District's Emergency Manager per the Emergency Response Plan policy (P300-16-2), declared a District State of Emergency to allow for essential operations to continue, and to ensure operational flexibility in meeting the challenges of COVID-19, while providing vital water and sewer services that are needed to protect public health and the environment. District emergency plans were aggressively implemented. On March 25, 2020, the Board of Directors approved Resolution No. 26-20, which confirmed the continuation of the District State of Emergency, and directed the General Manager to report on progress at least at every regularly scheduled meeting until the State of Emergency is terminated.

Since the first SIP order was issued on March 16, 2020, the State of California, Alameda County Health Officer, and California Division of Occupational Safety and Health (Cal/OSHA) have implemented and modified a number of COVID-19 restrictions that affect DSRSD's safety practices and operations. As of May 25, 2021, both Alameda County and Contra Costa County remain in the Orange Tier (Tier 3 – moderate risk) under the State's four-tier system for reopening the economy. Hospitalization rates and COVID-19 cases in our community remain relatively low and stable and vaccinations rates continue to increase.

In response to improved pandemic conditions and vaccination rates, Governor Newsom has announced plans to end the tier system and fully reopen the economy on June 15, 2021. With the ending of the tier system, offices would be allowed to reopen with no capacity limits. Workplaces, such as DSRSD facilities, would still be subject to any remaining state and local requirements, including Cal/OSHA emergency temporary standards (ETS) for COVID-19. Cal/OSHA is currently reviewing the COVID-19 ETS and is likely to make broad changes that could significantly alter the District's COVID-19 safety practices and protocols. These changes could take effect as early as June 15, 2021.

The COVID-19 Task Force has prepared a Safe Return to Onsite Work Plan to return the District's remote workers to onsite work in a phased manner, gradually transition back to "normal" operations, and wind down the District State of Emergency. The plan is flexible and can be adjusted based on changing pandemic conditions and COVID-19 regulations for the workplace. Staff plans to brief the Board on the details of the Safe Return to Onsite Work Plan on June 15.

The COVID-19 emergency continues in the District's service area. To assure proper staffing and support of critical operational functions, staff is requesting the Board find that there still exists a need to continue the State of Emergency reflected by Resolution No. 26-20.

Originating Department: Office of the General Manager	**Contact: J. Lee**	**Legal Review: Not Required**
Financial Review: Not Required	**Cost and Funding Source: N/A**	
Attachments: ☒ None ☐ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☐ Other (see list on right)		

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: June 1, 2021

TITLE: Adopt Initial Study/Mitigated Negative Declaration for the Tassajara Hills Pipeline Project in the City of Dublin

RECOMMENDATION:

Staff recommends the Board of Directors adopt, by Resolution, the Initial Study/Mitigated Negative Declaration for the Tassajara Hills Pipeline Project in the City of Dublin.

DISCUSSION:

The Tassajara Hills Development ("Development") currently under construction by Toll Brothers ("Developer") is a new neighborhood of 370 single-family homes that receives potable water from existing water mains at the intersection of Tassajara Road and Palisades Drive. The neighborhood is built in hilly terrain within two different water pressure zones. There are two potable water lines to the development, one provides water to 46 homes in Pressure Zone 20 and the other provides water to 324 homes in Pressure Zone 30. If either water line were disrupted by maintenance activities, public emergencies, or catastrophic events, the respective residential units would then be without water. Thus, the District has required the Developer to construct the Tassajara Hills Pipeline Project ("Project") to provide an additional water line to the Development to maintain adequate water supply during system disruptions. The additional water line will be approximately 1,100 feet long and will connect the existing Water Pressure Zone 30 pipeline at the north end of Cydonia Court to the Pressure Zone 30 pipeline on Delamar Drive within the Development.

When faced with a discretionary project which is not exempt from the California Environmental Quality Act (CEQA), a Lead Agency, in this case the District, must prepare an initial study to determine whether the project may have a significant adverse effect on the environment. If the potential effect can be reduced to a level that is less than significant through project revisions, a Mitigated Negative Declaration (MND) can be adopted.

In conformance with the CEQA, an Initial Study and MND was prepared for the Project. The MND states that there will be no significant environmental effects resulting from the Project. A Notice of Intent to adopt the MND was published on the District's website on March 31, 2021 and in the newspaper on April 1, 2021 for a 30-day review period expiring on April 30, 2021. No oral or written comments on the MND were received.

Upon adopting the MND, the District must make both of the following findings: (1) Revisions in the project avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) There is no substantial evidence considering the whole record before the District that the project, as revised, may have a significant effect on the environment. (Public Resources Code § 21064.5 and § 21080(c)).

Upon adoption of the MND, staff will file a Notice of Determination with Alameda County, in accordance with CEQA, and the Developer can commence with construction.

Originating Department: Engineering Services	**Contact: J. Yee**	**Legal Review: Not Required**
Financial Review: Not Required	**Cost and Funding Source: N/A**	
Attachments: ☐ None ☒ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☐ Other (see list on right)		

RESOLUTION NO. _____

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT ADOPTING INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR THE TASSAJARA HILLS PIPELINE PROJECT IN THE CITY OF DUBLIN, APPROVING THE PROJECT, AND AUTHORIZING AND DIRECTING THE FILING OF A NOTICE OF DETERMINATION

WHEREAS, the Tassajara Hills Pipeline Project ("Project") will construct approximately 1,100 linear feet of water main that will connect the existing water pipeline at the north end of Cydonia Court to the water pipeline on Delamar Drive; and

WHEREAS, pursuant to the California Environmental Quality Act (California Public Resources Code, 21000 et seq.; "CEQA"), the "CEQA Guidelines" (14 California Code of Regulations 15000, et seq.) and Dublin San Ramon Services District's (DSRSD) Local CEQA Guidelines, DSRSD has prepared an Initial Study/Mitigated Negative Declaration dated May 2021 for the Project ("Initial Study/Mitigated Negative Declaration"), to which reference is hereby made for the full particulars thereof; and

WHEREAS, with the implementation of specific mitigation measures outlined in Initial Study/Mitigated Negative Declaration, there will be no significant environmental effects resulting from the Project; and

WHEREAS, a Notice of Intent to adopt the Initial Study/Mitigated Negative Declaration was published on the District's website on March 31, 2021 and in the newspaper on April 1, 2021; and

WHEREAS, the 30-day public comment period expired on April 30, 2021; and

WHEREAS, no oral or written comments were received for the draft Initial Study/Mitigated Negative Declaration.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the Counties of Alameda and Contra Costa, California, as follows:

1. The Board hereby finds that with incorporation and implementation of the mitigation measures specified in the Initial Study/Mitigated Negative Declaration, no significant effects on the environment will result from the Project.

2. The Board hereby adopts the Final Tassajara Hills Pipeline Project Initial Study/Mitigated Negative Declaration (Exhibit "A") dated May 2021.

3. The Board hereby finds and declares that it has exercised its independent judgment and analysis and has considered said Initial Study/Mitigated Negative Declaration and all impacts and Mitigation Measures specified therein, all oral and written comments pertaining thereto received during

the review period, and hereby approves the Project conditioned upon the full performance of the Mitigation Measures.

4. The General Manager is hereby authorized and directed to sign and file a Notice of Determination with the County Clerk consistent with the foregoing findings and approvals pursuant to the CEQA Guidelines and the DSRSD Local CEQA Guidelines.

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 1st day of June, 2021, and passed by the following vote:

AYES:

NOES:

ABSENT:

_____
Ann Marie Johnson, President

ATTEST: _____
Nicole Genzale, District Secretary

FINAL

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

TASSAJARA HILLS PIPELINE PROJECT

DUBLIN, CALIFORNIA



LSA

May 2021

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FINAL

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

TASSAJARA HILLS PIPELINE PROJECT

DUBLIN, CALIFORNIA

Submitted to:

Dublin San Ramon Services District
7051 Dublin Boulevard
Dublin, California 94568

Prepared by:

LSA
157 Park Place
Pt. Richmond, California 94801
510.236.6810

Project No. TBR2101

LSA

May 2021

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MITIGATED NEGATIVE DECLARATION

Project Name. Tassajara Hills Pipeline Project

Project Location. The Tassajara Hills Pipeline Project would extend from an unpaved extension of Cydonia Court to an existing pipeline within Delamar Drive in Dublin, Alameda County, California. The proposed pipeline alignment would be located on two parcels (Assessor Parcel Number [APN] 985-0028-003-02 and 985-127-002-00).

Project Description. The Dublin San Ramon Services District (DSRSD) proposes to install approximately 1,110 linear feet of 8-inch-diameter high-density polyethylene (HDPE) pipeline to connect an existing 10-inch-diameter pipeline within an unpaved extension of Cydonia Court with an existing 8-inch-diameter pipeline within Delamar Drive in the Tassajara Hills Development in the City of Dublin. Approximately 800 feet of the proposed pipeline would be installed using horizontal directional drilling, whereby a tunnel is drilled under the ground surface and the pipeline is then pulled through the underground tunnel. The remaining 300 linear feet of pipeline would be installed using standard open trench construction within existing graded areas associated with adjacent residential development. The proposed pipeline would provide a redundant potable water supply to the Tassajara Hills Development.

Findings. It is hereby determined that, based on the information contained in the attached Initial Study, the project would not have a significant adverse effect on the environment.

Mitigation measures necessary to avoid the potentially significant effects on the environment are included in the Initial Study, which is hereby incorporated and fully made part of this Mitigated Negative Declaration. DSRSD has hereby agreed to implement each of the identified mitigation measures, which would be adopted as part of the Mitigation Monitoring and Reporting Program, provided in Appendix B to this Initial Study.

Jaclyn Yee Digitally signed by Jaclyn Yee
Date: 2021.05.14 10:40:50 -07'00'

Jackie Yee, Senior Engineer
Dublin San Ramon Services District

May 14, 2021
Date

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LIST OF ABBREVIATIONS AND ACRONYMS

AB 52	Assembly Bill 52
ABAG	Association of Bay Area Governments
ACTC	Alameda County Transportation Commission
BAAQMD	Bay Area Air Quality Management District
bgs	below ground surface
BMP	Best Management Practices
CalFIRE	California Department of Forestry and Fire Protection
CAP	Clean Air Plan
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Mines and Geology
CEC	California Energy Commission
CESA	California Endangered Species Act
CGS	California Geological Survey
CH_4	methane
CMA	Congestion Management Agency
CMP	Congestion Management Program
CNDDB	California Natural Diversity Data Base
CNEL	community noise equivalent level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalents
CRPR	California Rare Plant Rank
db	decibel

dBA	A-weighted sound level
DbD	Diablo clay, 15 to 30 percent slopes
DdFcc	Diablo clay, 30 to 50 percent slopes
DSRSD	Dublin San Ramon Services District
EFZs	Earthquake Fault Zones
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration's
GHGs	greenhouse gases
GWP	Global Warming Potential
HDPE	high-density polyethylene
HFCs	hydrofluorocarbons
I-580	Interstate 580
I-680	Interstate 680
L_{dn}	day-night average level
L_{eq}	equivalent continuous sound level
L_{max}	maximum noise levels
LUST	Leaking Underground Tank Cleanup Site
MLD	Most Likely Descendant
MMI	Modified Mercalli Intensity
N_2O	nitrous oxide

NAHC	Native American Heritage Commission
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NPDES	National Pollutant Elimination System
NWIC	Northwest Information Center
O&M	operation and maintenance
Pb	lead
PFCs	perfluorocarbons
PG&E	Pacific Gas and Electric Company
$PM_{2.5}$, PM_{10}	particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
RMS	root-mean-square
ROG	reactive organic gases
SF_6	sulfur hexafluoride
SLF	Sacred Lands File
SO_2	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants
USFWS	United States Fish and Wildlife Service

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1.0 PROJECT INFORMATION

1. **Project Title:**

   Tassajara Hills Pipeline Project

2. **Lead Agency Name and Address:**

   Dublin San Ramon Services District
   7051 Dublin Boulevard
   Dublin, CA 94568

3. **Contact Person and Phone Number:**

   Jackie Yee, Senior Engineer
   (925) 875-2258

4. **Project Location:**

   The Tassajara Hills Pipeline Project would extend from an unpaved extension of Cydonia Court to an existing pipeline within Delamar Drive in Dublin, Alameda County, California. The proposed pipeline alignment would be located on two parcels (Assessor Parcel Number [APN] 985-0028-003-02 and 985-127-002-00). Figures 1-1 and 1-2 show the regional location and aerial view of the project site, respectively.

5. **Project Sponsor's Name and Address:**

   Dublin San Ramon Services District
   7051 Dublin Boulevard
   Dublin, CA 94568

6. **General Plan Designation:**

   APN 985-0028-003-02: Open Space

   APN 985-127-002-00: Single Family Residential (0.9-6.0 dwelling units/acre)

7. **Zoning:**

   APN 985-0028-003-02: Planned Development, Ordinance 18-09

   APN 985-127-002-00: Planned Development, Ordinance 1-13

8. **Description of Project:**

   The Dublin San Ramon Services District (DSRSD) proposes to install approximately 1,110 linear feet of 8-inch-diameter high-density polyethylene (HDPE) pipeline to connect an existing 10-inch-diameter pipeline within an unpaved extension of Cydonia Court with an existing 8-inch-diameter pipeline within Delamar Drive in the Tassajara Hills Development in the City of Dublin. The proposed pipeline would provide a redundant potable water supply to the Tassajara Hills Development.

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FIGURE 1-1

N

0 500 1000
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SOURCE: ESRI World Street Maps (02/2020).

I:\DBR2101\GIS\Maps\Figure 1_Regional Location.mxd (2/26/2021)

Tassajara Hills Pipeline Project
Dublin, Alameda County, California

Regional Location



LSA

LEGEND

- Project Site
- Water Main Alignment
- Bore Pit or Receiving Pit
- Geotechnical Bore Hole

0 100 200
FEET

FIGURE 1-2

Tassajara Hills Pipeline Project
Dublin, Alameda County, California

Proposed Project

SOURCE: MacKay & Somps (2/2021); Google (2020).

I:\DBR2101\GIS\Maps\Figure 2_Project Vicinity (on aerial).mxd (3/4/2021)

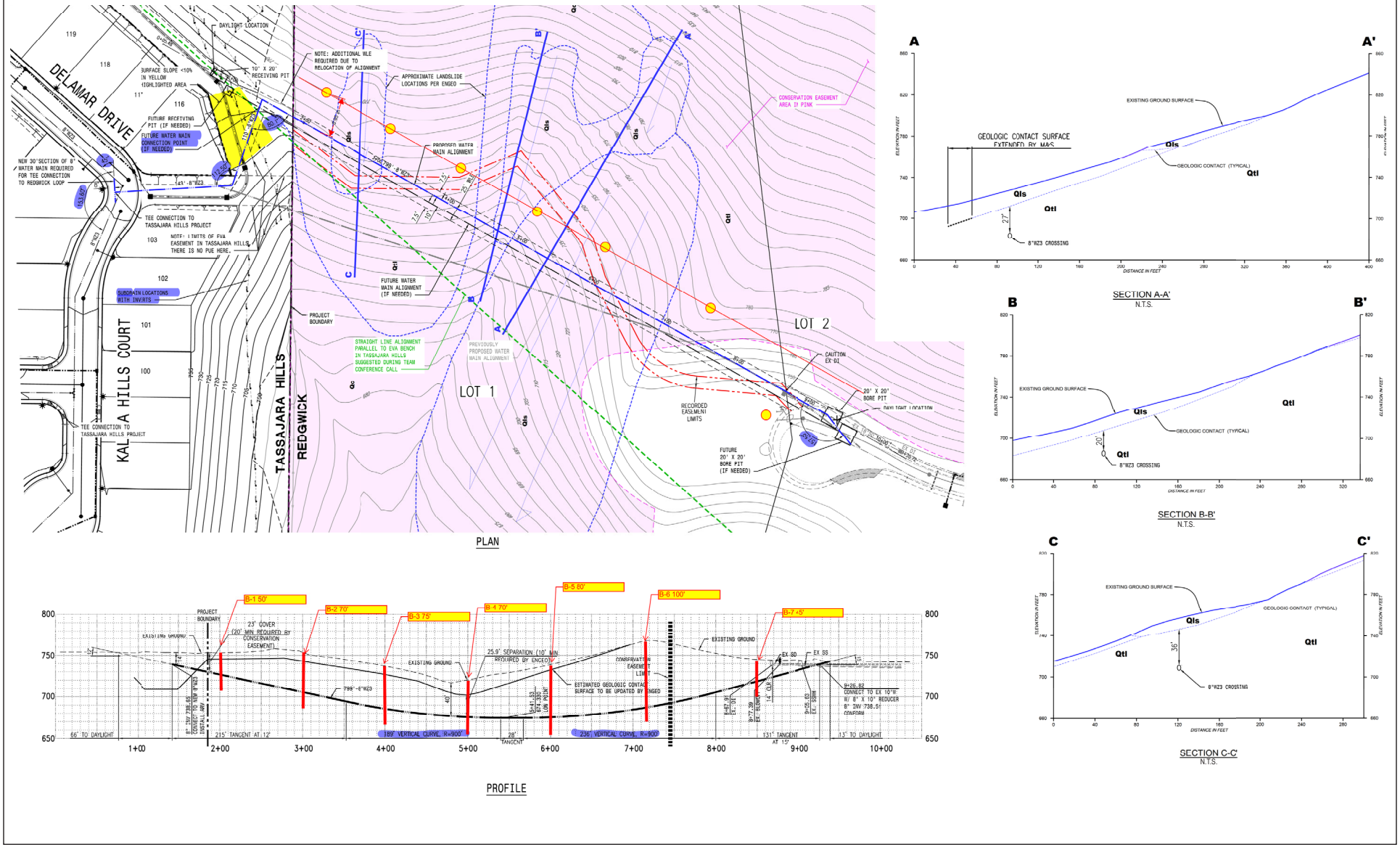
Project Background. The Tassajara Hills Development is a new neighborhood of 370 single-family, detached residential units and a private clubhouse that is currently served by two 12-inch potable water mains connected to existing 16-inch and 20-inch water mains at the intersection of Tassajara Road and Palisades Drive. The neighborhood is located in hilly terrain that is served by two different water pressure zones. One 12-inch water main connects to the 16-inch water main on Tassajara Road and runs within Palisades Drive from Tassajara Road to Oak Ridge Court; this main provides potable water to 46 homes in Water Pressure Zone 2. The second 12-inch water main connects to the 20-inch water main on Tassajara Road and runs within Palisades Drive from Tassajara Road to Delamar Drive; this main provides potable water to 324 homes in Water Pressure Zone 3. If either of these two 12-inch potable water mains were to go out of service for repair, then the respective residential units would be without water. The addition of the proposed water main from Cydonia Court to the Tassajara Hills Development would improve the reliability of the water system, by providing redundancy to supply water in the event of an emergency.

Project Components. The proposed project would construct approximately 800 linear feet by horizontal directional drilling and 300 linear feet by standard trench construction methods for a total of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The majority of the proposed pipeline would be installed using horizontal directional drilling, whereby a tunnel is drilled under the ground surface and the pipeline is then pulled through the underground tunnel. This portion of the pipeline would be installed beneath APN 985-0028-003-02 (open space) at depths from 5 to 85 feet below ground surface (bgs). The 300 linear feet to be installed using standard open trench construction would be located within existing graded areas associated with adjacent residential development. The approximate horizontal alignment of the pipeline is shown on Figure 1-3.

Access pits, approximately 20 feet wide by 20 feet long at the southern access point (APN 985-0028-003-02) and 10 feet wide by 20 feet long at the northern access point (APN 985-127-002-00), would be excavated at each end of the pipeline alignment. The southern access pit would be located within an unpaved extension of Cydonia Court and the northern access pit would be located within an unpaved emergency access road at the southern edge of the Tassajara Hills Development. The pipeline would be connected from the southern access pit to the existing potable water pipeline in Cydonia Court and from the northern access pit to the pipeline in Delamar Drive using standard trench construction methods. Proposed trenches would be approximately 2 feet wide and excavated to a depth of approximately 5 feet. Following construction, approximately 60 square feet of pavement, as well as sidewalk, curb and gutter would be replaced on Delamar Drive.

Proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations, which would include test borings. The borings would be limited to ten borings, not to exceed 8 inches in diameter, extending from 35 to 90 feet below the ground surface. Borings would be performed using either a wheel-mounted or a track-mounted drill rig. If a track-mounted drill rig is used the drill rig would not exceed 8 feet in width, measured from the outside edge of each track with each track no more than 2 feet wide and 15 feet long. The borings would require the drill rig to travel

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FIGURE 3

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SOURCE: MacKay & Somps, November 2020

P:\DBR2101 Tassajara Hills_Redgwick Pipeline\PRODUCTS\Graphics\Figure_1-3.ai (3/19/2021)

Tassajara Hills Pipeline Project
Dublin, Alameda County, California
Proposed Pipeline

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no more than 2,000 linear feet within a 200-foot-wide corridor along the proposed pipeline alignment. Upon completion, each boring would be backfilled and the soil cuttings spread on the ground in the vicinity of the boring locations.

Construction. Project construction is anticipated to start in August 2021 and last approximately 2 months. Construction activities would typically occur from 8:00 a.m. to 5:00 p.m., Monday through Friday. Proposed laydown areas for drilling would be located adjacent to the access pits at either end of the pipeline alignment. Construction staging would be confined to existing disturbed areas. Staging areas are proposed on the existing fire access road within the Tassajara Hills Development and along the northerly end of Cydonia Court. Access to the project site would likely be via Tassajara Road and Fallon Road. Once construction activities are complete, staging areas would be returned to existing conditions.

The contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. All of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required. During pipeline installation, water would be used to create the drilling fluid, a mixture of water and additives that facilitate both the soil borings and directional drilling. Water would be provided via a water truck during construction activities.

9. Surrounding Land Uses and Setting:

The proposed pipeline would be installed within an undeveloped hillside area, located between the existing residential development to the south and the Tassajara Hills Development to the north. The majority of the undisturbed grassland supports a species composition dominated by introduced annual grasses. As described above, the southern access pit would be located within an unpaved extension of Cydonia Court and the northern access pit would be located within an unpaved emergency access road at the southern edge of the Tassajara Hills Development. Both of these areas have been previously graded as part of the adjacent residential development. The majority of the pipeline alignment would be located within a proposed conservation easement. The project site is located within the East Dublin Specific Plan Area.

Lands to the south and east of the proposed pipeline alignment consist primarily of undeveloped lands located within a conservation easement (Northern Drainage Conservation Area) established as part of the larger Dublin Ranch development. This easement was established to provide protected habitat for California red-legged frog (*Rana draytonii*)) and California tiger salamander (*Ambystoma californiense*). California red-legged frog are federally listed as threatened and California tiger salamander are federally- and State-listed as threatened. The site is not located within federally designated critical habitat for either species. The Dublin Ranch development is located further to the south. Dublin Ranch is a master planned community with single-family and multi-family residential uses, schools, a golf course, and parks.

Lands to the north include single-family residential development associated with the Tassajara Hills Development. Further to the north, the land consists predominantly of open space,

consisting of hilly, grass-covered grazing land with a small amount of rural residential development along Tassajara Road.

Lands immediately to the west consist of undeveloped open space. Single-family residential development is located further to the west, across Tassajara Road.

10. Other Public Agencies Whose Approval is Required (e.g., permits, financial approval, or participation agreements):

- California Department of Fish and Wildlife
- United States Department of Fish and Wildlife

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resource Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On March 16, 2021, the DSRSD provided formal notification to those California Native American tribes that are traditionally and culturally affiliated with the geographic area within which the proposed project is located pursuant to the consultation requirements of AB 52. Letters were sent to all tribal representatives identified by the Native American Heritage Commission. To date, three tribes have requested consultation pursuant to Public Resources Code section 21080.3.1, as summarized below:

- Ms. Kanyon Sayer-Roods, Most Likely Descendent Contact of the Indian Canyon Mutsun Band of Costanoan Tribe, responded via email on March 17, 2021, recommending that a Native American Monitor and an Archaeologist be present on-site at all times. On March 17, 2021, DSRSD responded via email to Ms. Sayer-Roods requesting a date and time to discuss the findings of the cultural study. On March 19, 2021, the DSRSD followed up with a voicemail message. No response from Ms. Kanyon Sayer-Roods to the DSRSD's email or voicemail has been received to date.

- Ms. Katherine Perez, Chairperson of the North Valley Yokuts Tribe, responded via email on March 17, 2021, requesting consultation and additional information related to the project design. On March 17, 2021, DSRSD responded via email to Ms. Perez requesting a date and time to discuss the findings of the cultural study. On March 19, 2021, the DSRSD followed up with a phone call, but was unable to leave a voicemail message. No response from Ms. Katherine Perez to DSRSD's email has been received to date.

- Ms. Corrina Gould, Tribal Chair of the Confederated Villages of Lisjan Tribe, responded via email on April 14, 2021, requesting consultation and additional information related to the project design. On April 14, 2021, DSRSD responded via email to Ms. Gould and provided the cultural study prepared for the proposed project. No response from Ms. Corrina Gould to DSRSD's email has been received to date.

2.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist in Chapter 3.0.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use/Planning	☐ Mineral Resources
☐ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

2.1 DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jaclyn Gee
Signature

Date

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3.0 CEQA ENVIRONMENTAL CHECKLIST

3.1 AESTHETICS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a. Would the project have a substantial effect on a scenic vista? ***(No Impact)***

A scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Aesthetic components of a scenic vista generally include: (1) scenic quality; (2) sensitivity level; and (3) view access. The proposed project is located in an area that is primarily characterized by urban development. Development in the project vicinity includes local roads and residential housing. The project area is visible from local roadways, including Delamar Drive, Palisades Drive, and Copper Peak Drive.

The Eastern Dublin Specific Plan identifies ridgelines and ridgelands, which are considered to be visually sensitive to future development. "Visually sensitive ridgelines" are defined as those ridgelines which form the horizon (i.e., skyline) when viewed from one or more existing scenic corridors. "Visually sensitive ridgelands" include those areas in which two-story development (i.e., 30-foot building height) would obstruct or extend above the ridgeline as seen from existing scenic corridors. As shown on Figure 6.3 in the Eastern Dublin Specific Plan,[1] portions of the project area are designated as visually sensitive ridgelands on which development can occur with certain restrictions, including: 1) that development will not obscure or appear to extend above the major ridgeline, 2) that development is not silhouetted against the horizon when viewed from designated scenic routes; and 3) that grading for such development does not visually scar sensitive ridgelands.

Interstate 580 (I-580) and Interstate 680 (I-680) are designated Alameda County scenic routes. In addition, San Ramon Road, Dougherty Road, and Tassajara Road are City-designated scenic routes. According to the City's General Plan, it is the City's intention that Fallon Road would also be

[1] Dublin, City of. 1994. Eastern Dublin Specific Plan. January 7. Updated April 21, 2020.

designated as a scenic route once it is extended north to connect with Tassajara Road. Consistent with the City of Dublin General Plan and the Eastern Dublin Specific Plan, design review would be required for all projects visible from a designated scenic route in order to enhance a positive image of Dublin as seen by through travelers.

While the proposed pipeline would be installed within the foothill area that is designated as a scenic resource, the proposed pipeline project would not alter views to or from the project site. Upon completion, the proposed project would be underground and out of view. As the proposed project would not result in new above-ground pipe or other facility construction that would be visible from publicly accessible roadways or adjacent uses, the project would not block, impair or substantially affect views on a permanent basis.

During construction of the project, activities such as trucks hauling materials and machinery would be temporarily visible to some viewers along local roadways and from adjacent residential uses. Construction equipment and materials would be staged at each end of the pipeline alignment near the bore/receiving pits. The construction period would be temporary; therefore, the presence of construction equipment would result in minor short-term changes in the views from public vantage points. As such, implementation of the proposed project would not result in a substantial adverse effect on a scenic vista and no impact would occur.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? ***(No Impact)***

Caltrans Landscape Architecture Program administers the Scenic Highway Program, contained in Streets and Highways Code Sections 260–263. In Alameda County, State Route 84 (Niles Canyon Road) from Mission Boulevard to I-680 near Sunol, and I-680 from Mission Boulevard in Fremont to the Contra Costa County line are officially designated State Scenic Highways. I-580 from Route 5 to I-80 is designated as an eligible State Scenic Highway.[2] Neither of these State Scenic Highways are located in proximity to the project site and views from these highways would not be affected by project activities.

As described above, San Ramon Road, Dougherty Road, and Tassajara Road are designated scenic routes. The project site is not located along any of these County- or City-designated scenic routes. However, the project site is located near Tassjara Road and Fallon Road. No historic buildings or rock outcroppings are located on the project site or in the surrounding vicinity. Furthermore, implementation of the proposed project would not result in the removal of or damage to scenic resources. As discussed above in Section 3.1.a, the proposed project would result in the installation of an underground pipeline and would not result in any visible improvements at the project site. Therefore, implementation of the proposed project would not damage scenic resources within a State or locally designated scenic roadway and no impact would occur.

[2] California Department of Transportation. 2021. California State Scenic Highways. Website: dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed February 23, 2021)

c. In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? ***(No Impact)***

The existing visual character in the vicinity of the project site consists of undeveloped open space areas of annual grassland and residential development. As described in Section 3.1.a, these undeveloped hillsides/ridgelines visually dominate the character of the project area and define the visual character and quality of the project site. The project site location is visible from surrounding public roadways, including Delamar Drive, Palisades Drive, and Copper Peak Drive.

The proposed project would install a new underground pipeline from an unpaved extension of Cydonia Court to Delamar Drive in the Tassajara Hills Development. Upon completion, the proposed project would be underground and out of view.

Construction activities associated with the pipeline installation would be visible from public roadways and adjacent residential development. However, all temporary construction-related visual impacts such as construction equipment, staging areas, stockpile locations, and construction fencing would be removed following completion of construction. Therefore, implementation of the proposed project would have no impact associated with degrading the existing visual character or quality of the project site and its surroundings.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? ***(No Impact)***

No permanent sources of lighting would be installed as part of the project. Temporary construction-related sources of light (if any) would be removed upon construction completion. The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area and no impact would occur.

3.2 AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

*a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? **(No Impact)***

The project site is classified as "Grazing Land" on maps prepared by the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP).[3] Grazing Land includes land on which the existing vegetation is suited to the grazing of livestock. No Farmland is mapped on or near the project site. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and no impact would occur.

[3] California Department of Conservation. 2016. California Farmland Conservancy. California Important Farmland Finder. Website: maps.conservation.ca.gov/dlrp/ciff/ (accessed February 23, 2021).

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? ***(No Impact)***

The project site is zoned Planned Development. The project site is not zoned for agricultural use and is not under a Williamson Act contract. Therefore, implementation of the project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. No impact would occur.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))? ***(No Impact)***

The project is not located on forest land or timberland, and would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not result in any impacts to forestland.

d. Would the project result in the loss of forest land or conversion of forestland to non-forest use? ***(No Impact)***

The project is not located on forest land or timberland, and would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not result in any impacts to forestland.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ***(No Impact)***

Refer to Sections 3.2.1.a and 3.2.1.c. The proposed project would result in the installation of an underground water pipeline. The proposed project would not involve any other changes to the existing environment, which due to their location or nature, could result in conversion of Farmland to a non-agricultural use, or conversion of forest land to a non-forest use. Therefore, the proposed project would have no impact.

3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☒	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☒	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

a. Would the project conflict with or obstruct implementation of the applicable air quality plan? ***(Less-Than-Significant Impact)***

The proposed project is located in the City of Dublin, and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Dublin, and the rest of the air basin, exceedances of air quality standards occur primarily during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10}, $PM_{2.5}$), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal $PM_{2.5}$ 24-hour standard.

The applicable air quality plan is the BAAQMD 2017 Clean Air Plan (CAP),[4] which was adopted on April 19, 2017. In addition, the Regional Climate Protection Strategy is included in the 2017 Clean Air Plan, which identifies potential rules, control measures, and strategies that the BAAQMD can pursue to reduce greenhouse gases throughout the Bay Area. The 2017 Clean Air Plan/Regional Climate Protection Strategy serves as a roadmap for the BAAQMD to reduce air pollution and protect public

[4] Bay Area Air Quality Management District. 2017. *Clean Air Plan*. April 19.

health and the global climate. The 2017 Clean Air Plan also includes measures and programs to reduce emissions of fine particulates and toxic air contaminants.

Consistency with the 2017 Clean Air Plan is determined by whether or not the proposed project would result in significant and unavoidable air quality impacts or hinder implementation of control measures (e.g., excessive parking or preclude extension of transit lane or bicycle path). The proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The proposed project, as indicated in the analysis that follows, would not result in significant operational or construction-period emissions. The proposed project would not conflict with any of the control measures identified in the plan or measures designed to bring the region into attainment. Additionally, the proposed project would not increase the population, vehicle trips, or vehicle miles traveled. The proposed project would not hinder the region from attaining the goals outlined in the Clean Air Plan. Therefore, the proposed project would not inhibit or disrupt implementation of any control measures from the applicable Clean Air Plan and impacts would be less than significant.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? ***(Less Than Significant with Mitigation Incorporated)***

The BAAQMD is currently designated as a nonattainment area for State and national ozone standards and national particulate matter ambient air quality standards. The BAAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

According to BAAQMD's CEQA Guidelines, to meet air quality standards for operational-related criteria air pollutant and air precursor impacts, the project must not:

- Generate average daily construction emissions of reactive organic gases (ROG), NO_x, or $PM_{2.5}$ greater than 54 pounds per day or PM_{10} exhaust emissions greater than 82 pounds per day;
- Contribute to CO concentrations exceeding the State ambient air quality standards; or
- Generate operation emissions of ROG, NO_x, or $PM_{2.5}$ of greater than 10 tons per year or 54 pounds per day or PM_{10} emissions greater than 15 tons per year or 82 pounds per day.

The following analysis assesses the potential project-level construction- and operation-related air quality impacts and CO impacts.

Construction Emissions. During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., fugitive dust) generated by drilling, trenching, and other activities. Emissions from construction equipment are also anticipated and would include CO, nitrogen oxides (NO_x), ROG, directly emitted particulate matter ($PM_{2.5}$ and PM_{10}), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM_{10}). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts.

In addition to dust-related PM_{10} emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO_2, NO_x, ROGs and some soot particulate ($PM_{2.5}$ and PM_{10}) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model, Version 9.0.0 (RoadMod) as recommended by the BAAQMD for linear projects. As described in Section 1.0, Project Information, project construction is anticipated to start in August 2021 and last approximately 2 months. The contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. All of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required.

RoadMod results are estimated in terms of maximum daily emissions and total emissions. For consistency with BAAQMD Guidelines, total emissions were averaged over the 2-month construction period to determine average daily emissions for comparison to the average daily emissions threshold. Construction-related emissions for the project are shown in Table 3.3-A. Detailed calculations are provided in Appendix A.

Table 3.3-A: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust PM_{10}	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$	Fugitive Dust $PM_{2.5}$
Average Daily Emissions	1.0	8.7	0.3	13.7	0.3	3.0
BAAQMD Average Daily Emission Thresholds	54.0	54.0	82.0	BMP	54.0	BMP
Exceed Threshold?	**No**	**No**	**No**	**NA**	**No**	**NA**

Notes: BMP = Best Management Practices
Source: LSA (March 2021).

As shown in Table 3.3-A, construction emissions associated with the project would be less than significant for ROG, NO_x, and $PM_{2.5}$ and PM_{10} exhaust emissions. The BAAQMD also requires the implementation of BAAQMD Basic Construction Mitigation Measures (Best Management Practices), as outlined in Mitigation Measure AIR-1 below, to reduce construction fugitive dust impacts to a less-than-significant level.

Mitigation Measure AIR-1: In order to meet the BAAQMD fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered once a day.
- All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and

determined to be running in proper condition prior to operation.

- A publicly visible sign shall be posted with the telephone number and person to contact at Dublin San Ramon Services District (DSRSD) or DSRSD's representative regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.

Construction emissions associated with the project would be less than significant with implementation of Mitigation Measure AIR-1. Therefore, construction of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or State ambient air quality standards.

Operational Emissions. Long-term air emission impacts are associated with stationary sources and mobile sources. Stationary source emissions result from the consumption of natural gas and electricity. Mobile source emissions result from vehicle trips and result in air pollutant emissions affecting the entire air basin. As discussed above, the proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. Once operational, the project would not result in a significant increase in the generation of vehicle trips or vehicle miles traveled that would increase air pollutant emissions. The project would not be a source of stationary source emissions. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of PM_{10} or any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard and impacts would be less than significant.

Localized CO Impacts. The BAAQMD has established a screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in significant CO emissions. According to the BAAQMD CEQA Guidelines, a proposed project would result in a less-than significant impact related to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, and the regional transportation plan and local congestion management agency plans.

- Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.

- The project would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, or below-grade roadway).

Implementation of the project would not conflict with the Alameda County Transportation Commission (ACTC) Congestion Management Program (CMP) for designated roads or highways, a regional transportation plan, or other agency plans. The project site is not located in an area where vertical or horizontal mixing of air is substantially limited. In addition, the proposed project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour and would not result in localized CO concentrations that exceed State or federal standards. Therefore, this impact would be less than significant.

c. Would the project expose sensitive receptors to substantial pollutant concentrations? ***(Less Than Significant with Mitigation Incorporated)***

Sensitive receptors are defined as residential uses, schools, daycare centers, nursing homes, and medical centers. Individuals particularly vulnerable to diesel particulate matter are children, whose lung tissue is still developing, and the elderly, who may have serious health problems that can be aggravated by exposure to diesel particulate matter. Exposure from diesel exhaust associated with construction activity contributes to both cancer and chronic non-cancer health risks.

The closest sensitive receptors include residential uses located adjacent to the southern access pit (cul-de-sac of Cydonia Court) and the northern access pit at the southern edge of the Tassajara Hills Development. Construction of the proposed project may expose these surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement BAAQMD Basic Construction Mitigation Measures, as required by Mitigation Measure AIR-1 above. With implementation of Mitigation Measure AIR-1, project construction emissions would be below BAAQMD significance thresholds. Additionally, due to the linear nature of the project, construction activities at any one receptor location would occur for a limited duration. Once the project is constructed, the project would not be a source of substantial emissions. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during project construction or operation, and potential impacts would be considered less than significant.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? ***(Less-Than-Significant Impact)***

During construction, the various diesel-powered vehicles and equipment in use on the site would create localized odors. These odors would be temporary and are not likely to be noticeable for extended periods of time beyond the project site. The potential for diesel odor impacts is therefore considered to be less than significant. In addition, once the project is operational, it would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people, and potential impacts would be considered less than significant.

3.4 BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The project site is located along a moderately steep west-facing hillside, which supports a vegetative cover of non-native grassland. The most commonly distributed species are introduced annual grasses including wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*) and soft chess (*Bromus hordeaceus*). Introduced broadleaf herbaceous species are also present in the non-native grassland. The most common species in this group include mustard (*Brassica spp*.), yellow starthistle (*Centaurea solstitialis*), cutleaf geranium (*Geranium dissectum*) and milk thistle (*Silybum marianum*). Large patches of mustard are present where ground squirrel burrows are concentrated. A few native herbaceous plants are also present including soap plant (*Chlorogalum pomeridianum*) and lupine (*Lupinus sp*.)

Plant cover at the locations of the proposed boring and receiving pit locations is more ruderal, reflecting the disturbed nature of these areas, which have been graded in the past and the native soil removed. Many of the same species found in the adjacent non-native grassland are also present at these locations and visually they appear to be extensions of the non-native grassland. No woody plant species are found within the project footprint.

The project area grassland provides habitat for a variety of grassland associated wildlife species. Small rodents and birds provide a prey base for larger predators. Prey species found in this area include sierra tree frog (*Pseudacris sierra*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), Botta pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*) and California ground squirrel (*Otospermophilus beecheyi*). Ground squirrel burrows are scattered along the project alignment with a few locations with numerous burrows. Ground squirrel burrows provide retreat habitat for a number of small vertebrates including California tiger salamander (CTS), which breed in a seasonal stockpond located approximately 0.20 mile west of the project site.

Larger predatory species observed, or sign of their presence detected in the project area include white-tailed kite (*Elanus leucurus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*) and coyote (*Canis latrans*). It is also likely golden eagle (*Aquila chrysaetos)* forage in the area. An active golden eagle nest is located approximately 0.37 mile south of the Cydonia Court end of the site and ground squirrels are a primary prey species for golden eagles.

Other wildlife species present include rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), desert cottontail (*Sylvilagus audubonii*) and black-tailed deer (*Odocoileus hemionus*).

There are no wetland or other sensitive habitat on the project site.

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(Less Than Significant with Mitigation Incorporated)***

For the purpose of this report, special-status species are defined as follows:

- Species that are listed, formally proposed for listing, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act (ESA);
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act (CESA);
- Plant species on California Rare Plant Rank (CRPR) Lists 1A, 1B, and 2 in the CNPS Inventory of Rare and Endangered Plants;
- Animal species designated as Species of Special Concern or Fully Protected by the California Department of Fish and Wildlife (CDFW);
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines; and
- Species considered being a taxon of special concern by the relevant local agencies.

The project area contains potential habitat for three special status species: California red-legged frog (CRLF), San Joaquin kit fox (*Vulpes macrotis mutica*), and CTS. A fourth species, Alameda striped racer (whipsnake) (*Coluber lateralis euryxanthusi*) was also evaluated; however, no potential habitat is present for this species.

California Red-legged Frog. CRLF is federally listed as threatened and is a California Species of Special Concern. The project site is located within the southwestern corner of the Mount Diablo CRLF Critical Habitat Unit (CCS-2B).[5] CRLF occur in and along freshwater marshes, streams, ponds, and other semi-permanent water bodies. Adult CRLF are primarily aquatic and for successful breeding require ponded water from March to July/August. Adjacent uplands are also important for providing aestivation and dispersal habitat.

CRLF are known to be present in the Tassajara Hills project open space to the north,[6] and Tassajara Creek and Dougherty Valley Open Space lands to the west, northwest of the project site. They are also present in the conservation easement (Northern Drainage Conservation Area [NDCA]) established as part of the larger Dublin Ranch development to the south and grazing lands to the east, northeast of the project site east of Tassajara Road.

There are 45 California Natural Diversity Data Base (CNDDB) occurrences within 5 miles of the project site.[7] The nearest CNDDB record is a 2018 record from the NDCA 0.34 mile from the project site (CNDDB Occurrence #251).

The proposed project is not likely to adversely affect the CRLF due to the absence of impact on suitable aquatic habitat and the distance to suitable aquatic habitat. There is no breeding habitat on or immediately adjacent to the site. However, the proposed project could result in indirect effects to CRLF and increased construction traffic on roads in the vicinity of the project site could lead to direct mortality. Implementation of Mitigation Measure BIO-1, described below for California Tiger Salamander (CTS), would also reduce potential impacts to CRLF to a less-than-significant level.

San Joaquin Kit Fox. The San Joaquin kit fox (SJKF) is federally listed as endangered and State listed as threatened. Critical habitat has not been designated for this species. SJKF in its northern range are most commonly found in open valley and foothill areas with a grassland plant cover. They are dependent on dens for breeding, rest and cover which in the northern range are most commonly provided by enlarged ground squirrel burrows.

There are two SJKF CNDDB occurrences within 5 miles of the project site. The nearest occurrence was a 1975 sighting from Camp Parks, 2.9 miles from the project site (CNDDB Occurrence #1031).

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5 United States Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants: Revised designation of Critical Habitat for the California Red-legged Frog; Final Rule. Federal Register 75 (51): 12816-12959.

6 Pacific Gas and Electric Company (PG&E). 2010. Tri-Valley Capacity Increase Project, Wetland Mitigation Monitoring, Year 5. Report No. 001.3.10.1.

7 California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Data Base. California Natural Diversity Data Base (CNDDB), Commercial Version, Updated February 2, 2021. California Department of Fish and Game, Biogeographic Data Branch, Sacramento, California

This record from Morrell[8] has since been determined upon examination of photos of the animals to be gray fox.[9] The remaining occurrence within 5 miles was a 1989 sighting 4.48 miles from the project site (CNDDB occurrence #544). There is currently no known occupied SJKF habitat in Alameda, Contra Costa, and San Joaquin counties.[10] Given the lack of recent records in the project vicinity, the project is not likely impact SJKF. This impact would be less than significant.

California Tiger Salamander. CTS is a federally and State listed threatened species. The project site is not located within federally designated Critical Habitat.

CTS occur in grassland, oak savanna, sparse deciduous oak woodland, and occasionally, chaparral. The adults and juveniles remain below ground in the burrows of California ground squirrels, pocket gophers and other available underground retreats during the dry period of the year. They breed during the wet season in vernal pools, stock ponds, other temporary bodies of water, and occasionally intermittent creeks.

CTS occupy grassland habitat containing suitable breeding ponds to the north, east, and west of the project site alignment. CTS breed in a stock pond approximately 0.20 mile to the west. West of Tassajara Road and Tassajara Creek they are present on Camp Parks and the Doughtery Valley Open Space lands. CTS are present throughout the area east of the project site, which is almost all contiguous grassland habitat. There are 46 CTS CNDDB records within 5 miles of the project site.[11] Given that the project site is located within potential dispersal distance of a known breeding site and contains suitable upland habitat, the project may impact CTS.

Directional drilling associated with pipeline installation would have minor impacts on special-status species. Surface disturbance would be limited to the access pits (600 square feet), open cut trench (approximately 1,500 square feet) within the existing graded area, and in the immediate vicinity where equipment would be staged and drill cuttings would be stockpiled for removal/re-use. Both of these locations have previously been graded and support a ruderal herbaceous plant cover. As outlined in Section 1.0, Project Information, the proposed pipeline would be located 5 to 85 feet bgs, with the majority of the pipeline located a minimum of 20 feet bgs. The drilled pipeline route would be located in bedrock with the exception of the previously graded area in the unpaved extension of Cydonia Court. The 20-foot depth is deeper than ground squirrels are known to burrow[12] and ground squirrel burrowing in bedrock is unlikely. Therefore, drilling and installation of the water main would not impact CTS.

Proposed geotechnical investigations, which would include exploratory borings, could impact CTS and other small vertebrates, which may be present during boring activities. The drill rig would need

8 Morrell, S. 1975. San Joaquin Kit Fox Distribution and Abundance in 1975. California Department of Fish and Game, Wildlife Management Branch Administrative Report No. 75-3.

9 Green, M. 1983. Letter to John Gustafson, California Department of Fish and Game.

10 United States Fish and Wildlife Service (USFWS).2020. Species Status Assessment, Report for the San Joaquin kit fox (*Vulpes macrotis mutica*). Sacramento Fish and Wildlife Office. 74pp.

11 CDFW. 2021, op. cit.

12 Linsdale, J.M. 1946. The California Ground Squirrel. University of California Press. Berkeley and Los Angeles, California.

to access each test bore site by driving over the ground surface. Ground squirrel burrows are present along the entire length of the project site alignment, including proposed boring locations and access routes. Burrow mouths could be collapsed by the rig, trapping CTS and other small vertebrates, if present. The potential take of CTS would be a significant impact. Implementation of the following mitigation measure would reduce potential impacts to CTS to a less-than-significant level.

Mitigation Measure BIO-1 The following conservation measures shall be implemented prior to and during pipeline installation to avoid impacts to CTS and CRLF:

- Prior to initial ground disturbance, the DSRSD shall submit the name(s) and credentials of biologists who will conduct activities specified in the following measures. No ground disturbance activities shall begin until proponents have received written approval from the CDFW and/or USFWS that the biologist(s) is/are qualified to conduct the work.

- A qualified biologist shall train all project staff regarding habitat sensitivity, identification of listed species, and required practices before the start of construction. The training shall include the measures described in this mitigation measure to conserve this species as they relate to the project, the penalties for non-compliance, and the boundaries of the project site. A fact sheet or other supporting materials containing this information shall be prepared and distributed.

- A qualified biologist shall monitor all ground disturbing construction activities. After initial ground disturbing activities are complete, the qualified biologist shall train an individual to act as the on-site construction monitor. The on-site monitor shall have attended the training described above. Both the qualified biologist and the construction monitor shall have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The biologist and construction monitor shall complete daily logs summarizing activities and environmental compliance.

- A preconstruction survey for CRLF and CTS shall be conducted in and adjacent to the bore and receiving pits by a qualified biologist. The survey shall be conducted within 24 hours prior to the start of construction. During the pre-construction survey, the entire construction area shall be inspected. If any CRLF or CTS are found, CDFS and/or USFWS shall be contacted and the qualified biologist shall be allowed sufficient time to move any individuals from the work site before work activities begin. Only

qualified biologists shall participate in activities associated with the capture, handling, and monitoring of CRLF or CTS. All relocations shall be reported to CDFW and/or USFWS. Any biologist involved with the surveying/handling shall employ sterilization techniques appropriate to avoid the transmission of diseases to and from the site. If no CRLF or CTS are found during this survey, survey results shall be provided in writing to the CDFW and/or USFWS.

- The boundaries of the bore and receiving pits shall be delineated prior to the initiation of construction activities, and exclusion fencing shall be installed around their boundary. Exclusion fencing would keep CRLF and CTS from crossing into the construction area during the construction period and would prevent inadvertent disturbance of additional areas by construction activities. Exclusion fencing shall consist of silt fabric at least 3 feet high. The base of the fence shall be buried in the ground a minimum of 6 inches to prevent animals from crawling under. The remainder of the fence shall be above ground to serve as a barrier for animals moving on the ground surface. The fence shall be pulled taut at each support to prevent folds or snags.

- The bore and receiving pits shall be inspected for entrapped wildlife before commencement of drilling activities every morning. Any special-status species discovered shall be removed by a qualified biologist and relocated to an area outside the exclusion fence before construction activities resume. All other species of entrapped wildlife shall be moved by the on-site construction monitor if the qualified biologist is not on-site. Pipes that are stored on the site shall be inspected for trapped animals before the pipe is used in any way. Pipes in or adjacent to trenches left overnight shall be capped.

- Permanent and temporary construction disturbances and other types of project-related disturbance to habitat shall be minimized to the maximum extent practicable and confined to the sites of any exploratory geotechnical investigation and the bore pits. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and specifically designated access areas. These areas should be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous activities to prevent further adverse effects.

- Exploratory drill rig access routes shall be identified prior to drill rig entry into the project area and shall be surveyed for ground squirrel burrows, other small mammal burrows and potential kit fox dens. All burrows detected along these routes shall be marked with pin flags.

- The drill rig shall be accompanied by the project biologist who would walk in front of the rig as it approaches and leaves all test bore sites, directing it to avoid the identified burrows.

- Tightly woven fiber netting or similar material used for erosion control or other purposes at the project site shall not contain plastic monofilament netting to ensure that California tiger salamanders do not become entangled in the mesh. Coconut coir matting is an acceptable erosion control material.

- A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project site are deposited in covered or closed trash containers. Containers shall be removed from the project site at the end of each working day.

- To avoid entrapment of listed species and prevent injury or mortality of listed species resulting from drilling activities, all open excavated areas more than 6 inches deep (the bore and receiving pits) shall be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. The qualified biologist or construction personnel designated by the biologist shall be responsible for thoroughly inspecting the bore and receiving pits for listed species at the beginning of each workday. If any listed species have become trapped, the qualified biologist shall be contacted to relocate the animal, and no work shall occur in that area until approved by the biologist. Relocation of other wildlife species may be done by the on-site construction monitor. CDFW and/or USFWS shall be notified of all species relocations.

- All construction vehicle parking shall be restricted to existing disturbed areas. Necessary vehicles belonging to the biological monitors and construction workers shall be parked at the nearest point of entry on existing access roads and streets.

- A qualified biologist shall ensure that the spread or introduction of invasive exotic plant species would be avoided to the

maximum extent possible. When practicable, invasive exotic plants in the project site shall be removed.

Impacts to CTS and CRLF associated with proposed geotechnical borings and pipeline installation would be less than significant with implementation of Mitigation Measure BIO-1. Therefore, the proposed project would not result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? ***(No Impact)***

As described above, the proposed project site alignment is located along a moderately steep west-facing hillside, which supports a vegetative cover of non-native grassland. Plant cover at the locations of the proposed bore and receiving pits is more ruderal, reflecting the disturbed nature of these locations, which have been graded in the past, and the native soil removed. No riparian habitat or other sensitive natural communities are located within the project site. Therefore, the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community. No impact would occur.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? ***(No Impact)***

The project site is located in the Tassajara Creek watershed and drains to Moller Creek, a tributary to Tassajara Creek. As described in Section 3.3.b, no wetlands or other sensitive habitat (e.g., marsh, vernal pool, etc.) are located on the project site. Therefore, the proposed project would not have a substantial adverse effect on state or federally protected wetlands. No impact would occur.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ***(Less Than Significant with Mitigation Incorporated)***

The proposed project site alignment is located along a moderately steep west-facing hillside, which supports a vegetative cover of non-native grassland. This grassland provides habitat for a variety of grassland associated wildlife species. Implementation of the proposed project would not create any significant new permanent barriers to terrestrial or aquatic wildlife movement, as the proposed pipeline would be located underground. Because the pipeline would be installed via directional drilling, limited surface ground disturbance would be required for pipeline installation. Implementation of Mitigation Measure BIO-1, described above, would ensure that temporary impacts to migrating special-status wildlife species, including CRLF and CTS, as well as other small vertebrates, would be less than significant.

The project would not impact any known wildlife nursery sites, such as heron rookeries or bat roosts. This impact would be less than significant.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? ***(No Impact)***

Heritage trees and approved street trees are protected under the Dublin Municipal Code, specifically Sections 7.56, Street Trees, and 5.60, Heritage Trees. A permit is required from the City for the removal of any heritage tree and the removal/pruning of any approved street tree. In addition, for any property containing one or more heritage trees, a plan to protect heritage trees must be prepared and submitted to the City prior to the issuance of a demolition, grading, or building permit.

As outlined in Section 1.0, Project Information, the proposed pipeline alignment would be largely installed via directional drilling, which would require minimal ground disturbance for excavation of the access pits at each end of the pipeline alignment. Minimal trenching would be required to connect the drilled portion of the pipeline alignment to the existing pipelines with Delamar Drive and Cydonia Court. The proposed project is not expected to require the removal/pruning of any trees, as no trees are located in the areas where ground disturbance would be required. Therefore, the proposed project would not conflict with any local policies or ordinances protecting biological resources. No impact would occur.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? ***(No Impact)***

The project area is not subject to any adopted habitat conservation plan or natural community conservation plan. Therefore, the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or State habitat conservation plan and no impact would occur.

3.5 CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

*a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5? **(Less Than Significant with Mitigation Incorporated)***

For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources), it generally must be 50 years or older. Under CEQA, historical resources can include precontact (i.e., Native American) archaeological deposits, historic-period archaeological deposits, historic buildings, and historic districts. To identify cultural resources at the project site, the following tasks were completed: (1) a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System; (2) a review of historical maps and aerial photographs to assess the potential for buried precontact and historic-period archaeological deposits; and (3) a field survey of the project site by a qualified archaeologist. The DSRSD also undertook consultation outreach with California tribal organizations pursuant to the requirements of AB 52 (refer to Section 3.18, Tribal Cultural Resources).

Records Search. The NWIC records search was conducted on March 3, 2021. The search indicated that there are no recorded cultural resources in the project area or within a 500-foot radius of the project alignment. A total of 19 studies have been conducted in the project area.

Field Survey. A field survey of the project site was conducted on March 3, 2021. The entire project site was surveyed; however, the survey area was covered in thick weeds and grasses, resulting in an average 5 to 10 percent visibility. Approximately six spot checks were conducted by clearing a portion of the alignment to expose and examine the surface soils. Rodent burrows and the adjacent back soil in the project area were also examined. The survey area was located on steep and sloping hill areas, and was covered by matted grasses and weeds. No cultural resources were found in the project area during the survey. The results of this research and survey indicate that intact cultural resources are highly unlikely to exist within the project area.

Native American Heritage Commission. LSA requested a review of the Native American Heritage Commission (NAHC) Sacred Lands File on February 19, 2021, for any Native American cultural resources located within the project area. LSA received a response on March 4, 2021, from Ms. Sarah Fonseca, Associate Governmental Program Analyst, stating that "A record search of the NAHC Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative."**Summary of Results.** The NWIC records search and

field survey did not identify cultural resources in the project area or within 500 feet of the project site. Despite the negative results of the field survey, it cannot be entirely be ruled out that archaeological cultural resources could be encountered during project construction at the project sites. Should archaeological deposits be encountered during project ground disturbance, a substantial adverse change in the significance of a historical resource would occur from its demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5(b)(1)). To mitigate this potential impact, the DSRSD would be required to implement Mitigation Measure CULT-1, below. With implementation of Mitigation Measure CULT-1, potential impacts to historical resources would be reduced to less than significant.

Mitigation Measure CULT-1: Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the DSRSD shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recording the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods, findings, and recommendations shall be prepared by the qualified archaeologist and submitted to the DSRSD for review, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate local curation facility and used for future research and public interpretive displays, as appropriate.

Potential impacts to previously undiscovered historical or archaeological resources would be less than significant with implementation of Mitigation Measure CULT-1. Therefore, ground disturbing activities associated with the proposed project would not cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? ***(Less Than Significant with Mitigation Incorporated)***

According to the CEQA Guidelines, "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (CEQA Guidelines Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as "unique archaeological resources" (California PRC Section 21083.2).

Archaeological deposits identified during project construction shall be treated by the DSRSD—in consultation with a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology—in accordance with Mitigation Measure CULT-1. With implementation of Mitigation Measure CULT-1, identified above, impacts to archaeological resources would be less than significant. Therefore, ground disturbing activities associated with the proposed project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

c. Would the project disturb any humans remains, including those interred outside of formal cemeteries? ***(Less-Than-Significant Impact)***

Based on previous archaeological investigation and analysis, there is a low potential for the disturbance of archaeological cultural resources or human remains at the project site. However, if human remains are encountered at the project site, State Health and Safety Code Section 7050.5 and State CEQA Guidelines Section 15064.5(e)(1) state that no further disturbance shall occur to the area of the find until the County Coroner has made a determination of origin and disposition of the human bone pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately and shall make a determination within two working days of being notified. If the remains are determined to be Native American, the County Coroner shall notify the NAHC by phone within 24 hours, and the NAHC shall then immediately determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment of the remains within 48 hours of being granted access to the site. The MLD's recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

Compliance with Section 7050.5 of the California Health and Safety Code and Public Resources Code Section 5097.98 regarding the treatment of human remains would ensure that potential impacts to human remains would be less than significant.

3.6 ENERGY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

*a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation? **(Less-Than-Significant Impact)***

This analysis evaluates energy consumption for both construction and operation of the proposed project, including diesel fuel use for construction off-road equipment.

Construction. Construction activities associated with the proposed project would require the use of energy to fuel construction equipment and vehicles. All or most of this energy would be derived from non-renewable resources. Construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. Energy usage on the project site during construction would be temporary in nature and would be relatively small in comparison to the State's available energy sources. As such, construction energy usage would be less than significant. In addition, implementation of Mitigation Measure AIR-1 (refer to Section 3.3) would restrict equipment idling times to 5 minutes or less and construction workers would be required to shut off idle equipment, which would increase energy efficiency on the site during project construction. Therefore, impacts would be less than significant.

Operation. Typically, energy consumption is associated with fuel used for vehicle trips and electricity and natural gas use. The proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The project would not generate additional vehicle trips through the project area and, as such, would not increase fuel usage. In addition, implementation of the proposed project would not include lighting or features that could contribute to a significant new source of electricity and natural gas usage. Therefore, implementation of the proposed project would not result in a long-term demand for electricity and natural gas nor would the project require new service connections or construction of new off-site service lines or substations to serve the project. The nature of proposed improvements would not require substantial amounts of energy for either construction or maintenance purposes and, as such the proposed project would not use non-renewable resources in a wasteful or inefficient manner. Therefore, operational energy impacts would be less than significant.

b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? ***(Less-Than-Significant Impact)***

In 2002, the Legislature passed Senate Bill 1389, which required the California Energy Commission (CEC) to develop an integrated energy plan every two years for electricity, natural gas, and transportation fuels, for the California Energy Policy Report. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. The CEC recently adopted the 2019 Integrated Energy Policy Report.[13] The 2019 Integrated Energy Policy Report provides the results of the CEC's assessments of a variety of energy issues facing California. Many of these issues will require action if the State is to meet its climate, energy, air quality, and other environmental goals while maintaining energy reliability and controlling costs.

As indicated above, energy usage in the project area during construction would be relatively small in comparison to the State's available energy sources and energy impacts would be negligible at the regional level. Once operational, the proposed project would not increase energy use. Because California's energy conservation planning actions are conducted at a regional level, and because the project's total impact to regional energy supplies would be minor, the proposed project would not conflict with California's energy conservation plans as described in the 2019 Integrated Energy Policy Report. Thus, as shown above, the project would avoid or reduce the inefficient, wasteful, and unnecessary consumption of energy and not result in any irreversible or irretrievable commitments of energy. Impacts would be less than significant.

[13] California Energy Commission. 2020. *2019 Integrated Energy Policy Report.* California Energy Commission. Docket # 19-IEPR-01. February.

3.7 GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

*i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (**No Impact**)*

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace.

The State of California enacted the Alquist-Priolo Fault Zoning Act in 1972, requiring the State Geologist to delineate Earthquake Fault Zones (EFZs) along known active faults that have high potential for fault rupture. The project site is not located within a designated EFZ.[14] Therefore, the

[14] California Geological Survey. 2016. California Earthquake Hazards Zone Application. Website: maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed February 25, 2021).

proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault.

ii. Strong seismic ground shaking? ***(Less-Than-Significant Impact)***

The project site and the entire San Francisco Bay Area is in a seismically active region subject to strong seismic ground shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent of ground-shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity (MMI) scale is the most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII.[15] The closest faults to the project site are the Calaveras Fault, located approximately 5 miles to the west, and the Pleasanton Fault, located approximately 3 miles to the west.

Mapping has been performed by the Association of Bay Area Governments (ABAG) for the likely shaking intensities in the Bay Area that would have a 10 percent chance of occurring in any 50-year period. A large earthquake (magnitude 6.7 or greater) on one of the major active faults in the region would generate severe (MMI 8) ground shaking at the project site.[16]

Buried pipelines, like the proposed project, are generally less susceptible to damage from strong ground shaking than above ground structures since below ground pipelines are typically embedded in compacted backfill that can tolerate more seismic movement. Accepted procedures for placement of the water lines and construction measures necessary to minimize potential adverse effects have been incorporated into the project design. As outlined in Section 1.0, Project Information, proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations, which would include test borings. No businesses or residences would be constructed as part of the proposed project and people would not regularly access the project site upon completion. Therefore, the proposed project would not expose people or structures to substantial effects related to ground-shaking and this impact would be less than significant.

iii. Seismic-related ground failure, including liquefaction? ***(Less-Than-Significant Impact)***

Liquefaction is the transformation of saturated, loose, fine-grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Soils most susceptible to liquefaction are

15 United States Geological Survey. 2018. The Modified Mercalli Intensity Scale. Website: www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects (accessed February 25, 2021).

16 Association of Bay Area Governments (ABAG). 2020a. Shaking Scenarios Map. Available online at: mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed February 25, 2021).

loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts and gravels with poor drainage, or those capped by or containing seams of impermeable sediment.

The California Geological Survey (CGS) has mapped Seismic Hazard Zones that delineate areas susceptible to liquefaction and/or landslides that require proposed new developments in these areas to conduct additional investigation to determine the extent and magnitude of potential ground failure. According to mapping by CGS, the project site is not located within a Seismic Hazard Zone for liquefaction.[17] Mapping performed by ABAG indicates that the project site is in an area of very low liquefaction susceptibility.[18] Therefore, the impact of seismic-related ground failure, including liquefaction, is less than significant.

iv. Landslides? ***(Less-Than-Significant Impact)***

The proposed pipeline would be installed within hilly terrain, connecting existing pipelines on Cydonia Court and Delamar Drive. The proposed pipeline would be installed using horizontal directional drilling, whereby a tunnel is drilled under the ground surface and the pipeline is then pulled through the underground tunnel. According to CGS, the project site is located within a Seismic Hazard Zone for landslide.[19] The project site is also located within a rainfall-induced landslide zone, according to ABAG.[20] As described in Section 3.7.a.iii., accepted procedures for placement of the water lines and construction measures necessary to minimize potential adverse effects have been incorporated into the project design. Proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations, which would include test borings. Conformance with these project design features and geotechnical recommendations would reduce the effects of landslide to a less-than-significant level.

b. Would the project result in substantial soil erosion or the loss of topsoil? ***(Less-Than-Significant Impact)***

Construction of the proposed project, including excavation of access pits, and trenching and backfilling of pipeline connections could destabilize the soil surface and increase erosion potential from water and wind. As outlined in the Section 1.0, Project Information, the potential for soil erosion has been minimized through the implementation of directional drilling to install the proposed pipeline. Given the limited extent of ground disturbance, the potential for substantial soil erosion or the loss of topsoil that could result from construction of the proposed project is low.

Soil erosion would also be minimized with implementation of Best Management Practices (BMPs) during construction activities, including the use of sediment barriers (e.g., soil berms, silt fences,

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17 California Geological Survey. 2016, op. cit.

18 Association of Bay Area Governments (ABAG). 2020b. Liquefaction Susceptibility Map. Available online at: mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed September 1, 2020).

19 California Geological Survey. 2016, op. cit.

20 Association of Bay Area Governments (ABAG). 2020c. Interactive Landslide Hazards Map. Available online at: mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed September 1, 2020).

staked hay or straw bales, or sandbags), and trench barriers and breakers (constructed of materials such as sandbags or polyurethane foam). Soil erosion would also be minimized by limiting the time of soil disturbance, avoiding construction during periods of maximum runoff, hydroseeding of disturbed surface areas, and reestablishing pavement as soon as possible.

Consistent with Section 7.16.580, Erosion and Sediment Control of the City of Dublin Municipal Code, DSRSD would be required to prepare an Erosion and Sediment Control Plan (ESCP) that would indicate proposed methods for control of runoff, erosion and sediment movement. Soil erosion and loss of topsoil would also be minimized through implementation of Mitigation Measure AIR-1 (BAAQMD Basic Construction Mitigation Measures, which regulate fugitive dust). Implementation of these project design features and the ESCP would reduce potential impacts to soil erosion or the loss of topsoil to a less-than-significant level.

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? ***(Less-Than-Significant Impact)***

As discussed in Section 3.7.a, site soils would not be subject to lateral spreading or liquefaction but could be subject to landslide. The proposed pipeline would be designed and constructed with adequate foundations and bedding in accordance with the California Uniform Building Code, standard engineering practices and the recommendations of the geotechnical investigation. The project site is not anticipated to become unstable as a result of the proposed project, or potentially result in on- or off-site landslides, liquefaction, or lateral spreading. Therefore, the proposed project would not result in a geologic hazard from landslide, lateral spreading, subsidence, liquefaction or collapse and the impact is less than significant.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property? ***(Less-Than-Significant Impact)***

Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Changes in soil volume could result in significant expansion pressure on any structures proposed as part of future development of the project site. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction.

Soil types found on the project site include Diablo clay, 15 to 30 percent slopes (DbD) and Diablo clay, 30 to 50 percent slopes (DdFcc), according to the Natural Resources Conservation Service web soil survey.[21] The shrink-swell potential for these types of clay soil is high. [22] The proposed project would be designed and constructed using standard construction methods. Standard construction

[21] United States Department of Agriculture Soil Conservation Service. 2019. Web Soil Survey. Available online at: websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed February 25, 2021).

[22] United States Department of Agriculture Soil Conservation Service. 1975. Soil Survey of Alameda County, California, Western Part. Available online at: www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/CA610/0/alameda.pdf (accessed February 25, 2021).

methods for pipelines include appropriate selection of backfill materials that do not exhibit expansive behavior. In addition, proposed construction requirements, as well as the horizontal and vertical alignment of the proposed pipeline would be refined based on geotechnical investigations to ensure appropriate placement of the pipeline based on geologic conditions. Therefore, impacts associated with expansive soils would be less than significant.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? ***(No Impact)***

Implementation of the project would not include installation of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact to soils and wastewater disposal.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? ***(Less Than Significant with Mitigation Incorporated)***

As outlined in Section 1.0, Project Information, the proposed pipeline would be installed at depths from 5 to 85 feet bgs within bedrock underlying the pipeline alignment. In the event that fossil remains are encountered, or paleontologically sensitive bedrock (Monterey Formation or Briones Sandstone) are exposed, impacts to paleontological resources could occur. Implementation of Mitigation Measure GEO-1 would reduce potential impacts to paleontological resources to a less-than-significant level.

Mitigation Measure GEO-1: If fossil remains or paleontologically sensitive bedrock is exposed during project construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist shall be contacted to review the find. The project team (the DSRSD and the paleontologist) shall develop and implement a plan for impact avoidance. Should avoidance be infeasible due to engineering requirements, the project team shall develop and implement a plan to offset the loss of paleontological data through the implementation of a data recovery project, including paleontological recovery. If determined to be a unique paleontological resource, the potentially significant impacts caused by construction may be mitigated through monitoring during construction activity (beyond the area of the initial find), and, if warranted by potential finds, recovery of fossils; preservation, stabilization, and identification of collected resources; curation of resources into a museum repository; and preparation of a final report documenting the monitoring methods and results, to be submitted to the DSRSD.

Potential impacts to previously undiscovered paleontological resources would be less than significant with implementation of Mitigation Measure GEO-1. Therefore, the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.8 GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

*a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? **(Less-Than-Significant Impact)***

Greenhouse gases (GHGs) are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:

- Carbon dioxide (CO_2);
- Methane (CH_4);
- Nitrous oxide (N_2O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulfur Hexafluoride (SF_6).

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2, methane, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

These gases vary considerably in terms of Global Warming Potential (GWP), a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of

each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e).

This section describes the proposed project's construction- and operational-related GHG emissions and contribution to global climate change.

Construction Greenhouse Gas Emissions. The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. Construction activities would produce combustion emissions from various sources. During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. According to the results of the RoadMod analysis (refer to Section 3.3, Air Quality), the project would generate 62.6 metric tons of CO_2e construction emissions. Implementation of Mitigation Measure AIR-1 would further reduce construction GHG emissions by limiting construction idling emissions. Therefore, construction emissions would not be considered significant.

Operational Greenhouse Gas Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle trips to and from the project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Energy source emissions would be generated at off-site utility providers as a result of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. In addition, water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment.

The proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The project would not generate additional vehicle trips through the project area and, therefore, would not increase mobile source emissions. In addition, the project would not be a source of energy or area source emissions. As such, the proposed project would not generate any GHG emissions or result in any new vehicle trips that would contribute to an increase in GHG emissions. GHG emissions generated by the proposed project would be less than significant.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ***(Less-Than-Significant Impact)***

The City of Dublin Climate Action Plan 2030 and Beyond (CAP 2030) establishes a vision for the City to reach carbon neutrality by 2045 and includes quantified actions the City will take to GHG

emissions by 65,090 metric tons CO_2e by 2030. The CAP 2030 identifies additional actions that will need to be implemented to reach carbon neutrality. Dublin adopted its first Climate Action Plan (CAP 2020) in 2010 and is on track to meet the 2020 GHG emissions target. The purpose of the CAP 2030 is to meet the State's 2030 GHG emissions reductions target of at least 40 percent below 1990 levels by 2030. The CAP 2030 identifies GHG reduction strategies and measures that relate to renewable and carbon-free energy, building efficiency and electrification, sustainable mobility and land use, materials and waste management, and municipal leadership. As discussed above, the proposed project would result in the installation of approximately 1,100 linear feet of 8-inch HDPE pipeline to connect existing pipelines on Cydonia Court and Delamar Drive. The GHG reduction strategies identified in the CAP relate to land use development projects and municipal operations and are not applicable to the proposed project. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. This impact would be less than significant.

3.9 HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☒	☐	☐

*a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **(Less-Than-Significant Impact)***

The proposed project would result in the installation of a new underground water pipeline. Hazardous materials would not be routinely transported, used or disposed of during the operation and maintenance (O&M) phase of the proposed project. The DSRSD would be required to comply with existing government regulations in the use and disposal of any hazardous materials necessary for maintenance of the project pipeline, and such materials would not be used in sufficient strength or quantity to create a substantial risk to human or environmental health. Therefore, the proposed project would have a less-than-significant impact related to the routine transport, use, or disposal of hazardous materials.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? ***(Less-Than-Significant Impact)***

As described in 3.9.a above, operation of the project would not require routine use of hazardous materials; therefore, no hazards or hazardous materials impacts related to long-term operation of the project are anticipated.

The hazardous materials most likely to be used during construction include typical construction materials such as gasoline, diesel, motor oil, lubricants, solvents, and adhesives, as well as drilling fluids used for trenchless construction activities. Drips and small spills would be the most likely potential hazardous materials releases to occur, however any release that occurs in close proximity to sensitive habitat (e.g., a stream) could have a significant impact on the environment, if not properly controlled.

While gas and diesel fuel would typically be used by construction vehicles, BMPs would be utilized to ensure that no construction-related fuel hazards occur. Such materials would be kept at construction staging areas, and would be secured when not in use. In the unlikely event of a spill, fuels would be controlled and disposed of in accordance with applicable regulations. The DSRSD would be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the State Water Resources Control Board's National Pollutant Elimination System (NPDES) General Permit for Storm Water Discharge Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, as amended by Orders No. 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002) (Construction General Permit), permitting requirements, which would reduce the potential for hazardous materials releases to occur during construction, and would reduce the potential for spills to impact sensitive habitat or human health, to less than significant. SWPPPs are required for construction sites over one acre that do not qualify for a waiver. Therefore, development of the proposed project would not create a significant hazard to the public or environment. This impact would be less than significant.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? ***(No Impact)***

No public schools are located within 0.25 mile of the project site. The closest school to the project site is the John Green Elementary School, located 1.2 miles to the south of the project site. The proposed project would result in the installation a water pipeline and would not result in the routine use, transport or disposal of substantial quantities of hazardous materials. Therefore, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No impact would occur.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? ***(Less-Than-Significant Impact)***

Government Code Section 65962.5 states that the California Department of Toxic Substances shall compile and maintain annually a list of hazardous waste facilities subject to corrective action as part of the Health and Safety Code. This list is commonly referred to as the Cortese List. The project site is not located on the Regional Water Quality Control Board's Leaking Underground Tank Cleanup Site (LUST) or any other Cleanup Program Sites (formerly known as spills, leaks, investigations, and cleanups or SLIC). These two components comprise the State Cortese List of known hazardous materials sites compiled pursuant to Government Code Section 65962.5.

According to the California State Water Resources Control Board (SWRCB) Geotracker website,[23] no State-listed hazardous materials clean-up sites are located within 1,000 feet of the project site. One site, a private residence, located southwest of the project site on Branding Iron Place, is listed as a LUST site. This site is designated "closed." A closed site indicates that regulatory requirements for response actions, such as site assessment and remediation, have either been completed or were not necessary and, therefore, potential migration of residual contaminants in groundwater beneath the project corridor (if any) does not likely pose a risk to human health and the environment. Therefore, no significant hazard to the public or environment would be associated with this listed site, and this impact would be less than significant.

e. Would the project be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? ***(No Impact)***

The project site is not located within an airport land use plan, or within 2 miles of a public airport or public use airport. The closest airports to the project site are the Livermore Municipal Airport, located approximately 3.5 miles to the southeast, and the Hayward Executive Airport, located approximately 15 miles to the west of the project site. Therefore, the project would not result in a safety hazard for people residing or working in the project area.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? ***(Less-Than-Significant Impact)***

The Tri-Valley Local Hazard Mitigation Plan[24] was developed in compliance with State requirements and also meets the requirements of the Federal Emergency Management Agency (FEMA) as the City's local hazard mitigation plan. The Tri-Valley Local Hazard Mitigation Plan provides a uniform hazard mitigation strategy for the Tri-Valley area, addressing a range of hazards including, but not

[23] State Water Resources Control Board. 2021. Geotracker Website Application. Available online at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=delamar+drive+dublin# (accessed February 23, 2021).

[24] TetraTech. 2018. Tri-Valley Local Hazard Mitigation Plan, Volume 1: Planning Area-Wide Elements. September. Available online at: dublin.ca.gov/DocumentCenter/View/20467/2018-09-04_HMP-Volume-1-_Tri-Valley_FINAL (accessed September 1, 2020).

limited to, earthquakes, floods and wildland fire. The City of Dublin also has an adopted Comprehensive Emergency Management Plan and a Local Hazard Mitigation Plan to assess hazards and mitigate risks prior to a disaster event.

The proposed project would result in the installation of a new underground pipeline from an unpaved extension of Cydonia Court to Delamar Drive in the Tassajara Hills Development. As outlined in Section 1.0, Project Information, the access pits would be excavated at each end of the pipeline alignment. The southern access pit would be located within an unpaved extension of Cydonia Court and the northern access pit would be located within an unpaved emergency access road at the southern edge of the Tassajara Hills Development. Because the proposed project would not alter or block adjacent roadways, implementation of the proposed project would not be expected to impair the function of nearby emergency evacuation routes. Therefore, the proposed project would have a less-than-significant impact on implementation of an adopted emergency response plan or emergency evacuation plan.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? ***(Less Than Significant with Mitigation Incorporated)***

The project area is located in a moderate fire hazard zone as determined by the California Department of Forestry and Fire Protection (CalFIRE) [25] CalFIRE implements fire safety regulations in the State. Implementation of the project would not change the degree of exposure to wildfires because no new aboveground structures or housing would be constructed, and people would not regularly access the project site. However, construction of the pipeline would occur within an undeveloped hillside area. During construction, the most likely source of ignition would be by mechanical activities such as operation of backhoes, mini excavators, or rolled compactors. The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Due to the abundance of dry vegetation in and surrounding the project area, there is a risk of a wildland fire occurrence at the site, if regulatory requirements are not properly implemented during construction. Implementation of Mitigation Measure HAZ-1 would reduce the potential for construction activities to cause a wildland fire to a less-than-significant level.

Mitigation Measure HAZ-1: The DSRSD shall ensure that appropriate measures be taken to minimize the risk of fire during construction activities. Specifically, the DSRSD shall require that all fire safety regulations cited in the California Public Resources Code be incorporated into construction bid documents and contracts for the project, including regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction

[25] CalFire. 2020. California Fire Hazard Severity Zone Viewer. Website: gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414 (accessed February 23, 2021).

equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Additionally, special precautions shall be identified and taken to minimize the potential for fires resulting from the welding and fusing processes necessary for linking sections of pipeline together. BMPs shall be implemented during construction to reduce the potential for accidental spills or fires involving the use of hazardous materials.

The potential for construction activities to cause a wildland fire would be less than significant with implementation of Mitigation Measure HAZ-1. Therefore, construction of the proposed project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

3.10 HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i. Result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

*a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? **(Less-Than-Significant Impact)***

Implementation of the proposed project would not result in a net increase in the amount of impervious surface area or an associated increase in the rate and volume of stormwater runoff, as the proposed pipeline would be located underground. Continued long-term operation and maintenance of the proposed pipeline would not violate any water quality standards or waste discharge requirements.

Ground disturbance during construction could result in erosion and associated discharge of additional sediment and/or other pollutants from disturbed areas into streams. Trenching spoils generated during construction would be stored on the site for a short time and DSRSD would backfill or cover open trenches at the end of each workday to minimize the transport of soil to stormwater drainage facilities. Where backfilling or covering open trenches is not feasible, proper erosion control practices would be established to eliminate or minimize transport of sediment and other pollutants to stream channels. As outlined in Section 1.0, Project Information, the potential for soil erosion has been minimized through the implementation of directional drilling to install the proposed pipeline.

Consistent with Section 7.16.580, Erosion and Sediment Control of the City of Dublin Municipal Code, the construction contractor would be required to prepare an Erosion and Sediment Control Plan (ESCP) that would indicate proposed methods for control of runoff, erosion and sediment movement. Soil erosion and loss of topsoil would also be minimized through implementation of Mitigation Measure AIR-1 (BAAQMD Basic Construction Mitigation Measures, which regulate fugitive dust). With implementation of these project design features and the ESCP, the project would result in a less than significant impact associated with the violation of water quality standards or waste discharge requirements during construction.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ***(Less-Than-Significant Impact)***

The pipeline installation would not result in any changes to impervious surface area. Groundwater would not be extracted during operation of the proposed pipeline. Because the project would not result in the development of large areas of impervious surfaces that would prevent water from infiltrating into the groundwater nor would it result in direct additions or withdrawals to existing groundwater, operation of the project would result in a less-than-significant impact associated with depleting groundwater supplies or substantially interfering with groundwater recharge.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site;
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
iv. Impede or redirect flood flows? ***(Less-Than-Significant Impact)***

Project construction would not substantially alter existing drainage patterns or alter the course of a stream or river such that substantial erosion or siltation would occur. As outlined in Section 1.0, Project Information, the potential for soil erosion has been minimized through the implementation of directional drilling to install the proposed pipeline. After installation of the proposed pipeline, soils that have been excavated would be compacted and recovered to be consistent with current topography.

The proposed project would result in the installation of an underground water transmission pipeline. Implementation of the proposed project would not significantly alter existing drainage patterns, including alteration of the course of a stream or river or substantial increase in the rate/amount of surface runoff that could lead to on-site or off-site flooding.

The proposed project would not result in a substantial increase in impermeable surfaces that could lead to a significant amount of runoff. It would not affect drainage capacity, nor would it lead to a substantial addition of sources of polluted runoff.

The proposed project would result in the installation of an underground water transmission pipeline, which would not impede or redirect flood flows. This impact is less than significant.

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation? ***(No Impact)***

The project site is not located within a 100-year flood hazard zone as mapped by FEMA[26] and is not located within a mapped dam failure inundation area. There are no levees protecting the site from flooding and as a result, no risk of failure.

The project site is not located within a mapped tsunami area[27] and no seismically induced seiche waves have been documented in the San Francisco Bay throughout history.[28]

Implementation of the project involves installing an underground pipeline; no structures would be installed aboveground. Therefore, the project would not increase the risk of pollutants due to project inundation. No impact would occur.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? ***(Less-Than-Significant Impact)***

As discussed above, due to the size and nature of the proposed project (e.g., an underground pipeline), construction and operation of the project would be subject to local requirements related to stormwater runoff. Required compliance with local regulations regarding stormwater during construction would ensure that the proposed project would not conflict or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Following construction, the proposed pipeline would be located underground with limited potential to affect groundwater or water quality. As a result, this impact would be less than significant.

[26] Federal Emergency Management Agency. Flood Map Service Center (map) Website: msc.fema.gov/portal/search?AddressQuery=delamar%20drive%2C%20dublin%2C%20ca#searchresultsanchor (accessed March 3, 2021).

[27] California, State of. 2019. California Official Tsunami Inundation Maps. Website: www.conservation.ca.gov/cgs/tsunami/maps (accessed March 3, 2021).

[28] Association of Bay Area Governments and Metropolitan Transportation Commission. 2013. *Plan Bay Area.* July 18.

3.11 LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

*a. Would the project physically divide an established community? **(No Impact)***

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. Implementation of the project would provide a new water pipeline to provide a redundant source of water supply for an existing residential development. Therefore, implementation of the project would not physically divide an established community and no impact would occur.

*b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? **(Less Than Significant Impact)***

The City of Dublin General Plan, the City of Dublin Municipal Code, and the Eastern Dublin Specific Plan are the primary land use plans containing policies and regulations applicable to the project. The project would be located within an existing undeveloped hillside area between an unpaved extension of Cydonia Court to the south and the Tassajara Hills Development to the north. The proposed access pits would be located in areas that have been previously graded as part of the adjacent residential development. The proposed project would not change existing land use within the project area and would not result in the conversion of adjacent land uses or conflicts with applicable City land use designations or zoning standards. The proposed project would not conflict with any applicable land use plan, policy or regulation with jurisdiction over the project.

As described in Section 1.0, Project Information, lands to the south and east of the proposed pipeline alignment consist primarily of undeveloped lands located within a conservation easement (Northern Drainage Conservation Area) established as part of the larger Dublin Ranch development. The majority of the pipeline alignment would be located within a proposed conservation easement, which will establish allowable uses within the project area.

The City of Dublin General Plan, the Eastern Dublin Specific Plan and relevant sections of the City's Municipal Code outline relevant policies and regulations applicable to the proposed project, including policies to preserve visual, cultural, and natural resources and to protect the health and safety of their citizens. Consistent with the goals and policies of these relevant planning documents, the project has been designed to minimize impacts to natural and cultural resources. Project

conformance and/or potential conflicts with these ordinances are described in the relevant resource sections of this Initial Study. Where potentially significant environmental impacts have been identified in this Initial Study/Mitigated Negative Declaration, they have been mitigated to less than significant with implementation of appropriate mitigation measures. Therefore, the project would be consistent with applicable land use plans, policies and regulations, and no additional mitigation is required.

3.12 MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

*a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? **(No Impact)***

Neither the State Geologist nor the California Department of Mines and Geology (CDMG) have classified any areas in the City of Dublin as containing mineral deposits that are either of Statewide significance or the significance of which requires further evaluation. [29] The project site has been classified by the CDMG as being located in MRZ-4, indicating that the project site is located in an area where inadequate information is available for assignment to any other MRZ zone.[30] The project site is not designated or zoned for the extraction of mineral deposits. Therefore, the proposed project would not result in the loss of availability of a known mineral resource that would be of value of the region and the residents of the state and no impact would occur.

*b. Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? **(No Impact)***

As stated in Response 3.12.a., the project site is classified as MRZ-4. As stated in the City of Dublin General Plan, Dublin is an inland city which contains no mineral extraction areas.[31] No mineral extraction activities occur on the project site, and it is not located within an area known to contain locally important mineral resources. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan and no impact would occur.

[29] State of California, Division of Mines and Geology. 1996. Generalized Mineral Land Classification Map of the South San Francisco Bay Production Consumption Region. Open File Report 96-03, Plate 1.

[30] Ibid.

[31] Dublin, City of. 1985. City of Dublin General Plan. February 11. (Amended as of November 21, 2017)

3.13 NOISE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The following provides an overview of the characteristics of sound and vibration as well as the regulatory framework that applies to noise within the vicinity of the project site. The existing noise environment in and around the project site is also described.

Characteristics of Sound. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep.

Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud.

Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night. As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on dBA. L_{dn},

sometimes denoted as DNL, represents the time varying noise over a 24-hour period, with a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours of 7:00 p.m. to 10:00 p.m.

Characteristics of Vibration. Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible. Typically, there is more adverse reaction to effects associated with the shaking of a building. Vibration energy propagates from a source through intervening soil and rock layers to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by occupants as the motion of building surfaces, the rattling of items on shelves or hanging on walls, or a low-frequency rumbling noise. The rumbling noise is caused by the vibration of walls, floors, and ceilings that radiate sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with both ground-borne vibration and noise from these sources are usually localized to areas within approximately 100 feet from the vibration source, although there are examples of ground-borne vibration causing interference out to distances greater than 200 feet.[32] When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible. It is assumed for most projects that the roadway surface will be smooth enough that ground-borne vibration from street traffic will not exceed the impact criteria; however, both the construction of the project could result in ground-borne vibration that may be damaging.

Ground-borne vibration has the potential to damage buildings. Although it is very rare for typical construction activities to cause even cosmetic building damage, it is not uncommon for construction processes such as blasting and pile driving to cause vibration of sufficient amplitudes to damage nearby buildings. Ground-borne vibration is usually measured in terms of vibration velocity, either the root-mean-square (RMS) velocity or peak particle velocity (PPV). The PPV is used to characterize potential for damage.

Regulatory Framework. A project would have a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies. While the proposed project is located within the East Dublin Specific Plan, there are no policies specific to noise that would be applicable. The following analysis compares the potential impacts to the criteria within the Alameda County and City of Dublin Municipal Codes. Because the City of Dublin does not provide vibration assessment criteria for

[32] California Department of Transportation. 2013. *Caltrans Transportation and Construction Vibration Guidance Manual*. September.

damage related to construction, the guidelines within the Federal Transit Administration's (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA Manual)[33] have been used.

Alameda County Municipal Code. The Alameda County Municipal Code (Section 4-10.7 - Special Provisions)[34] sets allowable hours for construction activity to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays.

The City of Dublin Municipal Code. The City of Dublin's Municipal Code (Section 5.28.020)[35] prohibits any person within the City from making any loud, or disturbing, or unnecessary, or unusual or habitual noise or any noise which annoys or disturbs or injures or endangers the health, repose, peace, or safety of any reasonable person of normal sensitivity present in the area.

Federal Transit Administration. The criteria for environmental impacts resulting from ground-borne vibration are based on the maximum levels for a single event. The guidelines within the *FTA Manual* have been used to determine vibration impacts (refer to Table 3.13-A, below).

Table 3.13-A: Construction Vibration Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.50
Engineered concrete and masonry (no plaster)	0.30
Non-engineered timber and masonry buildings	0.20
Buildings extremely susceptible to vibration damage	0.12

Source: *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018), Table 12-3.
FTA = Federal Transit Administration PPV = peak particle velocity
in/sec = inches per second

The FTA Manual guidelines show that a vibration level of up to 0.2 in/sec PPV is considered safe for non-engineered timber and masonry buildings and would not result in any construction vibration damage. Therefore, in order to be conservative, the 0.2 in/sec PPV threshold has been used when evaluating vibration impacts at the nearest structures to the site.

Existing Noise Environment. The project site is located approximately 2.4 miles north of I-580. Access to the site is from Delamar Drive to the north or from an extension of Cydonia Court to the south. Each access point is in existing or zoned residential area, although the majority of the proposed pipeline alignment would be located on undeveloped land. The existing noise environment is generally quiet as the nearest arterial roadways is over 2,500 feet away.

Sensitive Land Uses in the Vicinity. Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest sensitive receptors to the project site are existing

33 Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123. September.
34 Alameda County. 2020. *Code of Ordinances*. October.
35 Dublin, City of. 2020. *Municipal Code*. December.

residential properties located 30 feet from the proposed trenching activities and 55 feet from the drilling and boring activities as shown on Figure 1-2.

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? ***(Less-Than-Significant with Mitigation Incorporated)***

The following section addresses the short-term construction and long-term operational noise impacts of the proposed project.

Short-Term Construction Noise Impacts. Project construction would result in short-term noise impacts on the nearby sensitive receptors. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Table 3.13-B lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model. Construction related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site, which would incrementally increase noise levels on roads leading to the site. As shown in Table 3.13-B, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA L_{max} with trucks passing at 50 feet. Because there is no hauling associated with the proposed project, the trips associated with construction traffic would be minimal.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 3.13-B lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor.

Table 3.13-B: Typical Construction Equipment Noise Levels

Equipment Description	Acoustical Usage Factor (%)	Maximum Noise Level (L_{max}) at 50 Feet[1]
Backhoes	40	80
Compactor (ground)	20	80
Compressor	40	80
Cranes	16	85
Dozers	40	85
Dump Trucks	40	84
Excavators	40	85
Flat Bed Trucks	40	84
Forklift	20	85
Front-end Loaders	40	80
Graders	40	85
Jackhammers	20	85
Pick-up Truck	40	55
Pneumatic Tools	50	85
Pumps	50	77
Rock Drills	20	85
Rollers	20	85
Scrapers	40	85
Tractors	40	84
Welder	40	73

Source: Roadway Construction Noise Model (FHWA 2006).
Note: Noise levels reported in this table are rounded to the nearest whole number.
Equipment in **bold** represents equipment proposed for this project.
[1] Maximum noise levels were developed based on Spec 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.
L_{max} = maximum instantaneous sound level

As discussed in Section 1.0, Project Information, the contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. This analysis assumes that an excavator and either a drill or roller would be operating simultaneously during construction of the proposed project. Based on the typical construction equipment noise levels shown in Table 3.13-B, noise levels associated with these pieces of construction equipment operating simultaneously would be approximately 88 dBA L_{max} at 50 feet.

The closest sensitive receptors include single-family residences located along Delmar Drive, approximately 30 feet from proposed trenching activities and 55 feet from the northern access pit, resulting in short-term construction noise levels approaching 92.5 dBA L_{max} and 87.2 dBA L_{max}, respectively. However, construction equipment would operate at various locations along the proposed 1,100-foot alignment and, due to the linear nature of the project, construction activities at any one receptor location would occur for a limited duration. Construction noise is permitted by Alameda County when activities occur between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays. In addition, while construction-related short-term noise levels have the potential to be higher than existing ambient

noise levels in the project area, the noise impacts would no longer occur once project construction is completed.

Implementation of Mitigation Measure NOI-1 would ensure that construction noise does not disturb the residential uses during hours when ambient noise levels are likely to be lower (i.e., at night). With implementation of Mitigation Measure NOI-1, construction noise impacts would be less than significant.

Mitigation Measure NOI-1: Prior to commencement of construction activities, DSRSD staff shall verify that grading and construction plans include the following requirements to ensure that the greatest distance between noise sources and sensitive receptors during construction activities has been achieved:

- Construction activities occurring as part of the project shall be subject to the limitations and requirements of the Alameda County Municipal Code, which states that construction activities are restricted to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays.
- During all project area excavation and on-site grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities.
- Designate a "disturbance coordinator" at the DSRSD who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

Construction noise associated with the project would be less than significant with implementation of Mitigation Measure NOI-1. Therefore, construction of the proposed project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity

of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Operational Noise Impacts. The proposed project would consist of installing approximately 1,100 linear feet of 8-inch-diameter HDPE pipeline below the ground surface to connect to existing pipelines within Cydonia Court and Delamar Drive. Once construction activities are complete, staging areas would be returned to existing conditions. Thus, no operational noise would be associated with the new pipeline.

As described above, with the incorporation of Mitigation Measure NOI-1, the project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or any other applicable standards. Therefore, this impact would be less than significant.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels? ***(Less-Than-Significant with Mitigation Incorporated)***

Construction of the proposed project could result in the generation of groundborne vibration. This construction vibration impact analysis assesses the potential for building damages using vibration levels in peak particle velocity (in/sec PPV). The FTA Manual guidelines indicate that a vibration level up to 0.2 in/sec PPV is considered safe for non-engineered timber and masonry buildings.

Table 3.13-C shows the PPV values at 25 feet from a construction vibration source. As shown in Table 3.13-C, bulldozers and other heavy-tracked construction equipment (except for vibratory rollers) generate approximately 0.089 in/sec PPV of groundborne vibration when measured at 25 feet.

Table 3.13-C: Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV (in/sec) at 25 feet
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2018).
in/sec = inches per second PPV = peak particle velocity

Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residential buildings in the project vicinity). The proposed project is expected to include the use of heavy equipment similar to a large bulldozer. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-

site buildings and the project disturbance areas because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below.

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

As identified above, residential structures are located 30 feet away from the proposed trenching activities and would experience vibration levels approaching 0.073 in/sec PPV. Although the proposed construction activities are located 30 feet from existing structures based on preliminary plans, construction vibration levels at these structures could exceed the FTA threshold of 0.2 in/sec PPV for non-engineered timber and masonry building damage if heavy equipment were to operate within 15 feet of the structures. For example, vibration levels at a distance of 14 feet would be 0.212 in/sec PPV. Therefore, construction that would occur within 15 feet of existing homes would exceed the FTA vibration damage thresholds resulting in a potentially significant impact. Implementation of Mitigation Measure NOI-1 would be required to maintain a minimum distance of 15 feet between the heavy construction equipment and the adjacent structures. Implementation of Mitigation Measure NOI-1 would ensure that construction vibration level would be below the FTA threshold of 0.2 in/sec PPV for building damage, reducing potential vibration impacts to less than significant. In addition, due to the linear nature of the project, construction activities at any one receptor location would occur for a limited duration.

Mitigation Measure NOI-2: The use of heavy construction equipment, such as large bulldozers or excavators, within 15 feet of existing structures shall be prohibited.

Construction vibration associated with the project would be less than significant with implementation of Mitigation Measure NOI-2. Therefore, construction of the proposed project would not result in generation of generation of excessive groundborne vibration or groundborne noise levels.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? ***(No Impact)***

The proposed project is not located within 2 miles of a public or public use airport. Aircraft noise is occasionally audible at the project site; however, no portion of the project site lies within the 60 dBA CNEL noise contours of any public airport nor does any portion of the project site lie within 2 miles of any private airfield or heliport. Therefore, the proposed project would not result in the exposure of people residing or working in the project area to excessive noise levels. No impact would occur.

3.14 POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? ***(No Impact)***

The proposed project would result in the installation of a new underground pipeline to provide a redundant potable water supply to the Tassajara Hills Development. The proposed pipeline would be installed within an undeveloped hillside area, located between the existing residential development to the south and the Tassajara Hills Development to the north. Surrounding land uses consist primarily of undeveloped lands and residential uses. As described above, the proposed pipeline would be installed to provide a redundant water supply. It would not provide additional major infrastructure or increase the capacity of the existing water system to accommodate new development nor would the project extend or expand infrastructure or services to existing undeveloped areas in the vicinity of the proposed alignment. Because the proposed water line would be installed to provide a redundant supply for the existing water system, and is not anticipated to serve demand generated by future development around the project site, it would not substantially induce growth. The project would not expand the capacity of the current water system or provide additional major infrastructure so as to encourage population growth or new development. The project would not include any new housing, commercial or industrial space. Therefore, the project would not directly or indirectly induce substantial population growth and no impact would occur.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? ***(No Impact)***

The project would be constructed within an undeveloped hillside area. No housing or people would be displaced as a result of implementation of the project and no impact would occur.

3.15 PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	☐	☐	☐	☒
ii. Police protection?	☐	☐	☐	☒
iii. Schools?	☐	☐	☐	☒
iv. Parks?	☐	☐	☐	☒
v. Other public facilities?	☐	☐	☐	☒

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection?
ii. Police protection?
iii. Schools?
iv. Parks?
v. Other public facilities? ***(No Impact)***

Public services in the area are provided by the Alameda County Fire Department, the Alameda County Sheriff's Office, the Dublin Unified School District, and the City of Dublin Parks and Community Services Department. Development of the project would improve the reliability of the DSRSD system by installing a new water pipeline to provide a redundant water supply to the Tassajara Hills Development. The project does not include the construction of structures that would increase the population in the area or that would generate a higher demand for fire or police services, schools, parks, or other public facilities. Therefore, the demand for public services for the project would be the same as under existing conditions and no impact would occur.

3.16 RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

*a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? **(No Impact)***

The City of Dublin Parks and Community Services Department operates and maintains a variety of outdoor recreational sites, neighborhood parks, community parks, community facilities, open space areas and a series of trail networks.[36] As discussed in Section 3.14, Population and Housing, and Section 3.15, Public Services, development of the project would improve the reliability of the DSRSD's system by installing a new water pipeline that would provide a redundant water supply. No housing would be constructed as part of the project. Therefore, the proposed project would not result in impacts related to the use of the existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No impact would occur.

*b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? **(No Impact)***

The project does not include nor require the construction or expansion of new or existing public recreational facilities. Therefore, the proposed project would not result additional environmental effects associated with recreation beyond those described in this document.

[36] Dublin, City of. 1985. op. cit.

3.17 TRANSPORTATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?	☐	☐	☒	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d. Result in inadequate emergency access?	☐	☐	☐	☒

*a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? **(Less-Than-Significant Impact)***

The Alameda County Transportation Commission (ACTC), which is Alameda County's designated Congestion Management Agency (CMA), has established a 100 peak-hour trip threshold for requiring preparation of a Traffic Impact Analysis. ACTC has determined that projects that would generate fewer than 100 peak hour trips are unlikely to generate enough change in the circulation system to result in a conflict with a program plan, ordinance or policy addressing the circulation system. The peak trip generation potential associated with the proposed project during the construction and operational periods is described below.

Short-Term Construction. As discussed in the project description, project construction is anticipated to start in August 2021 and last approximately two months. Construction activities would typically occur from 8:00 a.m. to 5:00 p.m., Monday through Friday. Construction personnel may arrive on site and depart approximately one hour prior to or after regular construction times. Staging areas are proposed on the existing fire access road within the Tassajara Hills Development and along the northerly end of Cydonia Court. Access to the project site would likely be via Tassajara Road or Fallon Road and I-580. Once construction activities are complete, staging areas would be returned to existing conditions.

The contractor would employ the use of heavy construction machinery, likely including the following: wheel-mounted/track-mounted drill rig, horizontal drilling machine, excavator, backhoe, and roller compactor. All of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required. The equipment would likely be delivered when the construction begins and removed when it ends. Therefore, on a typical day, heavy equipment related to construction activities would not affect the roadway network.

The on-site construction workforce would consist of laborers, craftsmen, supervisory personnel, support personnel, and construction management personnel. The number of construction employees will vary by site and activity. It is conservatively assumed that up to approximately 40 workers would be on-site during construction activities. Even if no carpooling occurs, these 40 workers would generate fewer than 100 trips during either morning or afternoon peak commute hour.

The trip generation is expected to be less than 100 peak hour trips, which is less than the established thresholds. Therefore, the project would not conflict with a program plan, ordinance or policy addressing the circulation system and the impact would be less than significant.

Operational Trips. Upon completion of construction, the proposed pipeline would be located underground. No daily or peak hour trips are anticipated to be attracted to or generated by the project site. Therefore, the project would not conflict with a program plan, ordinance or policy addressing the circulation system and the impact would be less than significant.

b. Would the project conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)? ***(Less-Than-Significant Impact)***

According to the screening threshold for small projects, defined in the State of California Governor's Office of Planning and Research Technical Advisory On Evaluating Transportation Impacts in CEQA dated December 2018, "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact."

Upon construction, the proposed pipeline would be located underground and would not generate any vehicle trips to/from the project site, except to perform periodic maintenance or repairs. During the short-term construction activity, less than 100 daily trips are anticipated. Therefore, in accordance with the Technical Advisory, impacts related to CEQA Guidelines section 15064.3, subdivision (b) can be assumed to be less than significant.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? ***(No Impact)***

The proposed project would not change the existing roadway design. During construction, construction vehicles would be staged within the off-roadway construction sites, at each end of the pipeline alignment. Heavy vehicles may travel along major arterials and I-580 during construction; however, no lane closures or detours would be required for the proposed project. In addition, the proposed project does not include any design features that may increase hazards as the pipeline would be underground. Therefore, no impacts associated with hazardous design features would result from the proposed project.

d. Would the project result in inadequate emergency access? ***(No Impact)***

The proposed project would install a water pipeline between two existing residential developments. Once completed, the proposed project would not interfere or encroach onto an emergency access route. Construction activities may temporarily restrict vehicular traffic; however construction

activities would not result in road closures or similar activities that would cause significant delay to emergency vehicles. Therefore, the proposed project would not result in inadequate emergency access. No impact would occur.

3.18 TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)? Or

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Assembly Bill 52 (AB 52), which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA environmental review process, and equates significant impacts to "tribal cultural resources" with significant environmental impacts. Public Resources Code (PRC) Section 21074 states that "tribal cultural resources" are:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe and are one of the following:
    - Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    - Included in a local register of historical resources as defined in subdivision (k) of PRC Section 5020.1.
    - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

A "historical resource" (PRC Section 21084.1), a "unique archaeological resource" (PRC Section 21083.2(g)), or a "nonunique archaeological resource" (PRC Section 21083.2 (h)) may also be a tribal cultural resource if it is included or determined to be eligible for inclusion in the California Register.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency's notification list for CEQA projects. Within 14 days of determining that a project application is complete, or a decision by a public agency to undertake a project, the lead agency must notify tribes of the opportunity to consult on the project, should a tribe have previously requested to be on the agency's notification list. California Native American tribes must be recognized by the NAHC as traditionally and culturally affiliated with the project site, and must have previously requested that the lead agency notify them of projects. Tribes have 30 days following notification of a project to request consultation with the lead agency.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or Mitigated Negative Declaration, or certification of an Environmental Impact Report (PRC Sections 21080.3.1, 21080.3.2, 21082.3). As described in Section 1.0, Project Information, DSRSD has notified California Native American tribes of the proposed project and reached out to the three tribes that requested consultation for follow-up. To date, no additional responses have been received by DSRSD.

As discussed in Section 3.5, Cultural Resources, the NWIC records search and the archaeological survey completed for the project did not identify evidence of Native American archaeological deposits or ancestral remains. The proposed project would not impact known tribal cultural resources that are listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources, nor has the DSRSD identified a tribal cultural resource at the project site. As noted in Section 3.5, Cultural Resources, implementation of Mitigation Measures CULT-1 and CULT-2 would ensure that potential impacts related to previously undiscovered historic or archaeological resources and human remains, including tribal cultural resources, would be less than significant.

3.19 UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

*a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? **(Less-Than-Significant Impact)***

The project would not require or result in the relocation or construction of new or expanded water, wastwater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities. The proposed project would install a new, underground water pipeline for the Tassjara Hills Development. Development of the proposed project would provide beneficial effects by improving the DSRSD's water distribution system reliability by providing a redundant water supply. Implementation of the proposed project would not affect the amount of on-site runoff and; therefore, would not require the expansion of stormwater facilities. No new wastewater, gas, electricity or telecommunications facilities would be required to serve the proposed project. Measures (e.g., Best Management Practices, Best Available Control Technologies) have been incorporated into the project design along with conformance with appropriate guidelines and policies to reduce possible environmental impacts to the extent practicable. Potentially significant environmental impacts associated with installation of the proposed pipeline would be reduced to less than significant with implementation of the mitigation measures included in this Initial Study. This impact would be less than significant.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? ***(Less-Than-Significant Impact)***

The project would not result in an increase in the amount of water that is distributed to the site currently. New or expanded water supply entitlements would not be required to serve the project. During pipeline installation, water would be used to create the drilling fluid, a mixture of water and additives that facilitate both the soil borings and directional drilling. Water would be provided via a water truck during construction activities. The amount of water required would be relatively small and would only be needed during the construction period. Therefore, the proposed project would result in a less-than-significant impact related to water supplies.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? ***(Less-Than-Significant Impact)***

Refer to Section 3.19.a above. Implementation of the project would not result in a change in the wastewater treatment needed. Impacts related to wastewater treatment would be less than significant.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? ***(Less-Than-Significant Impact)***

Implementation of the project would generate solid waste associated with construction activities, including construction materials and general refuse. As outlined in Section 1.0, Project Information, all of the material excavated during pipeline installation would be used to fill in the access pits following pipeline installation. No import or export of soils would be required. Therefore, minimal non-hazardous waste would be hauled to local disposal centers for recycling or taken to landfills.

The closest landfill to the project site is the Vasco Road Landfill (approximately 7.5 miles east). As of October 2016, the Vasco Road Sanitary landfill had remaining capacity of approximately 7.4 million cubic yards, with a total capacity of 32.9 million cubic yards.[37] The quantity of solid waste materials associated with construction would be limited to the construction period, and would not pose a significant impact upon existing landfills. No additional solid waste would be generated by long-term operations of the proposed project. Impacts related to solid waste disposal are considered less than significant

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste? ***(Less-Than-Significant Impact)***

As described in Section 3.19.d., implementation of the project would generate solid waste associated with construction activities. To the extent possible, solid waste would be recycled either

[37] CalRecycle. 2019. SWIS Facility/Site Activity Details Vasco Road Sanitary Landfill (01-AA-0010). Website: www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/9?siteID=8 (accessed March 2, 2021).

on-site or transported to a local disposal center for recycling. Solid waste generation would be limited to the construction period; no solid waste would be generated from long-term operation of the proposed project. The proposed project would comply with federal, State, and local statutes and regulations related to solid waste. This impact would be less than significant.

3.20 WILDFIRE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☒	☐	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan? ***(Less-Than-Significant Impact)***

The project area is located in a moderate fire hazard zone as determined by the California Department of Forestry and Fire Protection (CalFIRE).[38] As noted in Section 3.9.f, the proposed project would not impair the implementation of, or physically interfere with, and adopted emergency response plan as the pipeline would be installed underground. Therefore, this impact would be less than significant.

b. Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? ***(Less Than Significant with Mitigation Incorporated)***

The proposed project is located in hilly, undeveloped terrain; however, as described in Section 3.9.g, implementation of the project would not change the degree of exposure to wildfires because no new aboveground structures or housing would be constructed and people would not regularly access the project site. Implementation of Mitigation Measure HAZ-1, identified in Section 3.9., Hazards and Hazardous Materials, would reduce the potential for construction activities to cause a wildland fire to less than significant.

[38] CalFire. 2020, op. cit.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? ***(No Impact)***

The proposed project would install an underground water pipeline within hilly terrain via directional drilling. No infrastructure, such as roads, fuel breaks, emergency water sources, or power lines would be required to serve the proposed pipeline. Therefore, the proposed project would not require the installation or maintenance of associated infrastructure. No impact would occur.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? ***(No Impact)***

The proposed project would install an underground water pipeline within hilly terrain via directional drilling. The pipeline would be installed at depths from 5 to 85 feet bgs. Because the proposed pipeline would be located underground, it would not expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ***(Less Than Significant with Mitigation Incorporated)***

Implementation of the mitigation measures recommended in this Initial Study would ensure that the construction and operation of the proposed project would not substantially degrade the quality of the environment; reduce the habitat, population, or range of a plant or animal species; or eliminate important examples of California history or prehistory. As described in Section 3.4, the proposed project could result in impacts to special-status species, including CRLF and CTS. With implementation of the mitigation measures identified in this IS/MND, potential impacts to these species would be reduced to less than significant. Mitigation is provided in Section 3.5, Cultural Resources and Section 3.7, Geology and Soils, in the event that unanticipated archeological or paleontological resources and/or human remains are identified in the project area during construction. With implementation of these mitigation measures, impacts to these resources would be less than significant.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? ***(Less Than Significant Impact)***

The CEQA Guidelines require a discussion of significant environmental impacts that would result from project-related actions in combination with "closely related past, present, and probably future projects: located in the immediate vicinity (CEQA Guidelines Section 15130[b][1][A]). Cumulative environmental impacts are those impacts that by themselves are not significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the proposed project consist of projects that are reasonably foreseeable and that would be constructed or operated during the life of the proposed project.

The proposed project would be located in an undeveloped area, that is largely protected under existing and/or proposed conservation easements. The Tassajara Hills Development, which would be served by the proposed pipeline is largely built out. No other construction projects are anticipated in the immediate area of the proposed project. As described in this Initial Study/Mitigated Negative Declaration, impacts associated with the proposed project would be temporary, construction-related and would be reduced to less than significant with implementation of the mitigation measures contained herein. Therefore, the proposed project would not make a considerable contribution towards a cumulative impact related to construction impacts. Additionally, the proposed project would not generate a significant amount of greenhouse gas emissions and would therefore not result in a cumulatively considerable impact to global climate change. The proposed project would improve the reliability of the existing water distribution system by providing a redundant water supply.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? ***(Less Than Significant with Mitigation Incorporated)***

As described in this IS/MND, any potential environmental impacts from the project would be reduced to less than significant with the implementation of the recommended mitigation measures. With implementation of measures both incorporated into the project design and recommended as mitigations to reduce the impacts associated with air quality, biological resources, cultural resources, geology and soils, and noise, the project would not result in substantial adverse effects on human beings.

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5.0 REFERENCES

Alameda County. 2020. *Code of Ordinances*. October.

Association of Bay Area Governments (ABAG). 2020a. Shaking Scenarios Map. Available online at: mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed February 25, 2021).

Association of Bay Area Governments (ABAG). 2020b. Liquefaction Susceptibility Map. Available online at: mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed September 1, 2020).

Association of Bay Area Governments (ABAG). 2020c. Interactive Landslide Hazards Map. Available online at: mtc.maps.arcgis.com/apps/webappviewer/index.html?id=4a6f3f1259df42eab29b35dfcd086fc8 (accessed September 1, 2020).

Association of Bay Area Governments and Metropolitan Transportation Commission. 2013. *Plan Bay Area.* July 18.

Bay Area Air Quality Management District. 2017. *Clean Air Plan*. April 19.

CalFire. 2020. California Fire Hazard Severity Zone Viewer. Website: gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414 (accessed February 23, 2021).

California Department of Conservation. 2016. California Farmland Conservancy. California Important Farmland Finder. Website: maps.conservation.ca.gov/dlrp/ciff/ (accessed February 23, 2021).

California Geological Survey. 2016. California Earthquake Hazards Zone Application. Website: maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed February 25, 2021).

California Department of Fish and Wildlife (CDFW). 2021. California Natural Diversity Data Base. California Natural Diversity Data Base (CNDDB), Commercial Version, Updated February 2, 2021. California Department of Fish and Game, Biogeographic Data Branch, Sacramento, California

California Department of Transportation. 2021. California State Scenic Highways. Website: dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed February 23, 2021)

California Department of Transportation. 2013. *Caltrans Transportation and Construction Vibration Guidance Manual*. September.

California Energy Commission. 2020. *2019 Integrated Energy Policy Report.* California Energy Commission. Docket # 19-IEPR-01. February.

California, State of. 2019. California Official Tsunami Inundation Maps. Website: www.conservation.ca.gov/cgs/tsunami/maps (accessed March 3, 2021).

CalRecycle. 2019. SWIS Facility/Site Activity Details Vasco Road Sanitary Landfill (01-AA-0010). Website: www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/9?siteID=8 (accessed March 2, 2021).

Dublin, City of. 1985. City of Dublin General Plan. February 11. (Amended as of November 21, 2017)

Dublin, City of. 1994. Eastern Dublin Specific Plan. January 7. Updated April 21, 2020.

Dublin, City of. 2020. *Municipal Code*. December.

Federal Emergency Management Agency. Flood Map Service Center (map) Website: msc.fema.gov/portal/search?AddressQuery=delamar%20drive%2C%20dublin%2C%20ca#searchresultsanchor (accessed March 3, 2021).

Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No. 0123. September.

Green, M. 1983. Letter to John Gustafson, California Department of Fish and Game.

Linsdale, J.M. 1946. The California Ground Squirrel. University of California Press. Berkeley and Los Angeles, California.

Morrell, S. 1975. San Joaquin Kit Fox Distribution and Abundance in 1975. California Department of Fish and Game, Wildlife Management Branch Administrative Report No. 75-3.

Pacific Gas and Electric Company (PG&E). 2010. Tri-Valley Capacity Increase Project, Wetland Mitigation Monitoring, Year 5. Report No. 001.3.10.1.

State of California, Division of Mines and Geology. 1996. Generalized Mineral Land Classification Map of the South San Francisco Bay Production Consumption Region. Open File Report 96-03, Plate 1.

State Water Resources Control Board. 2021. Geotracker Website Application. Available online at: https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=delamar+drive+dublin# (accessed February 23, 2021).

TetraTech. 2018. Tri-Valley Local Hazard Mitigation Plan, Volume 1: Planning Area-Wide Elements. September. Available online at: dublin.ca.gov/DocumentCenter/View/20467/2018-09-04_HMP-Volume-1-_Tri-Valley_FINAL (accessed September 1, 2020).

United States Department of Agriculture Soil Conservation Service. 2019. Web Soil Survey. Available online at: websoilsurvey.sc.egov.usda.gov/App/HomePage.htm (accessed February 25, 2021).

United States Department of Agriculture Soil Conservation Service. 1975. Soil Survey of Alameda County, California, Western Part. Available online at: www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/CA610/0/alameda.pdf (accessed February 25, 2021).

United States Fish and Wildlife Service (USFWS). 2010. Endangered and Threatened Wildlife and Plants: Revised designation of Critical Habitat for the California Red-legged Frog; Final Rule. Federal Register 75 (51): 12816-12959.

United States Fish and Wildlife Service (USFWS).2020. Species Status Assessment, Report for the San Joaquin kit fox (*Vulpes macrotis mutica*). Sacramento Fish and Wildlife Office. 74pp.

United States Geological Survey. 2018. The Modified Mercalli Intensity Scale. Website: www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects (accessed February 25, 2021).

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APPENDIX A

AIR QUALITY MODELING RESULTS

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Road Construction Emissions Model Version 9.0.0

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Tassajara Hills Pipeline Project	
Construction Start Year	2021	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	2.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.21	miles
Total Project Area	2.19	acres
Maximum Area Disturbed/Day	2.19	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.20		1/1/2021
Grading/Excavation		0.80		1/8/2021
Drainage/Utilities/Sub-Grade		0.70		2/2/2021
Paving		0.30		2/24/2021
Totals (Months)	2			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade				0	0.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions User Input	User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT
Miles/ one-way trip	20			
One-way trips/day	2			
No. of employees: Grubbing/Land Clearing	5		10	200.00
No. of employees: Grading/Excavation	20		40	800.00
No. of employees: Drainage/Utilities/Sub-Grade	14		28	560.00
No. of employees: Paving	10		20	400.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grading/Excavation (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Draining/Utilities/Sub-Grade (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Paving (grams/mile)	0.02	1.10	0.10	0.05	0.02	0.00	339.80	0.00	0.01	342.28
Grubbing/Land Clearing (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Grading/Excavation (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Draining/Utilities/Sub-Grade (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Paving (grams/trip)	1.18	2.95	0.34	0.00	0.00	0.00	72.81	0.08	0.04	85.39
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.03	0.55	0.05	0.02	0.01	0.00	151.43	0.00	0.00	152.80
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.34

Pounds per day - Grading/Excavation	0.14	2.20	0.20	0.08	0.03	0.01	605.72	0.02	0.02	611.21
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	0.00	5.33	0.00	0.00	5.38
Pounds per day - Drainage/Utilities/Sub-Grade	0.10	1.54	0.14	0.06	0.02	0.00	424.00	0.01	0.01	427.85
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.01	0.00	0.00	0.00	0.00	3.26	0.00	0.00	3.29
Pounds per day - Paving	0.07	1.10	0.10	0.04	0.02	0.00	302.86	0.01	0.01	305.60
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.01
Total tons per construction project	0.00	0.04	0.00	0.00	0.00	0.00	9.93	0.00	0.00	10.02

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated	User Override of	Default Values	Calculated
User Input	Default # Water Trucks	Number of Water Trucks	Round Trips/Vehicle/Day	Round Trips/Vehicle/Day	Trips/day	Miles/Round Trip	Miles/Round Trip	Daily VMT
Grubbing/Land Clearing - Exhaust	1		5.00			8.00		40.00
Grading/Excavation - Exhaust	1		5.00			8.00		40.00
Drainage/Utilities/Subgrade	1		5.00			8.00		40.00
Paving	1		5.00			8.00		40.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grading/Excavation (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Paving (grams/mile)	0.04	0.42	3.06	0.11	0.05	0.02	1,779.29	0.00	0.28	1,862.69
Grubbing/Land Clearing (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	3.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.36
Pounds per day - Grading/Excavation	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.38	0.00	0.00	1.45
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	1.21	0.00	0.00	1.26
Pounds per day - Paving	0.00	0.04	0.31	0.01	0.00	0.00	156.91	0.00	0.02	164.26
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.00	0.00	0.54
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	3.45	0.00	0.00	3.61

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing	2.19		21.90	0.05	4.56	0.01
Fugitive Dust - Grading/Excavation	2.19		21.90	0.19	4.56	0.04
Fugitive Dust - Drainage/Utilities/Subgrade	2.19		21.90	0.17	4.56	0.04

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.26	2.07	3.02	0.09	0.08	0.01	912.06	0.30	0.01	921.92
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.23	3.27	2.15	0.10	0.10	0.01	500.19	0.16	0.00	505.59
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Other Construction Equipment	0.42	4.06	4.38	0.23	0.21	0.01	598.52	0.19	0.01	604.99
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	0.00	304.14
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Grubbing/Land Clearing	pounds per day	1.13	11.87	11.70	0.55	0.50	0.02	2,346.16	0.75	0.02	2,371.29
Grubbing/Land Clearing	tons per phase	0.00	0.03	0.03	0.00	0.00	0.00	5.16	0.00	0.00	5.22

Grading/Excavation	Default Number of Vehicles	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*		Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.26	2.07	3.02	0.09	0.08	0.01	912.06	0.30	0.01	921.92
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.23	3.27	2.15	0.10	0.10	0.01	500.19	0.16	0.00	505.59
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Other Construction Equipment	0.42	4.06	4.38	0.23	0.21	0.01	598.52	0.19	0.01	604.99
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	0.00	304.14
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day

0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation		pounds per day	1.13	11.87	11.70	0.55	0.50	0.02	2,346.16	0.75	0.02	2,371.29
	Grading/Excavation		tons per phase	0.01	0.10	0.10	0.00	0.00	0.00	20.65	0.01	0.00	20.87

Drainage/Utilities/Subgrade	Default Number of Vehicles	Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.26	2.07	3.02	0.09	0.08	0.01	912.06	0.30	0.01	921.92
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Excavators	0.23	3.27	2.15	0.10	0.10	0.01	500.19	0.16	0.00	505.59
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Other Construction Equipment	0.42	4.06	4.38	0.23	0.21	0.01	598.52	0.19	0.01	604.99
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	0.00	304.14
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment	If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab			ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Number of Vehicles	Equipment Tier	Type		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage/Utilities/Sub-Grade		pounds per day	1.13	11.87	11.70	0.55	0.50	0.02	2,346.16	0.75	0.02	2,371.29
	Drainage/Utilities/Sub-Grade		tons per phase	0.01	0.09	0.09	0.00	0.00	0.00	18.07	0.01	0.00	18.26

Paving	Default Number of Vehicles	Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.25	2.90	2.60	0.13	0.12	0.00	455.06	0.15	0.00	459.97
1.00			Model Default Tier	Paving Equipment	0.19	2.54	1.94	0.10	0.09	0.00	394.46	0.13	0.00	398.71
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rollers	0.19	1.88	1.92	0.12	0.11	0.00	254.09	0.08	0.00	256.83
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.19	2.26	1.90	0.11	0.10	0.00	300.90	0.10	0.00	304.14
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day		0.82	9.59	8.36	0.45	0.41	0.01	1,404.51	0.45	0.01	1,419.64
	Paving	tons per phase		0.00	0.03	0.03	0.00	0.00	0.00	4.63	0.00	0.00	4.68
Total Emissions all Phases (tons per construction period) =>				0.02	0.25	0.25	0.01	0.01	0.00	48.51	0.02	0.00	49.03

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

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Daily Emission Estimates for -> Tassajara Hills Pipeline Project

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.17	12.46	12.06	22.48	0.58	21.90	5.07	0.52	4.56	0.03	2,654.50	0.76	0.05	2,688.35
Grading/Excavation	1.28	14.11	12.21	22.54	0.64	21.90	5.10	0.54	4.56	0.03	3,108.79	0.77	0.06	3,146.76
Drainage/Utilities/Sub-Grade	1.24	13.45	12.15	22.51	0.61	21.90	5.09	0.53	4.56	0.03	2,927.07	0.76	0.06	2,963.39
Paving	0.89	10.73	8.76	0.50	0.50	0.00	0.44	0.44	0.00	0.02	1,864.27	0.46	0.05	1,889.51
Maximum (pounds/day)	1.28	14.11	12.21	22.54	0.64	21.90	5.10	0.54	4.56	0.03	3,108.79	0.77	0.06	3,146.76
Total (tons/construction project)	0.03	0.29	0.26	0.42	0.01	0.41	0.10	0.01	0.09	0.00	61.89	0.02	0.00	62.66

Notes:

Project Start Year ->	2021
Project Length (months) ->	2
Total Project Area (acres) ->	2
Maximum Area Disturbed/Day (acres) ->	2
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	200	40
Grading/Excavation	0	0	0	0	800	40
Drainage/Utilities/Sub-Grade	0	0	0	0	560	40
Paving	0	0	0	0	400	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Tassajara Hills Pipeline Project

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.03	0.03	0.05	0.00	0.05	0.01	0.00	0.01	0.00	5.84	0.00	0.00	5.37
Grading/Excavation	0.01	0.12	0.11	0.20	0.01	0.19	0.04	0.00	0.04	0.00	27.36	0.01	0.00	25.12
Drainage/Utilities/Sub-Grade	0.01	0.10	0.09	0.17	0.00	0.17	0.04	0.00	0.04	0.00	22.54	0.01	0.00	20.70
Paving	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.15	0.00	0.00	5.66
Maximum (tons/phase)	0.01	0.12	0.11	0.20	0.01	0.19	0.04	0.00	0.04	0.00	27.36	0.01	0.00	25.12
Total (tons/construction project)	0.03	0.29	0.26	0.42	0.01	0.41	0.10	0.01	0.09	0.00	61.89	0.02	0.00	56.84

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

APPENDIX B

MITIGATION MONITORING AND REPORTING PROGRAM

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MITIGATION MONITORING AND REPORTING PROGRAM

This Draft Mitigation Monitoring and Reporting Program (MMRP) is formulated based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) published in March 2021. The MMRP, which is found in Table A, lists mitigation measures recommended in the IS/MND prepared for the Tassajara Hills Pipeline Project (project) and identifies mitigation monitoring requirements.

This MMRP has been prepared to comply with the requirements of State law (Public Resources Code Section 21081.6). State law requires the Lead Agency to adopt an MMRP when mitigation measures are required to avoid significant impacts. The MMRP is intended to ensure compliance with the mitigation measures identified in the IS/MND during implementation of the project.

The MMRP is organized in a matrix format. The first column identifies the recommended mitigation measures. The second column, entitled *Implementation Actions*, refers to the actions taken by the party responsible for oversight to ensure compliance. The third column, entitled *Timing Requirements,* refers to when the monitoring will occur to ensure that the mitigating action is completed. The fourth column, entitled *Monitoring/Reporting Responsibility* refers to the party responsible for oversight or ensuring that the mitigation measure is implemented. The fifth column, entitled *Verified By and Date*, refers to the party and date the action was verified as complete.

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Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
AIR QUALITY				
AIR-1: In order to meet the BAAQMD fugitive dust threshold, the following BAAQMD Basic Construction Mitigation Measures shall be implemented: ● All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered once a day. ● All haul trucks transporting soil, sand, or other loose material off site shall be covered. ● All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ● All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. ● Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points. ● All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. ● A publicly visible sign shall be posted with the telephone number and person to contact at Dublin San Ramon Services District (DSRSD) or DSRSD's representative regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.	● Include measure as Condition of Approval. ● Implementation actions are outlined in the measure.	Throughout the construction period.	● Dublin San Ramon Services District (DSRSD) is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. ● The Construction Contractor is responsible for implementing this measure.	
BIOLOGICAL RESOURCES				
BIO-1: The following conservation measures shall be implemented prior to and during pipeline installation to avoid impacts to CTS and CRLF: ● Prior to initial ground disturbance, the DSRSD shall submit the	● Include measure as Condition of Approval ● Incorporate	Prior to and during pipeline installation.	● DSRSD is responsible for incorporating this measure into contract specifications, hiring a	

Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
name(s) and credentials of biologists who will conduct activities specified in the following measures. No ground disturbance activities shall begin until proponents have received written approval from the CDFW and/or USFWS that the biologist(s) is/are qualified to conduct the work. ● A qualified biologist shall train all project staff regarding habitat sensitivity, identification of listed species, and required practices before the start of construction. The training shall include the measures described in this mitigation measure to conserve this species as they relate to the project, the penalties for non-compliance, and the boundaries of the project site. A fact sheet or other supporting materials containing this information shall be prepared and distributed. ● A qualified biologist shall monitor all ground disturbing construction activities. After initial ground disturbing activities are complete, the qualified biologist shall train an individual to act as the on-site construction monitor. The on-site monitor shall have attended the training described above. Both the qualified biologist and the construction monitor shall have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The biologist and construction monitor shall complete daily logs summarizing activities and environmental compliance. ● A preconstruction survey for CRLF and CTS shall be conducted in and adjacent to the bore and receiving pits by a qualified biologist. The survey shall be conducted within 24 hours prior to the start of construction. During the pre-construction survey, the entire construction area shall be inspected. If any CRLF or CTS are found, CDFS and/or USFWS shall be contacted and the qualified biologist shall be allowed sufficient time to move any individuals from the work site before work activities begin. Only qualified biologists shall participate in activities associated with the capture, handling, and monitoring of CRLF or CTS. All relocations shall be reported to CDFW and/or USFWS. Any biologist involved	measure as part of construction specifications		qualified biologist, and ensuring this measure is implemented. ● A qualified biologist is responsible for training project staff, monitoring ground disturbing activities, conducting preconstruction surveys, inspecting the bore and receiving pits, and moving entrapped animals, if needed. ● The Construction Contractor is responsible for delineating the construction work zone, establishing exclusion fencing, minimizing disturbances, instituting a litter control program, and restricting construction vehicle parking to disturbed areas.	

Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
with the surveying/handling shall employ sterilization techniques appropriate to avoid the transmission of diseases to and from the site. If no CRLF or CTS are found during this survey, survey results shall be provided in writing to the CDFW and/or USFWS. ● The boundaries of the bore and receiving pits shall be delineated prior to the initiation of construction activities, and exclusion fencing shall be installed around their boundary. Exclusion fencing would keep CRLF and CTS from crossing into the construction area during the construction period and would prevent inadvertent disturbance of additional areas by construction activities. Exclusion fencing shall consist of silt fabric at least 3 feet high. The base of the fence shall be buried in the ground a minimum of 6 inches to prevent animals from crawling under. The remainder of the fence shall be above ground to serve as a barrier for animals moving on the ground surface. The fence shall be pulled taut at each support to prevent folds or snags. ● The bore and receiving pits shall be inspected for entrapped wildlife before commencement of drilling activities every morning. Any special-status species discovered shall be removed by a qualified biologist and relocated to an area outside the exclusion fence before construction activities resume. All other species of entrapped wildlife shall be moved by the on-site construction monitor if the qualified biologist is not on-site. Pipes that are stored on the site shall be inspected for trapped animals before the pipe is used in any way. Pipes in or adjacent to trenches left overnight shall be capped. ● Permanent and temporary construction disturbances and other types of project-related disturbance to habitat shall be minimized to the maximum extent practicable and confined to the sites of any exploratory geotechnical investigation and the bore pits. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, and specifically designated access areas. These areas should be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous				

Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
activities to prevent further adverse effects. ● Exploratory drill rig access routes shall be identified prior to drill rig entry into the project area and shall be surveyed for ground squirrel burrows, other small mammal burrows and potential kit fox dens. All burrows detected along these routes shall be marked with pin flags. ● The drill rig shall be accompanied by the project biologist who would walk in front of the rig as it approaches and leaves all test bore sites, directing it to avoid the identified burrows. ● Tightly woven fiber netting or similar material used for erosion control or other purposes at the project site shall not contain plastic monofilament netting to ensure that California tiger salamanders do not become entangled in the mesh. Coconut coir matting is an acceptable erosion control material. ● A litter control program shall be instituted at the project site. All workers shall ensure their food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project site are deposited in covered or closed trash containers. Containers shall be removed from the project site at the end of each working day. ● To avoid entrapment of listed species and prevent injury or mortality of listed species resulting from drilling activities, all open excavated areas more than 6 inches deep (the bore and receiving pits) shall be provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each workday. The qualified biologist or construction personnel designated by the biologist shall be responsible for thoroughly inspecting the bore and receiving pits for listed species at the beginning of each workday. If any listed species have become trapped, the qualified biologist shall be contacted to relocate the animal, and no work shall occur in that area until approved by the biologist. Relocation of other wildlife species may be done by the on-site construction monitor. CDFW and/or USFWS shall be notified of all species relocations. ● All construction vehicle parking shall be restricted to existing				

Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
disturbed areas. Necessary vehicles belonging to the biological monitors and construction workers shall be parked at the nearest point of entry on existing access roads and streets. ● A qualified biologist shall ensure that the spread or introduction of invasive exotic plant species would be avoided to the maximum extent possible. When practicable, invasive exotic plants in the project site shall be removed				
CULTURAL RESOURCES				
CULT-1: Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources), the DSRSD shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recording the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods, findings, and recommendations shall be prepared by the qualified archaeologist and submitted to the DSRSD for review, and the final report shall be submitted to the Northwest Information Center at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate local curation facility and used for future research and public interpretive displays, as appropriate.	● Include measure as Condition of Approval. ● Incorporate measure as part of construction specifications.	Prior to and throughout the construction period.	● DSRSD is responsible for incorporating this measure into contract specifications, hiring a qualified archaeologist (if discoveries are made), and for ensuring compliance during construction. ● The qualified archaeologist is responsible for determining the appropriate treatment of the discovery. ● The Construction Contractor is responsible for cooperating with the qualified archaeologist if resources are discovered.	
GEOLOGY AND SOILS				
GEO-1: If fossil remains or paleontologically sensitive bedrock is exposed during project construction, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist shall be contacted to review the find. The project team (the DSRSD and the paleontologist) shall develop and implement a plan for impact	● Include measure as Condition of Approval. ● Incorporate measure as part of	Throughout the construction period.	● DSRSD is responsible for incorporating this measure into contract specifications, hiring a qualified paleontologist (if	

Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
avoidance. Should avoidance be infeasible due to engineering requirements, the project team shall develop and implement a plan to offset the loss of paleontological data through the implementation of a data recovery project, including paleontological recovery. If determined to be a unique paleontological resource, the potentially significant impacts caused by construction may be mitigated through monitoring during construction activity (beyond the area of the initial find), and, if warranted by potential finds, recovery of fossils; preservation, stabilization, and identification of collected resources; curation of resources into a museum repository; and preparation of a final report documenting the monitoring methods and results, to be submitted to the DSRSD	construction specifications.		discoveries are made), and for ensuring compliance during construction. ● The qualified paleontologist is responsible for determining the appropriate treatment of the discovery. ● The Construction Contractor is responsible for cooperating with the qualified paleontologist if resources are discovered.	
HAZARDS AND HAZARDOUS MATERIALS				
HAZ-1: The DSRSD shall ensure that appropriate measures be taken to minimize the risk of fire during construction activities. Specifically, the DSRSD shall require that all fire safety regulations cited in the California Public Resources Code be incorporated into construction bid documents and contracts for the project, including regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Additionally, special precautions shall be identified and taken to minimize the potential for fires resulting from the welding and fusing processes necessary for linking sections of pipeline together. BMPs shall be implemented during construction to reduce the potential for accidental spills or fires involving the use of hazardous materials	● Include measure as Condition of Approval. ● Incorporate measure as part of construction specifications.	Throughout the construction period.	● DSRSD is responsible for incorporating this measure into contract specifications, and for ensuring compliance during construction ● The Construction Contractor is responsible for implementing fire safety regulations during construction.	
NOISE				
NOI-1: Prior to commencement of construction activities, DSRSD staff shall verify that grading and construction plans include the following requirements to ensure that the greatest distance between noise sources and sensitive receptors during construction	● Include measure as Condition of Approval. ● Incorporate	Throughout the construction period	● DSRSD is responsible for incorporating this measure into contract specifications and for	

Table A: Mitigation Monitoring and Reporting Program

Mitigation Measure	Implementation Actions	Timing Requirements	Monitoring/Reporting Responsibility	Verified By and Date
activities has been achieved: ● Construction activities occurring as part of the project shall be subject to the limitations and requirements of the Alameda County Municipal Code, which states that construction activities are restricted to between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday and between 8:00 a.m. and 5:00 p.m. on Saturdays and Sundays. ● During all project area excavation and on-site grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. ● Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site. ● Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all construction activities. ● Designate a "disturbance coordinator" at the DSRSD who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.	measure as part of construction specifications.		ensuring compliance during construction. ● The Construction Contractor is responsible for implementing this measure.	
NOI-2: The use of heavy construction equipment, such as large bulldozers or excavators, within 15 feet of existing structures shall be prohibited.	● Include measure as Condition of Approval. ● Incorporate measure as part of construction specifications.	Throughout the construction period	● DSRSD is responsible for incorporating this measure into contract specifications and for ensuring compliance during construction. ● The Construction Contractor is responsible for implementing this measure.	

Source: LSA (2021).

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Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: June 1, 2021

TITLE: Public Hearing: Receive Presentation and Public Comments on Draft 2020 Urban Water Management Plan (UWMP), Draft Water Shortage Contingency Plan (WSCP), and Draft Addendum to the 2015 UWMP, and Provide Direction

RECOMMENDATION:

Staff recommends the Board of Directors hold a public hearing to receive a presentation and public comments on the Draft 2020 Urban Water Management Plan (UWMP), Draft Water Shortage Contingency Plan (WSCP), and Draft Addendum to the 2015 UWMP, and provide direction regarding desired changes.

SUMMARY:

Staff has completed a draft of the District's 2020 UWMP and Water Shortage Contingency Plan. The public review period for the draft UWMP and Water Shortage Contingency Plan began May 24 and ends on June 15, 2021. A public hearing will be held at the June 1, 2021 Board meeting to receive public comments on the documents. The final 2020 UWMP is scheduled to be adopted by the Board at its June 15, 2021 regular meeting.

DISCUSSION:

Every five years, all California urban water suppliers serving more than 3,000 customers are required to prepare an UWMP in accordance with the Urban Water Management Planning Act passed by the California Legislature in 1983. The UWMP assesses water supplies against expected water needs over a 20-year planning horizon.

The California Department of Water Resources (DWR) provides a prescriptive guidebook and templates for preparation of UWMPs. UWMPs must evaluate water supplies under normal, single dry, and multiple dry water year scenarios. Because DSRSD's potable water is supplied by the Zone 7 Water Agency (Zone 7), DSRSD worked closely with Zone 7 in the preparation of the UWMP. The UWMP indicates, on average, no shortages are expected if potential future water supply and storage projects are implemented. Potential future water supply projects include the Bay Area Regional Desalination Project, a local potable reuse project, the Los Vaqueros Reservoir Expansion and Transfer-Bethany Pipeline, the Delta Conveyance Project, and Sites Reservoir. A portfolio of these projects, likely a subset, will be needed to address future supply deficits. The Zone 7 UWMP includes 5,000 acre-feet (AF) of water transfers through 2030, 5,000 AF from potable reuse and/or desalination, and 10,000 AF from Sites Reservoir as a potential sample portfolio.

The UWMP also outlines the District's efforts to address future water supply uncertainties utilizing a diversified portfolio that includes recycled water and conservation programs. The UWMP references the District's recently completed 2021 Alternative Water Supply Study and the potential near-term actions that DSRSD could implement that would be complementary to larger regional projects pursued by Zone 7.

Included in the UWMP is a Water Shortage Contingency Plan which defines six water shortage stages ranging from 10 percent to over 50 percent conforming with the state's stages, includes an annual process for assessing potential gaps between planned water supply and demands, and provides appropriate District actions to close the water shortage gap at each stage. A brief discussion of the Water Shortage Contingency Plan is included in Chapter 8 of the UWMP and the detailed plan is included in Appendix M.

The UWMP must also demonstrate consistency with the Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code of Regulations, Title 23, § 5003). The Delta Plan, adopted in 2013 by the Delta Stewardship Council, is a plan guiding how federal, state, and local agencies manage the Delta's water and environmental resources. Delta Plan Policy WR P1 identifies UWMPs as the tool to demonstrate consistency with

Originating Department: Engineering Services	**Contact: J. Zavadil**	**Legal Review: Not Required**
Financial Review: Not Required	**Cost and Funding Source: N/A**	
Attachments: ☐ None ☐ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☒ Other (see list on right)	**Attachment 1 – Draft 2020 Urban Water Management**	

state policy to reduce reliance on the Delta for a water supplier that takes part in a covered action. Covered actions include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. DWR had not developed guidance on how to interpret or demonstrate consistency with the Delta Plan prior to the 2015 UWMP due date. DWR is now requiring the information be provided as an addendum to the 2015 UWMP. Compared to the prescribed 2010 baseline, DSRSD has reduced its reliance on the Delta through water use efficiency, water recycling, and groundwater pumping quota, consistent with the Delta Plan. Appendix B of the draft 2020 UWMP is an addendum to the 2015 UWMP to demonstrate consistency with the Delta Plan.

The UWMP and Water Shortage Contingency Plan are important reference documents. They are required for state grant eligibility and used as a source for updates by the State to the California Water Plan. The UWMP also reports on the District's achievement in meeting and surpassing the requirements of the Water Conservation Act of 2009, which seeks a statewide 20 percent reduction in urban per capita water use by the year 2020.

The UWMP will be used as the foundational document for SB 610 Water Supply Assessments and SB 221 Written Verifications of Water Supply analyses. These analyses are required for development projects that present increased water demands equivalent to 500 residential units, or a 10 percent increase in water demands. The analyses must be considered by the cities or counties of land use entitlement jurisdiction prior to approving these types of projects.

The public review period for the draft UWMP and Water Shortage Contingency Plan began May 24 and ends on June 15, 2021. A public hearing will be held at the June 1, 2021 Board Meeting to receive public comments on the documents. Public comments on the draft need to be reviewed by the District, and at the discretion of the District may or may not be incorporated into the final 2020 UWMP.

The final 2020 UWMP is scheduled to be adopted by the Board at its June 15, 2021 regular meeting. After adoption, the final 2020 UWMP will be submitted to DWR for verification of completeness within 30 days, as required by law. The 2020 UWMP is due to DWR no later than July 1, 2021. The draft 2020 UWMP is attached, and the full draft report is available on the DSRSD website: https://www.dsrsd.com/about-us/library/plans-studies.

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2020 Urban Water Management Plan







PREPARED FOR

Dublin San Ramon Services District

Water, wastewater, recycled water

PREPARED BY

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Water. Engineered.

2020 Urban Water Management Plan

Prepared for

Dublin San Ramon Services District

Project No. 406-60-20-77

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Project Manager: Elizabeth Drayer, PE	Date
QA/QC Review: Jim Connell, PE	Date

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LIST OF ACRONYMS AND ABBREVIATIONS

2018 LHMP	2018 Tri-Valley Local Hazard Mitigation Plan
AB	Assembly Bill
ABAG	Association of Bay Area Governments
Act	Urban Water Management Planning Act
ACWA	Association of California Water Agencies
ACWD	Alameda County Water District

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ADWF	Average Dry Weather Flow
AF	Acre-Feet
AFY	Acre-Feet of Water Annually
Alternative GSP	Alternative Groundwater Sustainability Plan
AMI	Advanced Metering Infrastructure
Authority	Sites Project Authority
AWIA	America's Water Infrastructure Act
AWSS	Alternative Water Supply Study
AWWA	American Water Works Association
BACWA	Bay Area Clean Water Agencies
BARDP	Bay Area Regional Desalination Project
BARR	Bay Area Regional Reliability
BAWSCA	Bay Area Water Supply and Conservation Agency
Cal Water	California Water Service – Livermore District
CalWEP	California Water Efficiency Partnership
CASA	California Association of Sanitation Agencies
CASGEM	California Statewide Groundwater Elevation Monitoring
CCCSD	Central Contra Costa Sanitary District
CCWD	Contra Costa Water District
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cfs	Cubic Feet Per Second
CII	Commercial, Industrial and Institutional
CIMIS	California Irrigation Management Information System
CIP	Capital Improvement Program
COA	Coordinated Operations Agreement
Cr(VI)	Hexavalent Chromium
CUWCC	California Urban Water Conservation Council
DBP	Disinfectant Byproducts
DCP	Delta Conveyance Project
Delta	Sacramento-San Joaquin Delta
DERWA	DSRSD-EBMUD Recycled Water Authority
DLD	Dedicated Land Disposal
DMM	Demand Management Measures
DOF	California Department of Finance
DRA	Drought Risk Assessment
DSRSD	Dublin San Ramon Services Water District
Dublin	City of Dublin
DVWTP	Del Valle Water Treatment Plant

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DWR	Department of Water Resources
DWR Guidebook	2020 Urban Water Management Plans Guidebook for Urban Water Suppliers
EBDA	East Bay Discharges Authority
EBMUD	East Bay Municipal Utility District
EDSP	Eastern Dublin Specific Plan
EIR	Environmental Impact Report
ET_o	Evapotranspiration
FCI	Federal Correctional Institution
FDC	Flow Duration Controls
FEMA	Federal Emergency Management Agency
General Order 2016	General Water Reuse Order No. WQ 2016-0068-DDW
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GMP	Groundwater Management Plan
GPCD	Gallons Per Capita Per Day
GPQ	Groundwater Pumping Quota
GSA	Groundwater Sustainability Agency
InSAR	Interferometric Synthetic Aperture Radar
JPA	Joint Powers Authority
LAVWMA	Livermore-Amador Valley Water Management Agency
Livermore	City of Livermore
LVE	Los Vaqueros Reservoir Expansion
M&I	Municipal and Industrial
MCL	Maximum Contaminant Level
MFUV	Microfiltration and Ultraviolet
MGD	Million Gallons Per Day
MGDP	Mocho Groundwater Demineralization Plant
MMWD	Marin Municipal Water District
MTC	Metropolitan Transportation Commission
NAICS	North American Industry Classification System
NMP	Nutrient Management Plan
NOP	Notice of Preparation
Parks RFTA	U.S. Army Reserve's Parks Reserve Forces Training Area
PFAS	Polyfluoroalkyl Substances
Pleasanton	City of Pleasanton
RRA	Risk and Resilience Assessment
RUWMP	Regional Urban Water Management Plan
RWQCB	Regional Water Quality Control Board
RWTF	Recycled Water Treatment Facility

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San Ramon	City of San Ramon
SB X7-7	Senate's Seventh Extraordinary Session of 2009
SBA	South Bay Aqueduct
SFPUC	Francisco Public Utilities Commission
SFUV	Sand Filtration and Ultraviolet
SGMA	Sustainable Groundwater Management Act
SMP	Salt Management Plan
SNMP	Salt and Nutrient Management Plan
SRVRWP	San Ramon Valley Recycled Water Program
SWP	State Water Project
T&O	Taste and Odor
TAF	Thousand Acre-Feet
target	2020 Urban Water Use Target
TDS	Total Dissolved Solids
TOC/DOC	Total and Dissolved Organic Carbon
TRE	TRE Altamira
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VW	Valley Water (formerly known as Santa Clara Valley Water District)
WSCP	Water Shortage Contingency Plan
WSE	Water Supply Evaluation
WUE	Water Use Efficiency
WWTP	Wastewater Treatment Plant
Yuba Accord	Lower Yuba River Accord
Zone 7	Zone 7 Water Agency

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An Urban Water Management Plan (UWMP) helps water suppliers assess the availability and reliability of their water supplies and current and projected water use to help ensure reliable water service under different conditions. This water supply planning is especially critical for California currently, as climate change alters rainfall and snowfall (impacting water supply availability) and development occurs statewide (increasing the need for reliable water supplies). The Urban Water Management Planning Act (Act) requires larger water suppliers that provide water to urban users (whether directly or indirectly) to develop UWMPs every five years. UWMPs evaluate conditions for the next 20 years, so these regular updates ensure continued, long-term planning.

Dublin San Ramon Services Water District (DSRSD) is a water retailer (also referred to as a retail water agency), meaning it sells water directly to individual water users (e.g., residents and businesses). DSRSD purchases most of its water supplies from Zone 7 Water Agency (Zone 7). Besides DSRSD, Zone 7's retailers consist of the California Water Service-Livermore District, the City of Livermore, and the City of Pleasanton. Because DSRSD provides water to more than 3,000 users, it is required to prepare a UWMP.

This Executive Summary serves as a Lay Description of DSRSD's UWMP, as required by California Water Code §10630.5.

CALIFORNIA WATER CODE REQUIREMENTS

The California Water Code documents specific requirements for California water suppliers. The Act is included in the California Water Code and specifies the required elements of a UWMP, including discussing an agency's water system and facilities, calculating how much water its customers use (i.e., water demand) and how much it can supply, and detailing how it would respond during a drought or other water supply shortage. Also, a UWMP must describe what specific coordination steps were taken to prepare, review, and adopt the plan.

The Act has been revised over the years. The Water Conservation Act of 2009 (also known as SB X7-7) required retail water agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. In 2020, retail water agencies are required to report on their compliance with SB X7-7.

The 2012 to 2016 drought led to further revisions to the Act to improve water supply planning for long-term reliability and resilience to drought and climate change. These revisions were formalized in the 2018 Water Conservation Legislation and include:

- Five Consecutive Dry-Year Water Reliability Assessment: Analyze water supply reliability for five consecutive dry years over the planning period of this UWMP (see Chapter 7).
- Drought Risk Assessment: Assess water supply reliability from 2021 to 2025 assuming that the next five years are dry years (see Chapter 7).
- Seismic Risk: Identify the seismic risk to the agency's water facilities and have a plan to address identified risks; the region's Local Hazard Mitigation Plan may address this requirement (see Chapter 8).
- Energy Use Information: If data is available, include reporting on the amount of electricity used to obtain, treat, and distribute water (see Chapter 6).

- Water Shortage Contingency Plan (WSCP): Update the agency's plan to include an annual process for assessing potential gaps between planned water supply and demands; conform with the State's standard water shortage levels (including a shortage level greater than 50 percent) for consistent messaging and reporting; and provide water shortage responses that are locally appropriate (see Chapter 8).
- Lay Description: Provide a lay description of the findings of the UWMP; this Executive Summary serves as the "Lay Description" for this 2020 UWMP.

Major components and findings of DSRSD's 2020 UWMP are summarized below.

DSRSD WATER SYSTEM

DSRSD's water facilities store, and deliver drinking (i.e., potable) water to its customers in the City of Dublin and the Dougherty Valley in the City of San Ramon, California, which include DSRSD residents and commercial customers. DSRSD purchases treated potable water from Zone 7. DSRSD also owns and operates an extensive network of storage, pumping, and pipeline facilities to deliver drinking water to its customers.

Besides drinking water, DSRSD also has separate facilities to produce and deliver recycled water to a portion of customers within its service area, mainly for landscape irrigation. Recycled water is highly treated wastewater that can be used for non-potable purposes like landscape irrigation, toilet flushing, and cooling. DSRSD owns and operates a recycled water treatment plant, and an extensive network of storage, pumping and pipeline facilities to distribute recycled water.

WATER USE BY DSRSD CUSTOMERS

DSRSD anticipates growth in the next 10 years, which would increase its demand for water and expected to reach buildout by 2035. Thorough and accurate accounting of current and future water demands is critical for DSRSD's planning efforts. To continue delivering safe and reliable drinking water, DSRSD must know how much water its customers currently use and how much they expect to use in the future.

DSRSD coordinated closely with Zone 7 to estimate water demands through the year 2045. This process involved reviewing DSRSD's development and planning documents. DSRSD's potable and recycled water demand is expected to increase approximately 23 and 47 percent (from 2020 levels), respectively, by 2035 and then stay constant through 2045.

DSRSD WATER SUPPLIES

DSRSD's water supplies consist of potable water purchases from Zone 7 and augmented recycled water produced at DSRSD's Recycled Water Treatment Facilities.

The future reliability of Zone 7's imported water is a concern. Drought, sea level rise, and natural disasters threaten the Sacramento-San Joaquin Delta (Delta), a critical component of the delivery system bringing water to Zone 7. As a result, Zone 7 is participating in and evaluating various projects that would provide alternate water supplies and/or storage, or protect, the existing delivery system against threats. These projects include installing a new diversion or conveyance system for Delta supplies, desalinating brackish water (water with high salt content), reusing highly treated wastewater for potable reuse, participating in the

construction of a new reservoir to capture surplus water from the Sacramento River, expanding an existing reservoir near Zone 7 for additional storage, and adding a new connection to the South Bay Aqueduct.

Based on Zone 7's efforts and DSRSD's continued use of recycled water, DSRSD's future water supplies are expected to keep pace with its water demands.

CONSERVATION TARGET COMPLIANCE

In its 2015 UWMP, DSRSD achieved its interim water use target and confirmed its 2020 water use target based on 2010 Census data. In 2020, DSRSD achieved its 20 percent reduction target in accordance with SB X7-7. This was the result of continued water conservation by its customers following the recent drought. Conservation will continue to play a key role in achieving long-term water supply reliability for DSRSD.

DSRSD WATER SERVICE RELIABILITY

The California Water Code asks agencies to evaluate their water service reliability by examining the impact of drought on their water supplies and comparing those reduced supplies to water demands. Specifically, agencies should calculate their water supplies during a single dry year and five consecutive dry years using historical records. For example, DSRSD can estimate its purchased supply from Zone 7 during a single dry year by looking at how much it purchased during the driest year on record. If that historical "dry year" amount was reduced by 10 percent, then DSRSD can conservatively assume a similar 10 percent reduction in purchased supplies in a future dry year.

DSRSD is positioned to withstand the effects of a single dry year and a five-year drought. DSRSD's drought risk was specifically assessed between 2021 and 2025, assuming that the next five years are dry years. Based on Zone 7's ability to meet all its water demands during dry conditions, DSRSD is expected to have enough water supplies to meet water demands for a five-year drought beginning in 2021. This remains true for five-year droughts beginning in 2025, 2030, 2035, 2040, and 2045.

WATER SHORTAGE CONTINGENCY PLAN

A WSCP describes an agency's plan for preparing for and responding to water shortages. DSRSD updated its WSCP to include its process for assessing potential gaps between planned water supply and demands for the current year and the next potentially dry year. DSRSD aligned its water shortage levels with the State for consistent messaging and planned for locally appropriate water shortage responses. The WSCP may be used for foreseeable and unforeseeable events and is adopted concurrently with this UWMP by separate resolution to allow for updates as conditions change.

UWMP PREPARATION, REVIEW, AND ADOPTION

DSRSD developed this 2020 UWMP in coordination with Zone 7 and the public. While preparing its UWMP, DSRSD notified other stakeholders (e.g., Alameda County, Contra Costa County, California Water Service-Livermore District, City of Livermore, City of Pleasanton) of its preparation, its availability for review, and the public hearing prior to adoption. DSRSD encouraged community participation in the development of the 2020 UWMP using newspaper advertisements and web-based communication. These public notices included the time and place of the public hearing, as well as where the plan would be available for public inspection.

The public hearing provided an opportunity for DSRSD's water users and the general public to become familiar with the 2020 UWMP and ask questions about DSRSD's water supply, its continuing plans for providing a reliable, safe, high-quality water supply, and its plans to address potential water shortages. Following the public hearing, the DSRSD Board of Directors adopted the 2020 UWMP on June 1, 2021. A copy of the adopted Plan was submitted to the Department of Water Resources and is available on the DSRSD website (www.dsrsd.com).

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CHAPTER 1
Introduction

This chapter provides an introduction and overview of the Dublin San Ramon Services District (DSRSD), 2020 Urban Water Management Plan (UWMP) including the importance and extent of DSRSD's water management planning efforts, changes since the preparation of DSRSD's 2015 UWMP, and the organization of DSRSD's 2020 UWMP. This 2020 UWMP has been prepared jointly by District staff and West Yost.

1.1 INTRODUCTION

The Urban Water Management Planning Act (Act) was originally established by Assembly Bill (AB) 797 on September 21, 1983. Passage of the Act was recognition by state legislators that water is a limited resource and a declaration that efficient water use and conservation would be actively pursued throughout the state. The primary objective of the Act is to direct "urban water suppliers" to develop a UWMP that provides a framework for long-term water supply planning, and documents how urban water suppliers are carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future water demands. A copy of the current version of the Act, as incorporated in Sections 10610 through 10657 of the California Water Code, is provided in Appendix A of this plan.

1.2 IMPORTANCE AND EXTENT OF DISTRICT'S WATER MANAGEMENT PLANNING EFFORTS

The purpose of the UWMP is to provide a planning tool for DSRSD for developing and delivering municipal water supplies to DSRSD's water service area. This UWMP provides DSRSD with a water management action plan for guidance as water supply and demand conditions.

DSRSD has had a long history of providing clean and reliable water to its customers. DSRSD's UWMP is a comprehensive planning guide for a safe and adequate water supply.

1.3 CHANGES FROM 2015 UWMP

The Urban Water Management Planning Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the 2007 to 2009 drought, and as a result of the Governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009, also known as Senate Bill Seven of the Senate's Seventh Extraordinary Session of 2009 (SB X7-7). This act required agencies to establish water use targets for 2015 and 2020 that would result in statewide water savings of 20 percent by 2020. The 2014 to 2017 drought has led to further amendments to the California Water Code to improve water supply planning for long-term reliability and resilience to drought and climate change.

Summarized below are the major additions and changes to the California Water Code since DSRSD's 2015 UWMP was prepared.

- **Five Consecutive Dry-Year Water Reliability Assessment [CWC §10635(a)]:** The Legislature modified the dry year water reliability planning from a "multi-year" time period to a "drought lasting five consecutive water years" designation. This statutory change requires the urban water supplier to analyze its water supplies' reliability to meet its water use over

an extended drought period. This requirement is addressed in the water use assessment presented in Chapter 4; the water supply analysis presented in Chapter 6; and the water reliability determinations in Chapter 7 of this plan.

- **Drought Risk Assessment [CWC §10635(b)]:** The California Legislature created a new UWMP requirement for drought planning because of the significant duration of recent California droughts and the predictions about hydrologic variability attributable to climate change. The Drought Risk Assessment (DRA) requires the urban water supplier to assess water supply reliability over five years from 2021 to 2025 that examines water supplies, water uses, and the resulting water supply reliability under a reasonable prediction for five consecutive dry years. The DRA is discussed in Chapter 7 based on the water use information in Chapter 4; the water supply analysis is presented in Chapter 6; and the water reliability determinations are discussed in Chapter 7 of this plan.
- **Seismic Risk [CWC §10632.5]:** The Water Code now requires urban water suppliers to specifically address seismic risk to various water system facilities and to have a mitigation plan. Water supply infrastructure planning is correlated with the regional hazard mitigation plan associated with the urban water supplier. DSRSD's seismic risk is discussed in Chapter 8 of this plan.
- **Energy Use Information [CWC §10631.2]:** The Water Code now requires Suppliers to include readily obtainable information on estimated amounts of energy for their water supply extraction, treatment, distribution, storage, conveyance, and other water uses. The reporting of this information was voluntary in 2015.
- **Water Loss Reporting for Five Years [CWC §10608.34]:** The Water Code added the requirement to include the past five years of water loss audit reports as part of this UWMP.
- **Water Shortage Contingency Plan [CWC §10632]:** In 2018, the Legislature modified the UWMP laws to require a Water Shortage Contingency Plan (WSCP) with specific elements. The WSCP is a document that provides the urban water supplier with an action plan for a drought or catastrophic water supply shortage. Although the new requirements are more prescriptive than previous versions, many of these elements have long been included in WSCPs, other sections of UWMPs, or as part of the urban water supplier's standard procedures and response actions. Many of these actions were implemented by the urban water suppliers during the last drought to successfully meet changing local water supply challenges. The WSCP is used by DWR, the State Water Board, and the Legislature in addressing extreme drought conditions or statewide calamities that impact water supply availability. DSRSD's WSCP is presented in Chapter 8 and Appendix L of this plan.
- **Groundwater Supplies Coordination [CWC §10631(b)(4)]:** In 2014, the Legislature enacted the Sustainable Groundwater Management Act to address groundwater conditions throughout California. Water Code now requires 2020 UWMPs to be consistent with Groundwater Sustainability Plans in areas where those plans have been completed by Groundwater Sustainability Agencies. This requirement is addressed in Chapter 6 of this plan.
- **Lay Description [CWC §10630.5]:** The Legislature included a new statutory requirement for the urban water supplier to include a lay description of the fundamental determinations of the UWMP, especially regarding water service reliability, challenges ahead, and strategies for managing reliability risks. This section of the UWMP could be viewed as a go-to synopsis for new staff, new governing members, customers, and the media. It can ensure a consistent representation of the Supplier's detailed analysis. This requirement is addressed in the Executive Summary.

- **Water Loss Management [CWC §10608.34(a)(1)]:** The Legislature included a requirement for urban water suppliers to report on their plan to meet the water loss performance standards in their 2020 UWMPs. This requirement is addressed in the Demand Management Measures presented in Chapter 9 of this plan.

1.4 DEMONSTRATION OF CONSISTENCY WITH THE DELTA PLAN FOR PARTICIPANTS IN COVERED ACTION

Urban water suppliers that anticipate participating in or receiving water from a proposed project (covered action) such as a multiyear water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Sacramento-San Joaquin Delta (Delta) should provide information in their 2015 and 2020 UWMP's that can then be used in the certification of consistency process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (California Code Reg., tit. 23, § 5003). To demonstrate reduced reliance on the Delta and improve regional self-reliance, urban water suppliers are to:

1. Complete an Urban Water Management Plan;
2. Identify, evaluate, and commence implementation of programs and projects included in the UWMP that are locally cost effective and technically feasible in reducing reliance on the Delta; and
3. Include expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance in their UWMPs, commencing in their 2015 UWMPs and continuing in their subsequent UWMPs. The reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply.

DSRSD's wholesale water supplier is Zone 7 Water Agency (Zone 7), who is a contractor of the State Water Project (SWP). Through Zone 7, DSRSD anticipates participating in a covered action and is therefore required to demonstrate reduced Delta reliance. Appendix B of this UWMP demonstrates DSRSD's consistency with Delta Plan Policy WR P1, along with Zone 7 and the region's other water retailers—City of Pleasanton (Pleasanton), City of Livermore (Livermore), and California Water Service – Livermore District (Cal Water).

DSRSD completed and adopted its 2015 UWMP in June 2016. This 2020 UWMP was completed and adopted by DSRSD in June 2021. Chapter 6 (Water Supply) of DSRSD's 2015 and 2020 UWMPs describes and evaluates existing and future projects whose implementation improves regional self-reliance. Chapter 9 (Demand Management Measures) of DSRSD's 2015 and 2020 UWMPs describes demand management measures that DSRSD has implemented as part of its Water Conservation Program.

1.5 PLAN ORGANIZATION

This 2020 UWMP contains the appropriate sections and tables required per CWC Division 6, Part 2.6 (Urban Water Management Planning Act), included in Appendix A of this 2020 UWMP, and has been prepared based on guidance provided by the California Department of Water Resources (DWR) in their "2020 Urban Water Management Plans Guidebook for Urban Water Suppliers" (DWR Guidebook).

This 2020 UWMP is organized into the following chapters:

- Chapter 1: Introduction
- Chapter 2: Plan Preparation
- Chapter 3: System Description
- Chapter 4: Water Use Characterization
- Chapter 5: SB X7-7 Baselines, Targets, and 2020 Compliance
- Chapter 6: Water System Supply Characterization
- Chapter 7: Water System Reliability and Drought Risk Assessment
- Chapter 8: Water Shortage Contingency Plan
- Chapter 9: Demand Management Measures
- Chapter 10: Plan Adoption, Submittal and Implementation

This 2020 UWMP also contains the following appendices of supplemental information and data related to DSRSD's 2020 UWMP:

- Appendix A: Legislative Requirements
- Appendix B: Demonstration of Reduced Delta Reliance
- Appendix C: DWR 2020 Urban Water Management Plan Tables
- Appendix D: DWR 2020 Urban Water Management Plan Checklist
- Appendix E: Public Notices
- Appendix F: Distribution System Water Loss Audit Reports
- Appendix G: SB X7-7 Compliance Form
- Appendix H: Water Supply Contract and Amendment
- Appendix I: DSRSD-EBMUD Recycled Water Authority Resolution 19-3
- Appendix J: DSRSD 2021 Alternative Water Supply Study Executive Summary
- Appendix K: DSRSD Water Resiliency Policy
- Appendix L: Zone 7 Water Supply Policy (Resolution No. 13-4230)
- Appendix M: Water Shortage Contingency Plan
- Appendix N: DSRSD Water Waste Prevention Ordinances
- Appendix O: Water Conservation Outreach Materials
- Appendix P: UWMP and WSCP Adoption Resolutions

Furthermore, this 2020 UWMP contains all the tables recommended in the DWR Guidebook, both embedded into the UWMP chapters where appropriate and included in Appendix C.

DWR's Urban Water Management Plan Checklist, as provided in the DWR Guidebook, has been completed by West Yost to demonstrate the plan's compliance with applicable requirements. A copy of the completed checklist is included in Appendix D.

CHAPTER 2
Plan Preparation

This chapter describes the preparation of DSRSD's 2020 UWMP and WSCP, including the basis for the preparation of the plan, individual or regional planning, fiscal or calendar year reporting, units of measure, and plan coordination and outreach.

2.1 BASIS FOR PREPARING A PLAN

The Act requires every "urban water supplier" to prepare and adopt a UWMP, to periodically review its UWMP at least once every five years and make any amendments or changes which are indicated by the review. An "urban water supplier" is defined as a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually (AFY).

DSRSD is a water retailer and manages Water System CA0110009. As shown in Table 2-1, in 2020, DSRSD provided water to 25,521 customer connections and supplied 10,330 AF of potable water. Therefore, DSRSD is required to prepare a UWMP. DSRSD's last UWMP, the 2015 UWMP, was adopted by DSRSD Board of Directors on June 7, 2016.

Note that the California Environmental Quality Act (CEQA) does not apply to the preparation and adoption of a UWMP as stated in CWC 10652, and therefore did not require the public process associated with CEQA.

Table 2-1. Public Water Systems (DWR Table 2-1 Retail)

Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA0110009	Dublin San Ramon Services District	25,521	10,330
	TOTAL	25,521	10,330

NOTES: Units of measure is AF; number of connections and volume of water supplied is for potable water system only.
SOURCE: Dublin San Ramon Services District, Water Usage Report 2020, February 2021.

2.2 REGIONAL PLANNING

As described in Section 2.3 below, DSRSD has prepared this 2020 UWMP on an individual reporting basis, not part of a regional planning process. However, DSRSD routinely coordinates with the Zone 7 (the region's water wholesaler) and the region's other water retailers – Pleasanton, Livermore and Cal Water – on water supply matters and in conjunction with the assessment of the region's available water supply and projected water demands for Zone 7's 2019 Water Supply Evaluation (WSE) Update, 2020 UWMP and WSCP update. Zone 7 also assisted DSRSD in the preparation of this UWMP. Additionally, DSRSD regularly coordinates with East Bay Municipal Utility District (EBMUD) through the DSRSD-EBMUD Recycled Water Authority (DERWA) on recycled water supply matters.

2.3 INDIVIDUAL OR REGIONAL PLANNING AND COMPLIANCE

This 2020 UWMP has been prepared on an individual reporting basis covering only DSRSD's service area, see Table 2-2. DSRSD does not participate in a regional alliance, and it has not prepared a Regional Urban Water Management Plan (RUWMP). As described below in Section 2.5, DSRSD has notified and coordinated with appropriate regional agencies and constituents, including Zone 7, Pleasanton, Livermore, Cal Water, EBMUD, and DERWA.

Table 2-2. Plan Identification (DWR Table 2-2)

Select Only One	Type of Plan		Name of RUWMP or Regional Alliance *if applicable* (select from drop down list)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		

2.4 FISCAL OR CALENDAR YEAR AND UNITS OF MEASURE

DSRSD is a water retailer.

DSRSD's 2020 UWMP has been prepared on a calendar year basis, with the calendar year starting on January 1 and ending on December 31 of each year. Water use and planning data for the entire calendar year of 2020 has been included.

The water volumes in this 2020 UWMP are reported in units of acre-feet (AF).

DSRSD's reporting methods for this 2020 UWMP are summarized in Table 2-3.

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Table 2-3. Agency Identification (DWR Table 2-3)

Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP	
Unit	AF

2.5 COORDINATION AND OUTREACH

This section includes a discussion of DSRSD's inter-agency coordination and coordination with the general public. The UWMP Act requires DSRSD to coordinate the preparation of its UWMP and updates to its WSCP with other appropriate agencies and all departments within DSRSD, including other water suppliers that share a common source, water management agencies, and relevant public agencies. DSRSD coordinated the preparation of its Plan with Zone 7, Pleasanton, Livermore, Cal Water, EBMUD, and DERWA. These agencies, as well as the public, participated in the coordination and preparation of this 2020 UWMP, including the WSCP update, and are summarized below.

2.5.1 Wholesale and Retail Coordination

DSRSD is one of four water retailers that purchase water on a wholesale basis from Zone 7. As noted in Table 2-4, DSRSD notified Zone 7 of the development of its 2020 UWMP and provided Zone 7 with a copy of the draft Plan. In addition, DSRSD has participated in the development of Zone 7's UWMP by providing DSRSD's water demand projections and commenting on Zone 7's Draft UWMP. DSRSD, in turn, received information from Zone 7 on its existing and planned sources of water.

Table 2-4. Water Supplier Information Exchange (DWR Table 2-4 Retail)

The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name
Zone 7 Water Agency (Zone 7)

2.5.2 Coordination with Other Agencies and the Community

DSRSD actively encourages community participation in water management activities and specific water-related projects. DSRSD's public participation program includes both active and passive means of obtaining input from the community, such as mailings, public meetings, and web-based communication. DSRSD's website describes on-going projects and posts announcements of planned rate increases to fund these water projects.

As part of the 2020 UWMP and WSCP update, DSRSD facilitated a public review period. Public noticing, pursuant to Section 6066 of the Government Code, was conducted prior to commencement of a public comment period. Public hearing notices are included in Appendix E of this plan. During the public comment period, the Draft UWMP, which includes the updated WSCP, was made available on DSRSD's website (www.dsrsd.com) and at the DSRSD office, City of Dublin and San Ramon City Halls, and the following local libraries:

- Dublin Library at 200 Civic Plaza, Dublin, CA 94568; and
- Dougherty Station Library at 17017 Bollinger Canyon Road, San Ramon, CA 94583.

DSRSD also coordinated the preparation of this 2020 UWMP with several agencies, including relevant public agencies that utilize the same water supplies. These agencies included the following:

- City of Dublin (Dublin)
- City of San Ramon (San Ramon)
- Alameda County
- Contra Costa County
- Zone 7
- Cal Water
- Livermore
- Pleasanton
- U.S. Army Reserve's Parks Reserve Forces Training Area (Parks RFTA)
- Federal Bureau of Prison's Federal Correctional Institution at Dublin (FCI)
- Alameda County Santa Rita Jail
- Contra Costa Water District (CCWD)
- East Bay Municipal Utility District (EBMUD)
- East Bay Discharges Authority (EBDA)
- Livermore-Amador Valley Water Management Agency (LAVWMA)
- DSRSD-EBMUD Recycled Water Authority (DERWA)

The public hearing provided an opportunity for all DSRSD water users and the general public to become familiar with the UWMP and WSCP updates and ask questions about DSRSD's water supply, in addition to DSRSD's continuing plans for providing a reliable, safe, high-quality water supply.

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2.5.3 Notice to Cities and Counties

CWC Section 10621(b) requires agencies to notify the cities and counties to which they serve water at least 60 days in advance of the public hearing that the plan is being updated and reviewed. On March 10, 2021, a notice of preparation was sent to the cities and counties and other stakeholders, to inform them of the UWMP update process and schedule, and to solicit input for the 2020 UWMP and updated WSCP. The notifications to cities and counties, the public hearing notifications, and the public hearing and adoption are discussed in Chapter 10.

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CHAPTER 3
System Description

This chapter provides a description of DSRSD's water system and service area. This includes a description of the water system facilities, climate, population, and housing within DSRSD's service area.

3.1 GENERAL DESCRIPTION

DSRSD was formed in 1953 under the Community Services District Act, Government Code Sections 61000-61802, and was initially known as the Parks Community Services District. In 1963, the name was changed to Valley Community Services District. The initial water system was constructed by the Volk-McClain Company, which drilled wells for DSRSD along Dublin Boulevard in Dublin . DSRSD originally supplied water to San Ramon until EBMUD took over water service in 1967.

As the need for additional sources of water became apparent, DSRSD first entered into an agreement with Zone 7 in 1963 to acquire additional treated water supplies. DSRSD's most recent contract with Zone 7 went into effect on August 23, 1994 and has a 30-year term (until 2024). Discussion of the terms of the supply contract is provided in Chapter 6 of this UWMP. Other water retailers served by Zone 7 include Livermore, Pleasanton, and Cal Water.

Commercial and residential growth in the region since 1963 has required continuous increases in the capacity of Zone 7's treatment, pumping, storage, and distribution facilities, along with the expansion of DSRSD's water service area and water distribution system. Additional growth is anticipated in the region. DSRSD, in cooperation with Zone 7, has acquired additional water supplies to provide for this growth. These supplies include additional water from Zone 7 (including a water entitlement transfer for Dougherty Valley), groundwater, and recycled water. Current and projected water supplies are described in greater detail in Chapter 6 of this UWMP.

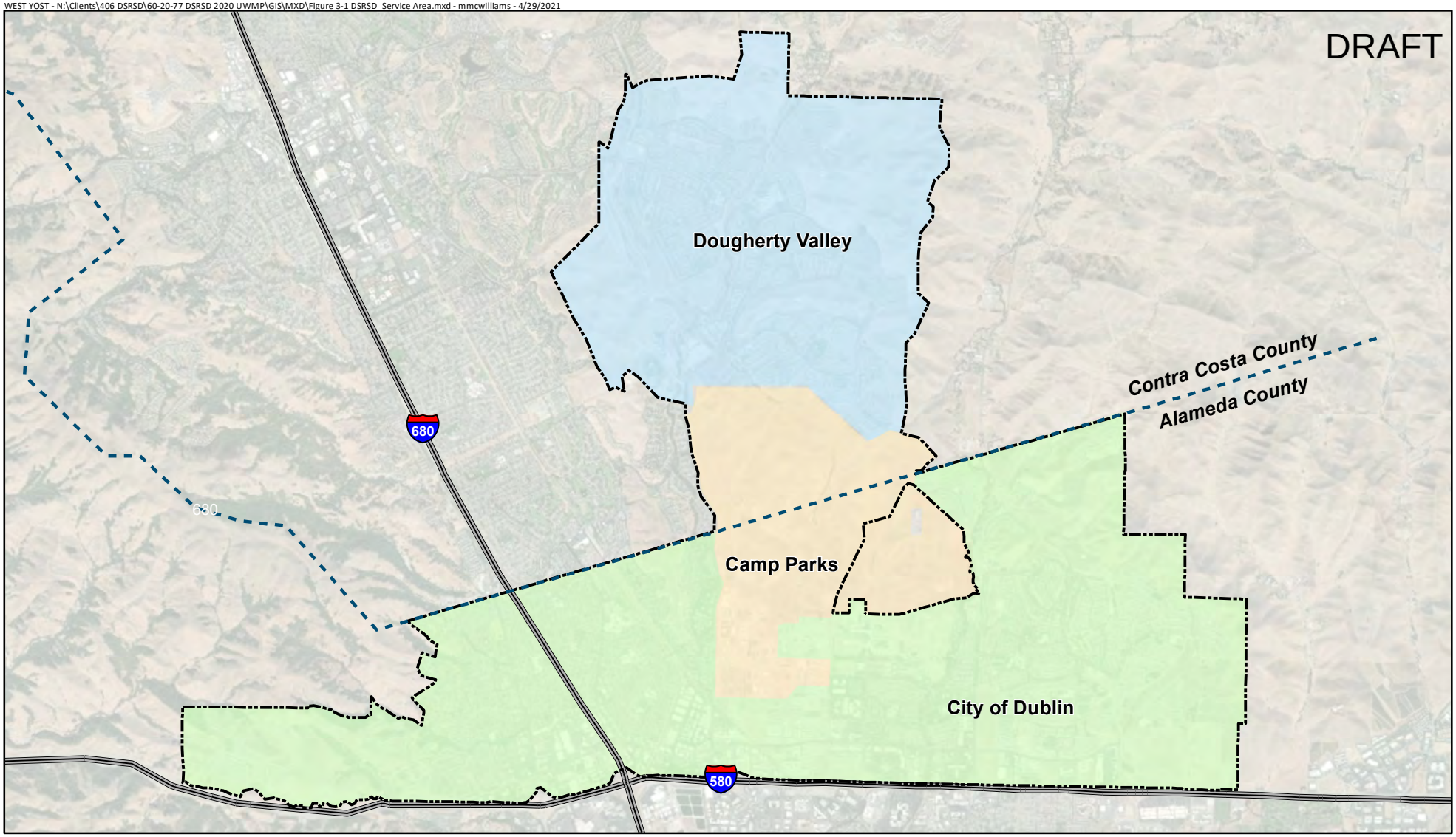
3.2 SERVICE AREA BOUNDARY

DSRSD's service area is located in the East (San Francisco) Bay's Livermore-Amador Valley near the Interstate 580/680 interchange. Currently, DSRSD is responsible for providing both potable and recycled water to its original service area in Dublin, as well as approved development in eastern Dublin, western Dublin, and the Dougherty Valley area of San Ramon in Contra Costa County. DSRSD's water service area also includes the Parks RFTA, which officially became part of the water system in 1999, FCI, and Alameda County's Santa Rita Jail.

Wastewater collection and treatment services are also provided by DSRSD for Dublin, Pleasanton, Parks RFTA, FCI, Santa Rita Jail, and the southern portion of San Ramon. DSRSD owns and operates a wastewater treatment plant in Pleasanton that has a capacity of 17 million gallons per day (MGD).

DSRSD currently (2020) supplies potable water to approximately 27,988 municipal connections (residential, commercial, construction, fire line, and landscape irrigation customers) in Dublin, California, and the Dougherty Valley in San Ramon, California. DSRSD also supplied recycled water to 474 customers connections in Dublin and Dougherty Valley by the end of 2020.

DSRSD's water service area is shown on Figure 3-1.





- Water Service Area
- Camp Parks
- Dougherty Valley
- City of Dublin

N

0 3,000 6,000

Scale in Feet

Figure 3-1

DSRSD Current Water Service Area

Dublin San Ramon Services District
2020 Urban Water Management Plan

3.3 WATER SYSTEM DESCRIPTION

DSRSD provides both potable water and recycled water services within its water service area. DSRSD's potable water and recycled water systems are presented in Figures 3-2 and 3-3, respectively.

3.3.1 Potable Water System Facilities and Pressure Zones

DSRSD has a total of eight pressure zones. The main pressure zone, Zone 1, is supplied directly from the Zone 7 through several turnouts. There are three pressure zones (Zones 2, 3, and 4) in western Dublin, two pressure zones (Zones 20 and 30) in eastern Dublin, and two pressure zones (Zone 200 and 300) in the Dougherty Valley that are supplied from Zone 1 through booster stations. DSRSD's potable water distribution system currently contains approximately 337 miles of potable water pipelines.

3.3.2 Recycled Water System Facilities

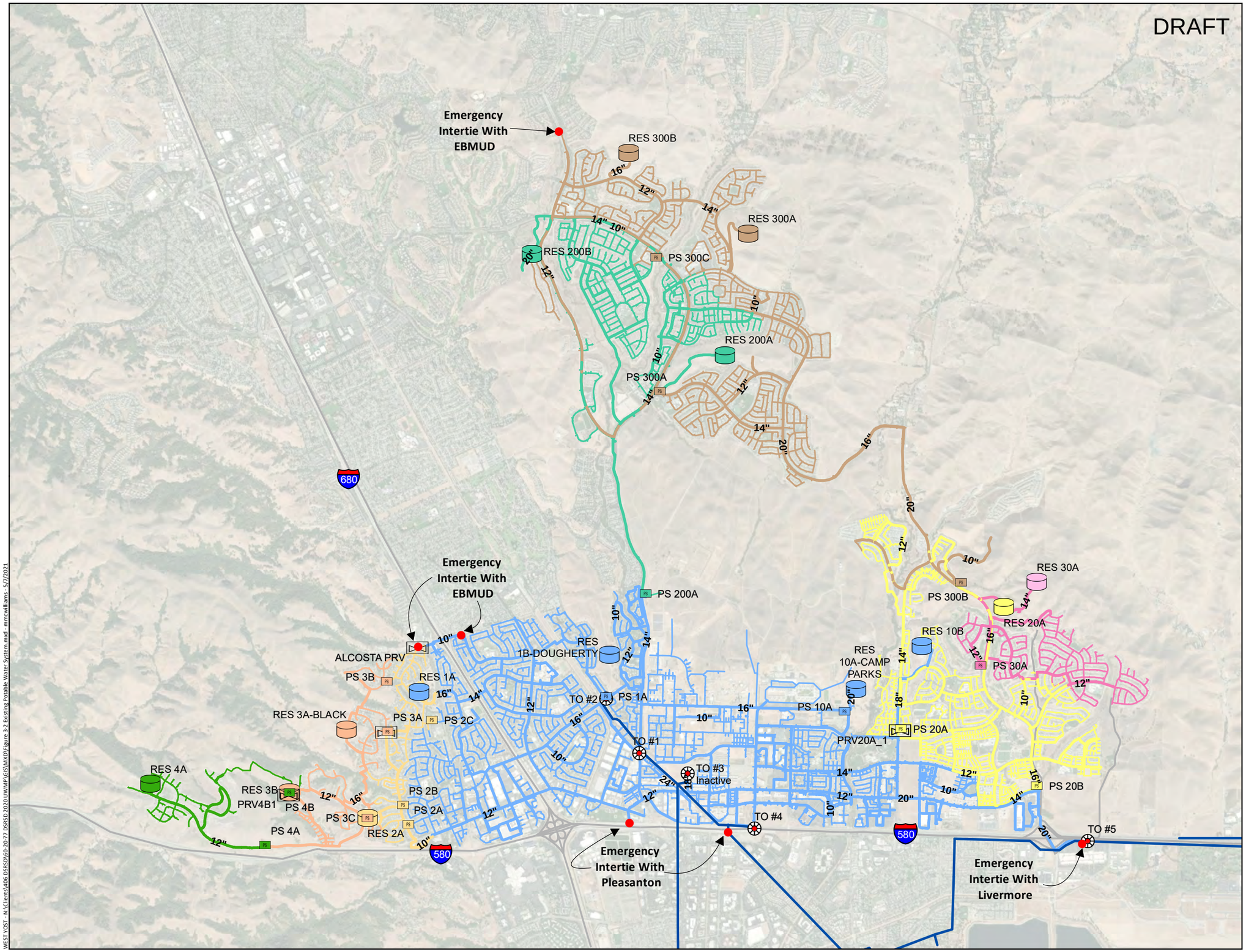
DSRSD began constructing its major recycled water infrastructure in 1998. The system was expanded into Eastern Dublin and Dougherty Valley as development in those areas occurred, and in 2015, it was expanded into Western Dublin. DSRSD owns and operates 55.3 miles of recycled water distribution mains, and operates 16.6 miles of DERWA transmission mains.

3.3.3 Emergency Interties

DSRSD currently has six potable water pipeline interties (three with EBMUD, two with Pleasanton and one with the Livermore). Each emergency intertie was added as DSRSD's potable water system expanded to create an opportunity for interconnection with adjacent agencies. The interties are strictly for emergency conditions, such as a major pipeline break, supply contamination, or interruption of deliveries due to earthquake, flood, or other disaster. Each agency participating in an intertie can obtain water from the other during an emergency.

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- Zone 7 Turnout
- Emergency Intertie
- Potable Pump Station
- Pressure Reducing Station
- Potable Reservoir

DSRSD Pipeline

- ≤ 8-inch
- > 8-inch
- Zone 7 Conveyance Pipeline

Pressure Zone

- PZ 1
- PZ 2
- PZ 3
- PZ 4
- PZ 20
- PZ 30
- PZ 200
- PZ 300

WEST YOST - N:\Clients\406 DSRSD\60-20-77 DSRSD 2020 UWMP\GIS\MXD\Figure 3-2 Existing Potable Water System.mxd - mmcwilliams - 5/7/2021

Figure 3-2

Existing Potable Water System

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Future Pump Station R4000
Future Reservoir R3000
Future Pump Station R3000
Reservoir R200
Pump Station R300B
Pump Station R200A
Pump Station R200B
Reservoir R100
Pump Station R300A
Reservoir R300
Pump Station R20
Reservoir R20

Camino Tassajara Rd
Crow Canyon Rd
Bollinger Canyon Rd
Iron Horse Trail
Alcosta Blvd
Highland Rd
San Ramon Rd
Amador Valley Blvd
Dougherty Rd
Tassajara Rd
Dublin Blvd
Owens Dr
Stoneridge Dr
Hopyard Rd
Hacienda Dr
Positas Blvd
Santa Rita Rd
Foothill Rd
Valley Ave
Charro Rd
Vineyard Ave

680
580

PS Pump Station
Reservoir
Existing Pipeline
Future Pipeline
DERWA Recycled Water Transmission Pipeline
EBMUD Service Area
DSRSD Service Area
R1 (DSRSD)
R1 (EBMUD)
R20 (DSRSD)
R200 (DSRSD)
R200 (EBMUD)
R300A (DSRSD)
R300B (DSRSD)
R3000 (EBMUD)
R4000 (EBMUD)

N

0 2,000 4,000
Scale in Feet

Figure 3-3

Recycled Water System

Dublin San Ramon Services District
2020 Urban Water Management Plan

3.4 SERVICE AREA CLIMATE

The climate of DSRSD's service area is best described as Mediterranean, characterized by hot, dry summers and cool winters.

3.4.1 Historical Climate

Water use within DSRSD's water service area is dependent on various climate factors such as temperature, precipitation, and evapotranspiration (ET_o). ET_o describes the combined water loss through evaporation from the soil and surface-water bodies and plant transpiration. In general, the ET_o is given for turf grass, and then corrected for a specific crop type. Local ET_o data was obtained from the California Irrigation Management Information System (CIMIS) monitoring station in Pleasanton, California (Station #191), which is located just south of DSRSD's water service area.

The historical climate characteristics affecting water management in DSRSD's service area, including average ET_o, rainfall, and temperature, are shown in Table 3-1. The average annual precipitation is approximately 17.2 inches, while the total evapotranspiration is approximately 51.5 inches. Average monthly temperatures vary from 47 to 70 degrees Fahrenheit throughout the year.

Table 3-1. Monthly Average Climate Data Summary

Month	Standard Monthly Average ET_o[(a)], inches	Average Total Rainfall[(b)], inches	Average Temperature[(b)], degrees Fahrenheit
January	1.51	2.83	47.4
February	2.17	2.70	50.6
March	3.63	2.95	53.8
April	4.94	1.47	56.9
May	6.16	0.57	61.1
June	7.10	0.23	67.0
July	7.53	0.09	70.2
August	6.61	0.09	69.3
September	4.98	0.12	67.2
October	3.50	1.09	61.0
November	1.93	1.66	52.6
December	1.41	3.36	47.1
Total	51.5	17.2	--

(a) Source: California Irrigation Management Information System (CIMIS) data for Station #191: Pleasanton (downloaded November 11, 2020).
(b) Source: CIMIS data for Station #191: Pleasanton (data from October 2004 through October 2020).

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3.4.2 Potential Effects of Climate Change

California Water Code now requires water suppliers to account for climate change impacts on water supplies and supply reliability. A discussion of climate change's effects on water demands, supplies, and reliability can be found in Chapter 4, Chapter 6, and Chapter 7 of this UWMP. This section summarizes those discussions.

In general, climate change is expected to increase water demand for irrigation and the year-to-year variability of demands. These increases are the result of increased temperatures (which increases evapotranspiration) and more variability in precipitation (which impacts supply availability and reliability). Natural disasters such as wildfires, droughts, and floods are expected to increase in both frequency and intensity.

Responding to climate change generally takes two forms: mitigation and adaptation. Mitigation is taking steps to reduce the contribution to climate change caused by reducing greenhouse gas (GHG) emissions. Adaptation is the process of responding to the effects of climate change by modifying systems and behaviors to function in a warmer climate.

In the water sector, climate change mitigation is generally achieved by reducing energy use, increasing energy efficiency, and/or replacing fossil fuel-based energy sources with renewable energy sources. Because water requires energy to move, treat, use, and discharge, water conservation results in energy conservation. Adaptation initiatives include diversification of DSRSD's water supply portfolio and expanding recycled water use.

3.5 SERVICE AREA POPULATION AND DEMOGRAPHICS

DSRSD's service area serves a highly desirable area due to its close proximity to major employment centers in the eastern San Francisco Bay Area. Land use planning within DSRSD's water service area is undertaken by Dublin and San Ramon. Land use planning within Dublin is guided by the *City of Dublin General Plan (2017).* Planning in the Dougherty Valley area is guided by the *City of San Ramon General Plan (2035)* and *Dougherty Valley Specific Plan (2014).*

Dublin has experienced strong housing growth since the early 1990's. Dublin's housing stock increased by 126 percent from 1990 to 2010. In 2011 and 2012, growth slowed due to the statewide economic downturn; however, in 2013, Dublin's population increased by over 7 percent, making Dublin one of the fastest-growing cities in California in 2013. From 2010 to 2019, Dublin's population increased from 46,036 to 66,147, a 44 percent increase. Dublin is expected to have an annual population increase of 2.09 percent from 2019 to 2024.

In 2000, Dublin's voters approved Measure M, which established an Urban Limit Line in the Western Extended Planning Area of Dublin's General Plan for a period of 30 years. During this period, Dublin is restricted in approving uses or extensions of city services, facilities, and roads for urban development west of the Urban Limit Line. DSRSD's water service area is coterminous with the Dublin's city limit. The restriction of services to the Western Extended Planning Area will end in 2030. DSRSD shows no water demand for that area for 2035 because Dublin has no planned development after 2030. DSRSD will review the ability to provide water service to the west of the Urban Limit Line when Dublin adopts a General Plan that includes it.

Similar to Dublin, San Ramon experienced housing growth since the early 1990's. DSRSD provides potable water and recycled water services to the Dougherty Valley portion of San Ramon, a master-planned community that commenced development in the early 2000's.

3.5.1 Service Area Population

As described above, DSRSD provides water service to Dublin and the Dougherty Valley in San Ramon, California. Since the early 1980s, the population in DSRSD's service area has roughly tripled and growth is expected to continue. DSRSD has a current (2020) service area population of 92,409. The 2020 City of Dublin population is based on California Department of Finance (DOF) population estimate.[1] The 2020 Dougherty Valley population is based on data obtained from the DWR Population Tool and is included in Appendix G. Additional discussion of DSRSD's historical and 2020 service area population, to determine DSRSD's SB X7-7 baseline and target per capita water use and 2020 compliance, is provided in Chapter 5 Conservation Target Compliance.

Projections of the future population within DSRSD's service area have been made based on the projected number of new housing units within planned new developments and are summarized in Table 3-2. Dublin is projected to continue its growth through 2045, while Dougherty Valley is substantially built out. Population projections from 2025 to 2045 for DSRSD's water service area are estimated based on new housing units. Population projections between 2035 and 2045 include estimated population increases associated with 50 percent of Dublin's household allocations as proposed in the *Draft Regional Housing Needs Allocation (RHNA) Methodology Release* in December 2020 to support Plan Bay Area 2050, which is discussed further in Section 3.6.3. By 2045, DSRSD's water service area population is projected to grow by approximately 20.6 percent to 111,458.

Table 3-2. Population – Current and Projected (DWR Table 3-1 Retail)

Population Served	2020[1]	2025	2030	2035[2]	2040[2]	2045*(opt)* [2]
	92,409	100,686	104,625	107,942	109,700	111,458

NOTES:

[1]Dublin 2020 population estimate is from DOF Table E-1 data. Dougherty Valley 2020 population estimate is from the DWR population tool. (See Appendix G.)

[2]Includes 50 percent of December 2020 Proposed RHNA household allocations at 2.81 persons per dwelling unit, per DOF *Table E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark* , distributed from 2032 to 2045.

[1] State of California, Department of Finance, E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2020 and 2021. Sacramento, California, May 2021. (https://www.dof.ca.gov/forecasting/demographics/estimates/e-1/)

3.5.2 Other Social, Economic, and Demographic Factors

The State now requires the inclusion of service area socioeconomic information as part of the system description in UWMPs. However, differences in household water use across sociodemographic groups in DSRSD's water service area have not been studied, nor does DSRSD differentiate water management by sociodemographic factors. To comply with the new regulation, the following social, economic, and demographic information from the US Census Bureau[2,3] is provided. The persons per household information for Dublin and San Ramon was obtained from DOF Table E-5, *Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark*.[4] The following information is for Dublin during the five-year period from 2015 to 2019.

- The average number of people per household was 2.81.
- The median household income was $150,299.
- The owner-occupied housing unit rate was 65.5 percent, with a median home value of $882,200.
- The median gross rent was $2,681 per month.
- Of persons 25 years or older, 94.9 percent had earned at least a high school diploma or equivalent, and 66.3 percent had earned a bachelor's degree or higher.
- By race/ethnicity, 38.9 percent of people were White, 3.7 percent were Black, 0.5 percent were American Indian or Alaska Native, 48.9 percent were Asian, 0.4 percent were Hawaiian Native or Pacific Islander, 5.8 percent were two or more races, and 10.1 percent were Hispanic or Latino.
- 39.0 percent of residents were foreign born.

The following information is for San Ramon during the five-year period from 2015 to 2019.

- The average number of people per household was 2.85.
- The median household income was $160,783.
- The owner-occupied housing unit rate was 72.4 percent, with a median home value of $958,800.
- The median gross rent was $2,391 per month.
- Of persons 25 years or older, 96.4 percent had earned at least a high school diploma or equivalent, and 70.6 percent had earned a bachelor's degree or higher.
- By race/ethnicity, 43.1 percent of people were White, 2.3 percent were Black, 0.4 percent were American Indian or Alaska Native, 46.7 percent were Asian, 0.4 percent were Hawaiian Native or Pacific Islander, 5.8 percent were two or more races, and 7.1 percent were Hispanic or Latino.
- 37.0 percent of residents were foreign born.

[2] United States Census Bureau. American Community Survey, 2015-2019 ACS 5-Year Data Profile for the City of Dublin Census

[3] United States Census Bureau. American Community Survey, 2015-2019 ACS 5-Year Data Profile for the City of San Ramon Census

[4] State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2011-2021. Sacramento, California, May 2021. (https://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/.)

3.6 LAND USES WITHIN SERVICE AREA

This section describes DSRSD's current and projected land uses in its water service area. It also discusses long-range planning efforts beyond the planning of this UWMP that require consideration in the future.

3.6.1 City of Dublin

DSRSD provides potable water and recycled water services, and wastewater collection and treatment service to Dublin. Land use planning for Dublin consists of four areas: the Primary Planning Area, the Eastern Extended Planning Area, the Western Extended Planning Area, and the Dublin Crossing Planning Area. Most of the Primary Planning Area has been developed, with primary land uses including single-family residential, business park/industrial, open space, and parks. One exception within the Primary Planning Area is the Downtown Dublin Specific Plan Area, which is being redeveloped to focus on higher density, mixed-use (transit-oriented) projects following the opening of the West Dublin Bay Area Rapid Transit (BART) station.

Development opportunities are also limited in the Western Extended Planning Area, where approximately 85 percent of the Western Extended Planning Area's 3,132 acres lies outside Dublin's Urban Limit Line. The Urban Limit Line protects natural resources in Dublin's western hills, and Dublin will not extend services or facilities (e.g., utilities or roads) beyond the Urban Limit Line. Most of the Western Extended Planning Area acreage within the Urban Limit Line has been designated open space, with the remainder reserved for low density residential development.

A significant portion of future development in Dublin will occur within the Eastern Extended Planning Area. This is formalized in the Eastern Dublin Specific Plan (EDSP), which provides a framework for growth and development of approximately 3,300 acres east of the Parks RFTA. While residential designations within the EDSP area range from rural residential/agriculture to high density multi-family, approximately 55 percent of new dwelling units will be single-family residential. Non-residential land uses within the EDSP area include retail, service, office, governmental, research and development, and light industrial.

3.6.2 City of San Ramon-Dougherty Valley

DSRSD provides potable and recycled water services to Dougherty Valley, and wastewater collection and treatment services to the southern San Ramon areas. Dougherty Valley encompasses approximately 5,978 acres of land located in south central Contra Costa County, immediately to the north of the Alameda County line and east of San Ramon. It includes land on both sides of Dougherty Road, from Parks RFTA on the south to near the Crow Canyon/Dougherty Road intersection on the north.

San Ramon is divided into nine planning subareas, four of which overlap DSRSD's wastewater and potable water service areas: Westside, Southern San Ramon, Dougherty Hills, and Dougherty Valley. The Westside subarea is mostly unincorporated open hillsides, though an area along San Ramon Valley Boulevard is designated primarily for residential development and a neighborhood shopping center. In contrast, the Southern San Ramon and Dougherty Hills subareas are suburban communities with primarily residential land uses. Development of Dougherty Valley is detailed in the Dougherty Valley Specific Plan, which includes residential neighborhood clusters served by their own public facilities, a mixed-use activity center (Village Center), and a backdrop of broad open space. The Dougherty Valley area is substantially built out.

3.6.3 Long-Range Land Use Planning

In this section, long-range land use planning that may affect water management planning is discussed. Long-range planning includes years beyond the planning horizon of this UWMP and should be noted for consideration in future UWMP updates.

The Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC) is preparing Plan Bay Area 2050, which provides long-range plans to guide the growth of the nine-county region. Plan Bay Area 2050 is expected to be completed in 2021 and integrates strategies for transportation, housing, the environment, and the economy. ABAG published the *Draft RHNA Methodology Release* in December 2020 to support Plan Bay Area 2050; this methodology has been used to develop "illustrative" RHNA allocations for each city and county in the region. Allocations will be finalized in 2021 through the remaining steps of the RHNA process. The proposed housing unit allocations for the cities in DSRSD's water service area are 3,719 units for Dublin and 5,111 units for San Ramon.[5] ABAG is expected to approve a Final Methodology and issue Draft Allocations in Spring 2021. Issuing the Draft Allocations will be followed by an appeal period, with ABAG issuing Final Allocations by the end of 2021. Dublin and San Ramon will then have until January 2023 to update their Housing Element to include an inventory of specific sites or parcels that are available for residential development to meet the RHNA and receive certification by the California Department of Housing and Community Development.

Each of the cities in DSRSD's water service area will need to understand the Final Allocations in the context of their respective general plans and update their Housing Elements, as necessary. As a preliminary estimate, DSRSD incorporated a portion of the City of Dublin's RHNA allocation into the water demand projections from 2032 to 2045.

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[5] Association of Bay Area Governments, December 2020. Release of ABAG Draft RHNA Methodology and Final Subregional Shares, Appendix 3.

CHAPTER 4
Water Use Characterization

This chapter describes and quantifies DSRSD's past, current, and projected potable and recycled water use. Water demand projections are based on the projected growth within DSRSD's service area. This chapter also presents DSRSD's water losses for the previous five years, projects future water use for lower income households, and discusses the impact of climate change on water use.

4.1 NON-POTABLE VERSUS POTABLE WATER USE

DSRSD provides both potable water and recycled water to customers within its water service area. Potable water is water that is safe to drink, and which typically has had various levels of treatment and disinfection. DSRSD purchases potable water supplies from the Zone 7 and distributes the water within its water service area.

Recycled water is municipal wastewater that has been treated to a specified quality to enable it to be used again. As discussed in Chapter 6, DSRSD owns and operates a recycled water treatment facility (RWTF) at its wastewater treatment plant and participates with EBMUD in a joint powers authority, DERWA, which operates the San Ramon Valley Recycled Water Program (SRVRWP). The SRVRWP provides recycled water that meets Title 22 disinfected tertiary recycled water requirements to landscape irrigation customers of DSRSD and EBMUD. In 2018, DSRSD commenced delivery of recycled water to Pleasanton.

Raw water is untreated water that is used in its natural state or with minimal treatment. DSRSD does not deliver raw water to any customers in its service area

DSRSD's water supplies are described further in Chapter 6.

4.2 WATER USE BY SECTOR

This section describes DSRSD's past, current, and projected water use by sector through the year 2045 in five-year increments. Water demand projections are estimated based on land use and land use-based water use factors documented in the DSRSD's 2016 Water Master Plan.

This section identifies the usage among water use sectors including single-family residential, multi-family residential, commercial, industrial, institutional/governmental, landscape irrigation, agricultural, and others. These classifications were used to analyze current consumption patterns among various types of customers. DSRSD uses the same definitions for each sector as outlined in the DWR Guidebook:

- **Single-family Residential:** A single-family dwelling unit. A lot with a free-standing building containing one dwelling unit that may include a detached secondary dwelling.
- **Multi-family Residential:** Multiple dwelling units contained within one building or several buildings within one complex.
- **Commercial:** A water user that provides or distributes a product or service (CWC 10608.12(d)).
- **Industrial:** A water user that is primarily a manufacturer or processor of materials as defined by the North American Industry Classification System (NAICS) code sectors 31 to 33, inclusive, or an entity that is a water user primarily engaged in research and development (CWC 10608.12(h)).

- **Institutional (and Governmental):** A water user dedicated to public service. This type of user includes, among other users, higher education institutions, schools, courts, churches, hospitals, government facilities, and nonprofit research institutions (CWC 10608.12(i)).
- **Landscape:** Water connections supplying water solely for landscape irrigation. Such landscapes may be associated with multi-family, commercial, industrial, or institutional/governmental sites, but are considered a separate water use sector if the connection is solely for landscape irrigation.
- **Agricultural:** Water used for commercial agricultural irrigation.
- **Other:** Any other water demand that is not adequately described by the water sectors defined above. Unlike previous UWMPs, system water losses are not to be reported in the "Other" category.

4.2.1 Historical Water Use

DSRSD's past water use (for 2010 and 2015) by water use sector is reported in Table 4-1. These are the same values reported in DSRSD's 2015 UWMP.

Table 4-1. Historical Water Use by Customer Type

Water Use Type	2010 Actual Volume, AF[(a)]	2015 Actual Volume, AF[(b)]
Single Family	4,566	3,618
Multi-Family	1,226	1,418
Commercial	835	699
Industrial	0	0
Institutional/ Governmental	798	105
Landscape	1,376	482
Agricultural	0	0
Other	0	696
Potable System Losses	463	421
Total Potable Water Use	**9,264**	**7,439**
Recycled Water- Metered	1,264	2,579
Recycled Water- WWTP Use	465	
Total Recycled Water Use[(c)]	**1,729**	**2,579**
Total Water Use	**10,993**	**10,018**

(a) DSRSD 2015 UWMP, Table 4-1
(b) DSRSD 2015 UWMP, Table 4-2
(c) DSRSD 2015 UWMP, Table 6-8

Because DSRSD's WWTP is physically located in Pleasanton, recycled water used at its WWTP is not included in the above table.

4.2.2 Current Water Use

Table 4-2 reports DSRSD's actual water use for the year 2020. DSRSD does not use its water supply for saline barriers, groundwater recharge, and conjunctive use, within its service area.

Table 4-2. Actual Demands for Potable and Non-Potable Water (DWR Table 4-1 Retail)

Use Type	2020 Actual[1]		
Drop down list	Additional Description (as needed)	Level of Treatment When Delivered	Volume[2]
Single Family		Drinking Water	5,784
Multi-Family		Drinking Water	1,869
Commercial		Drinking Water	651
Institutional/Governmental		Drinking Water	492
Landscape		Drinking Water	1,011
Other	Fireline Meters	Drinking Water	1
Other	Ranch Owner	Drinking Water	2
Other	Supplemental water for recycled water demand	Drinking Water	7
Losses		Drinking Water	513
		TOTAL	10,330

NOTES:
[1]Volumes are in AF.
[2]Source: Dublin San Ramon Services District, Water Usage Report Export 2020, February 2021. American Water Works Association, Water Audit Report 2019-2020.

4.2.3 Projected Water Use

This section presents water demand projections for DSRSD's water service area. Water demand projections in this 2020 UWMP are estimated based on future developments within DSRSD's service area, which primarily are located in the Dublin area. This section details water demand projections on a 25-year planning horizon and, for the DRA, a characteristic five-year basis.

4.2.3.1 25-Year Planning Horizon

DSRSD's projected water demands through the year 2045 are presented in Table 4-3. DSRSD's recycled water program is highly successful and reached maximum capacity to serve recycled water customers during peak months. Due to the limited recycled water supply during peak months, DSRSD is no longer

projecting new recycled water connections until the recycled water supply is available. Thus, projected recycled water demands are not anticipated to increase from 2025 to 2045.

Table 4-3. Demands for Potable and Non-Potable Water – Projected (DWR Table 4-2 Retail)

Use Type	Additional Description (as needed)	Projected Water Use[1,2] *Report To the Extent that Records are Available*				
		2025	2030	2035	2040	2045 (opt)
Single Family		6,236	6,983	7,226	7,342	7,458
Multi-Family		2,043	2,287	2,367	2,405	2,443
Commercial		649	727	752	764	776
Institutional/Governmental		522	584	604	614	624
Landscape		1,329	1,489	1,540	1,565	1,590
Other	Construction	376	376	376	188	188
Other	Fireline meters	1	1	1	2	2
Other	Ranch owner	2	3	3	3	4
Other	Unmetered sales[3]	136	136	136	136	136
Other	Supplemental water for recycled water demand[4]	21	21	21	21	21
Losses	Potable System Water Losses[5]	678	755	780	781	793
Other	Recycled Water[6]	3,044	3,044	3,044	3,044	3,044
	TOTAL	15,037	16,407	16,851	16,864	17,078

NOTES:
1. Volumes are in AF.
2. Projected demands given by DSRSD.
3. Estimated based on the average of 2017-2020 water loss audit billed unmetered data.
4. Average of supplemental potable water from 2015 to 2020.
5. Unaccounted for water at 6 percent.
6. Includes WWTP process water and facility landscaping.

Table 4-4 summarizes the actual and projected potable water demands reported in Tables 4-2 and 4-3, and the projected recycled water demands reported in Chapter 6.

Table 4-4. Total Gross Water Use (Potable and Non-Potable) (DWR Table 4-3 Retail)

	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*[1]	10,330	11,993	13,363	13,807	13,820	14,034
Recycled Water Demand *From Table 6-4*[1]	3,044	3,044	3,044	3,044	3,044	3,044
Optional Deduction of Recycled Water Put Into Long-Term Storage	0	0	0	0	0	0
TOTAL WATER USE	13,374	15,037	16,407	16,851	16,864	17,078
NOTES: [1]Volumes are in AF. Table references refer to DWR table numbers.						

4.2.3.2 Characteristic Five-Year Water Use

Water Code Section 10635(b) requires urban suppliers to include a five-year DRA in their UWMP. A key component of the DRA is estimating demands for the next five years (2021-2025) without drought conditions (i.e., unconstrained demand) to account for climate change considerations. Chapter 7 details the DRA, but the five-year demand projections are summarized in Table 4-5. Demand projections for 2021 through 2024 are estimated based on new developments that had submitted a planning application to Dublin.

Table 4-5. Projected Water Demands for Drought Risk Assessment

	2021	2022	2023	2024	2025
Potable Water Demand[(a)], AFY	10,663	10,996	11,328	11,661	11,993

(a) Demand projections were estimated based on new developments that had submitted a planning application to Dublin.

4.3 DISTRIBUTION SYSTEM WATER LOSSES

System losses are the difference between the actual volume of water treated and delivered into the distribution system and the actual metered consumption. Such apparent losses are always present in a water system due to pipe leaks, unauthorized connections or use; faulty meters; unmetered services such as fire protection and training, and system and street flushing.

DSRSD uses the American Water Works Association (AWWA) method to evaluate its distribution system losses annually. For the 2019/2020 fiscal year, DSRSD's water losses were estimated to be approximately 513 AF, or approximately 4.8 percent. A copy of DSRSD's 2020 Water Audit for Fiscal Year 2019/2020 worksheet is provided in Appendix F.

New regulations require retail water suppliers to include potable distribution system water losses for the preceding five years (to the extent records are available). Table 4-6 summarizes system losses for the previous four fiscal years (2015/2016 through 2019/2020). At the time of preparation of this UWMP, DWR and the State Water Board are in the process of adopting water loss standards as discussed further in Chapter 9.

Table 4-6. 12-Month Water Loss Audit Reporting (DWR Table 4-4 Retail)

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2016	167
07/2017	490
07/2018	446
07/2019	513
NOTES: Volume are in AF; a copy of the DSRSD's 2020 Water Audit is provided in Appendix E.	

4.4 ESTIMATING FUTURE WATER SAVINGS

The water use projections presented in Table 4-4 are based on land use projections within DSRSD's water service area of Dublin and Dougherty Valley. Additional water savings from codes, standards, ordinances, or transportation and land use plans, also known as passive savings, can decrease the water use for new and future customers. As indicated in Table 4-7 below, these potential passive savings have not been included in DSRSD's water demand projections to be conservative.

Table 4-7. Inclusion in Water Use Projections (DWR Table 4-5 Retail)

Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	No
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes

4.5 WATER USE FOR LOWER INCOME HOUSEHOLDS

SB 1087 (2006) requires water providers to develop written policies that prioritize development that includes affordable housing to low-income households. The water demand projections shown in Tables 4-3 and 4-4 include water use for single-family and multi-family residential housing needed for low-income households, as identified in Dublin's and San Ramon's Housing Elements. A low-income household is defined as a household with an income below 80 percent of the Area Median Income, adjusted for family size. According to the Dublin Housing Element (2015-2023) adopted in November

2014, the percent of Dublin households with incomes below 80 percent of the Area Median Income was 17 percent in 2010[6]. According to the San Ramon General Plan 2035 adopted in April 2015, the percent of San Ramon households with incomes below 80 percent of the Area Median Income was 16 percent in 2010[7].

Therefore, based on the housing data for Dublin and San Ramon, approximately 17 percent of DSRSD's water demands are estimated to be attributed to low-income households. Table 4-8 presents these projected water demands for single-family and multi-family households.

Table 4-8. Projected Water Demands for Lower Income Households

Water Use Sector	Water Demands for Low Income Households[(a)], AF				
	2025	2030	2035	2040	2045
Single Family	1,060	1,187	1,228	1,248	1,268
Multi-Family	347	389	402	409	415
Total	1,407	1,576	1,631	1,657	1,683

(a) Based on data from City of Dublin and City of San Ramon Housing Elements indicating that 16 to 17 percent of households in DSRSD service area are classified as low-income.

As indicated in Table 4-7, the water demands for the lower income households are included in DSRSD's water demand projections.

4.6 CLIMATE CHANGE CONSIDERATIONS

DSRSD's future water demand and use patterns may be impacted by climate change. Warmer temperatures are expected to increase landscaping and irrigation demand and lengthen the growing season. In addition, climate change may increase the frequency and intensity of wildfires, which would increase water demands for firefighting. Expanded use of recycled water could mitigate the effects of climate change on water demands.

DSRSD continues to evaluate methodologies to correlate climate change impacts to water demands within DSRSD's service area and will incorporate climate change impacts on demands in future UWMPs.

The potential impacts of climate change on DSRSD's water supplies are described in Chapter 6.

[6] Appendix C Table C-8: Households by Income Category – 2010, City of Dublin Housing Element 2015-2015, adopted November 18, 2014 (Resolution 197-14).

[7] Chapter 11 Housing, Table 11-5: San Ramon Households by Income Category (2010), City of San Ramon General Plan 2035, adopted by San Ramon City Council April 28, 2015.

CHAPTER 5
SB X7-7 Baselines, Targets, and 2020 Compliance

In November 2009, the Water Conservation Act of 2009, was signed into law as part of a comprehensive water legislation package. Also known as Senate Bill X7-7 (SB X7-7), the Water Conservation Act of 2009 addressed both urban and agricultural water conservation and set a goal of achieving a 20 percent statewide reduction in urban per capita water use by December 31, 2020 (i.e., "20 by 2020").

This chapter demonstrates that DSRSD has achieved its 2020 target reduction by reviewing its population and recent water use.

5.1 OVERVIEW AND BACKGROUND

To meet the urban water use target required by SB X7-7, each retail supplier was required to determine its baseline water use, as well as its target water use for the year 2020. Water use is measured in gallons per capita per day (GPCD).

This chapter provides a review of the methodology DSRSD used to calculate its baseline and its 2020 Urban Water Use Target (target). DSRSD calculated baselines and targets on an individual reporting basis in accordance with SB X7-7 legislation requirements and DWR's *Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use* (2016) (DWR's Methodologies).

DSRSD's compliance with SB X7-7 was first addressed in its 2010 UWMP, in which it determined its baseline per capita water use and established and adopted its urban water use targets for 2015 and 2020. SB X7-7 included a provision that an urban water supplier may update its 2020 urban water use target in its 2015 UWMP and may use a different target method than was used in 2010. Also, the SB X7-7 methodologies developed by DWR in 2011 noted that water suppliers may revise population estimates for baseline years when the 2010 Census information became available. The 2010 Census data was not finalized until 2012. In its 2015 UWMP, DSRSD updated its population, baselines, and targets to reflect 2010 Census data. DSRSD demonstrated that it successfully achieved its 2015 interim target and confirmed its 2020 target.

The 2020 Census results were not available for inclusion in this UWMP update. Thus, actual water use data and the California Department of Finance (DOF) and DWR Population Tool population estimates were used for Dublin and San Ramon's Dougherty Valley, respectively, to calculate GPCD water use. DSRSD verifies that it achieved its 2020 target per capita water use. The potential difference between population estimates herein and the eventual final 2020 Census results is not believed to impact the fundamental conclusions of meeting SB X7-7 requirements.

Compliance with the urban water use target requirement is demonstrated in the SB X7-7 Compliance Form, which is included as Appendix G in this plan.

5.2 GENERAL REQUIREMENTS FOR BASELINE AND TARGETS

SB X7-7 required each urban water retailer to determine its baseline daily per capita water use over a 10-year or 15-year baseline period. The 10-year baseline period is defined as a continuous 10-year period ending no earlier than December 31, 2004 and no later than December 31, 2010. SB X7-7 also allowed urban water retailers that met at least 10 percent of their 2008 water demand with recycled water to extend their baseline GPCD calculation to a maximum of a continuous 15-year baseline period, ending no earlier than December 31, 2004 and no later than December 31, 2010. In its 2015 UWMP, DSRSD selected

the 10-year baseline period from 1996 through 2005. This is the same 10-year baseline period reported in DSRSD's 2010 UWMP.

SB X7-7 and DWR provided four different methods for calculating an urban water retailer's 2020 target. Three of these methods are defined in Water Code Section 10608.20(a)(1), and the fourth method was developed by DWR. The 2020 water use target may be calculated using one of the following four methods:

- **Method 1**: 80 percent of DSRSD's base daily per capita water use;
- **Method 2**: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscaped area water use; and commercial, industrial, and institutional uses;
- **Method 3**: 95 percent of the applicable State hydrologic region target as stated in the State's April 30, 2009, draft 20x2020 Water Conservation Plan; or
- **Method 4**: An approach that considers the water conservation potential from: 1) indoor residential savings, 2) metering savings, 3) commercial, industrial and institutional savings, and 4) landscape and water loss savings.

DSRSD selected Method 1 to calculate its 2020 target in its 2015 UWMP.

Daily average water use is divided by the service area population to obtain baseline and target GPCD. In 2015, DSRSD adjusted its baseline and target GPCD to reflect its updated population estimates based on 2010 Census data results. To calculate DSRSD's compliance year GPCD and compare it to the 2020 target, the population is updated to reflect population estimates for 2020. Details of determining the 2020 water service area population are provided in Section 5.3.

DSRSD's baselines and targets are summarized in Section 5.5. DSRSD's 2020 compliance water use is provided in Section 5.6.

5.3 SERVICE AREA POPULATION

At the time of preparation of this UWMP, the 2020 Census results were unavailable, and alternative methods were used to correctly calculate DSRSD's GPCD. The method used to estimate the water service area population is shown on Table 5-1 and the resulting 2020 population estimate is provided in Table 5-2.

The DOF uses U.S. Census data from the last completed Census (2010), combined with changes to the housing stock, estimated occupancy of housing units, and the number of persons per household to estimate annual population within jurisdictional boundaries. For the Dublin service area, DSRSD is a Category 1 water provider in accordance with DWR's Methodologies document. DSRSD's current water service area is substantially contiguous with the Dublin boundaries; thus, DOF population data for Dublin is valid for use as the service area population. DOF estimates that Dublin population was 65,161 in 2020. For the Dougherty Valley service area, DSRSD is a Category 2 water provider in accordance with Methodology 3 of DWR's Methodologies document. The DWR Population Tool was used to estimate the population in Dougherty Valley. The DWR Population Tool confirmation information is included in Appendix G, and estimates that Dougherty Valley population is 27,248. Thus, the total estimated population for DSRSD's service area is 92,409.

DSRSD's baseline population estimate is provided in Section 5.5.

Table 5-1. Method for Population Estimates (SB X7-7 Table 2)

Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review

Table 5-2. Service Area Population (SB X7-7 Table 3)

2020 Compliance Year Population	
2020	92,409

NOTES:
1. City of Dublin Population 65,161. State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2020 and 2021* . Sacramento, California, May 2021.
2. Dougherty Valley: 7,169 housing units * 3.80 person per housing unit = 27,248 people
3. Total population: 65,161 + 27,248 = 92,409 people

5.4 GROSS WATER USE

As defined in CWC §10608.12 (h), annual gross water use is the water that enters DSRSD's distribution system over 12 months (calendar year) with specific exclusions. This section discusses DSRSD's annual gross water use for each year in the baseline periods, as well as 2020, in accordance with DWR's Methodologies.

Annual gross water use for the baseline periods and 2020 are summarized in Appendix G. The baseline values reported in Appendix G are the same as documented in DSRSD's 2010 and 2015 UWMP. DSRSD's 2020 actual gross water use for Calendar Year 2020 is 10,330 AF as presented in Chapter 4 of this plan.

5.5 BASELINES AND TARGETS SUMMARY

Daily per capita water use is reported in GPCD. Annual gross water use is divided by annual service area population to calculate the annual per capita water use for each year in the baseline periods. As discussed in Section 5.1, DSRSD updated its water service area population data, adjusted its baseline, and confirmed

its 2020 target in its 2015 UWMP. DSRSD's 10-year base daily per capita water use is 211 GPCD. Using Method 1 for 2020 water use target calculation as described in Section 5.2, DSRSD's confirmed 2020 compliance target is 169 GPCD. DSRSD's baseline and target per capita water uses are summarized in Table 5-3.

Table 5-3. Supplier: Baseline and Targets Summary (DWR Table 5-1 Retail)

Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1996	2005	211	169
5 Year	2003	2007	199	
NOTES: *DSRSD 2015 UWMP Table 5-1.				

The baseline and 2020 target are included in the SB X7-7 Compliance Form, Appendix G.

5.6 2020 COMPLIANCE DAILY PER CAPITA WATER USE

DSRSD's 2020 population and gross water use are presented in Sections 5.3 and 5.4, respectively. DSRSD calculated its actual 2020 water use for the 2020 calendar year in accordance with DWR's *Methodologies*. As shown in Table 5-4, DSRSD's per capita water use in 2020 was 100 GPCD, which is well below the confirmed 2020 water use target of 169 GPCD. Therefore, DSRSD has met its 2020 final water use target. The complete set of SB X7-7 tables used to document this compliance is included in Appendix G.

Table 5-4. Supplier: 2020 Compliance (DWR Table 5-2 Retail)

2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
100	0	100	169	Yes
NOTES: *From SBX7-7 2020 Compliance Form, Appendix G.				

As detailed in DWR's *Methodologies*, adjustments are allowed that can be made to an agency's gross water use in 2020 for unusual weather, land use changes, or extraordinary institutional water use.

DSRSD has elected not to make the adjustments allowed by Water Code Section 10608.24 because these exceptions are not needed to demonstrate compliance with SB X7-7 for 2020. Water use in 2020 in DSRSD's water service area was significantly reduced as compared to baseline years as a result of continued water conservation efforts by DSRSD and its customers, as well as the conversion of potable irrigation to recycled water irrigation.

5.7 REGIONAL ALLIANCE

DSRSD has chosen to comply with the requirements of SB X7-7 on an individual basis. DSRSD has elected not to participate in a regional alliance.

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CHAPTER 6
Water Supply Characterization

This chapter describes DSRSD's water supply portfolio, which includes purchased water from Zone 7 and DSRSD's recycled water. These existing supplies, along with the other projected future supplies are described in this chapter. Because Zone 7 provides DSRSD all of its potable water supplies, Zone 7's water supply sources are also discussed in this chapter.

6.1 WATER SUPPLY ANALYSIS OVERVIEW

DSRSD's primary water supply source is purchased potable water from Zone 7, augmented by recycled water produced at DSRSD's RWTF. DSRSD also has a groundwater pumping quota (GPQ) from the local groundwater basin, pumped on its behalf by Zone 7, the local groundwater basin manager. The management of each of DSRSD's supply sources in correlation with each other are provided in this chapter. Because all of DSRSD's potable water supply is from Zone 7, the region's water wholesaler, Zone 7's water supplies, storage operations, and future supply projects are discussed.

DSRSD's water supplies and anticipated availability under normal water years are described in this chapter. The availability of DSRSD's water supplies under a single dry year and a drought lasting five years, as well as more frequent and severe periods of drought, including changes in supply due to climate change, are detailed in Chapter 7 of this UWMP.

6.2 WATER SUPPLY CHARACTERIZATION

This section describes the water supplies currently available to DSRSD, as well as future anticipated water supplies. DSRSD currently utilizes water from the following sources:

- Potable water supplies (including imported and local surface water supplies and local groundwater supplies) purchased from Zone 7;
- Recycled water supplies produced at DSRSD's RWTF.

These sources, along with the other projected future supplies, and the potential for desalinated water, indirect or direct potable reuse, and exchanges or transfers are described in this section.

6.2.1 Purchased or Imported Water

DSRSD currently receives its potable water supply from Zone 7. Zone 7 is a multi-purpose agency that oversees water-related issues in the Livermore-Amador Valley. Zone 7 is a State Water Project contractor that wholesales treated water to four retail water agencies, including DSRSD, Livermore, Pleasanton, and Cal Water Livermore District. In addition, Zone 7 retails non-potable water supplies for irrigated agricultural use, retails treated water to several direct customers, provides and maintains flood control facilities, and manages groundwater and surface water supplies in its service area.

6.2.1.1 DSRSD's Water Supply Contract with Zone 7

Zone 7 and DSRSD entered into the current contract for a Municipal and Industrial Water Supply on August 23, 1994. The contract has a 30-year term (expiring in 2024) and is intended to ensure an equitable, reliable, and high-quality water service for DSRSD's customers. It provides the water supply for existing DSRSD customers and sets the stage upon which DSRSD would be able to provide service to future customers. Some of the key provisions of the current contract include the following:

- Service Area: DSRSD has sole discretion to expand its service area. However, Zone 7 water cannot be used outside of the Zone 7 territory unless Zone 7 finds that providing water to such areas is in its best interest.
- Water Supply: DSRSD shall purchase from Zone 7 all water required by DSRSD for use within DSRSD's service area, except that DSRSD may extract groundwater per the contract provisions or obtain water from "Other Sources" as defined in the contract[8].
- Water Quality: Zone 7 will endeavor to provide water that is aesthetically acceptable to all retailers and blend the different sources of water available to it within its operational capabilities to provide water of approximately equal quality to all customers.
- Groundwater Pumping: DSRSD's Groundwater Pumping Quota was maintained at 645 AFY of withdrawals from the Livermore Valley Main Basin. Zone 7 pumps this groundwater from the Main Basin on DSRSD's behalf. Withdrawals from the fringe basin are unlimited (but may have a limitation that can be imposed by Zone 7)[9] and can be used at DSRSD's discretion.
- Carryover of Pumping Quota: The contract provides a limited carryover of unused pumping quota from one year to another.
- Transfer of Pumping Quota: The four retailers served by Zone 7 can voluntarily transfer their pumping quotas between or among themselves.
- Recycled Water: Recycled water is considered to be an "Other Source" of water that DSRSD can use at will.
- Delivery Schedule: DSRSD shall submit in writing to Zone 7 a preliminary water delivery schedule indicating the anticipated quantity of treated water required by DSRSD during each month of the succeeding five calendar years and the anticipated peak day treated demand from Zone 7 for each such year. Zone 7 shall review such schedule, and after consultation with DSRSD, shall approve such schedule in a timely manner or make revisions as necessary to make such deliveries.

[8] Water from "Other Sources" includes: a) water received for fire flow or fire storage requirements or other emergency purposes; b) water necessary to meet DSRSD's treated water needs as a result of Zone 7's non-compliance with state and federal drinking water requirements; c) water necessary to meet DSRSD's requirements should Zone 7 be unable to deliver the quantity of treated water necessary to satisfy the requirements of DSRSD; d) water from other sources even if Zone 7 is able to meet DSRSD's demands if the DSRSD pays Zone 7 "for obligated fixed costs of Zone 7 associated with the quantity of water the Contractor will obtain from other sources"; e) groundwater extracted within Zone 7's boundary, but outside the Main Basin, provided said extraction does not cause an adverse impact on the Main Basin; f) the source water is recycled water from DSRSD's or another contractor's treated wastewater.

[9] Zone 7 Water Agency and Dublin San Ramon Services District for a Municipal & Industrial Water Supply, Section B-5(e).

In February 2000, the contract was amended to expand DSRSD's service area to include the Dougherty Valley area and special provisions were added regarding supplying water to Dougherty Valley. A copy of the water supply contract and amendment is provided in Appendix H.

The term of the current contract between Zone 7 and DSRSD expires in 2024. It is expected to be renewed.

DSRSD coordinates with Zone 7 on an on-going basis to track water use and develop future water supplies.

6.2.1.2 Zone 7 Water Supply Sources

This section details Zone 7's water supplies and their management. Zone 7's water supply has two major components: 1) incoming water supplies available through contracts and water rights each year, and 2) accumulated water supplies in storage derived from previous years. Incoming water supplies typically consist of annually allocated imported surface water supply and local surface water runoff. Accumulated or "banked" water supplies are available in local and non-local storage locations.

To optimize its local resources, Zone 7 practices conjunctive use of the Livermore Valley Groundwater Basin. Zone 7 also stores local runoff from the Arroyo Valle watershed in the local reservoir (Lake Del Valle), which is owned and operated by DWR. Two long-term water storage ("banking") agreements with agencies south of Zone 7's service area in Kern County (Semitropic Water Storage District and Cawelo Water District) provide additional flexibility in managing annual fluctuations in supplies.

To mitigate the risk associated with significant reliance on imported water supply, Zone 7 is continuing to develop local sources of water and diversify its water supply portfolio. In April 2019, Zone 7 completed its 2019 Water Supply Evaluation Update (2019 WSE Update), a follow-up to its 2016 Water Supply Evaluation Update that documents Zone 7's current water supplies based on new information and experience gained since the 2014-2016 drought. The 2019 WSE Update also evaluates various future water supply portfolios, which are discussed in Section 6.2.8.2.

6.2.1.2.1 Imported Water from the State Water Project (SWP)

Imported water from the SWP, which is owned and operated by DWR, is by far Zone 7's largest water source, providing approximately 90 percent of the treated water supplied to its customers on an annual average basis. As described below, SWP water, carryover water, water banked in non-local storage, and transfer water all come through the Delta.

SWP water originates within the Feather River watershed, is captured in and released from Lake Oroville, and flows through the Delta before it is conveyed by the South Bay Aqueduct (SBA) to Zone 7 and two other water agencies (Valley Water [VW, formerly known as Santa Clara Valley Water District] and Alameda County Water District [ACWD]). Much of the SWP water continues to southern California via the California Aqueduct. Lake Del Valle is part of the SWP's SBA system and is used for storage of SWP water, as well as local runoff.

At Zone 7, SWP water is directly used to meet treated water demands from M&I customers—primarily wholesale to water retailers and some direct retail customers—and untreated water demands from agricultural customers. It is also used to recharge the local groundwater basin, as discussed in Section 6.2.2.2.3, and fill non-local groundwater storage in Kern County.

The following sections describe Zone 7's contract with DWR for SWP water and the types of water Zone 7 receives under this contract.

6.2.1.2.1.1 Contract with DWR

DWR provides water supply from the SWP to 29 SWP contractors, including Zone 7, in exchange for contractor payment of all costs associated with providing that supply. DWR and each of the contractors entered into substantially uniform long-term water supply SWP contracts in the 1960s with 75-year terms. The first set of contracts originally terminated in 2035, and most of the remaining contracts terminated within three years after that. Zone 7's original contract was executed in 1961 and was set to expire in 2036. Over the last few years, there have been several key amendments to the SWP contracts, including reaching an agreement in principle to extend SWP contracts, improve water management tools for SWP contractors, and participation in the Delta Conveyance Project. Details regarding Zone 7's contract with DWR are provided in Zone 7's 2020 UWMP.

6.2.1.2.1.2 Table A Allocation

Each SWP contractor is limited to a maximum annual contract amount as specified in Article 6(c) and Table A of the SWP Contract; this amount is therefore commonly referred to as "Table A." As noted above, Zone 7 first entered into the SWP Contract in November 1961; as the SWP was expanded and as Zone 7 demands increased over the years, Zone 7's Table A amount was increased, reaching the amount of 46,000 AFY in 1997. Since then, Zone 7 has increased its supply from the SWP through a series of five permanent transfers. In December 1999, Zone 7 secured Table A SWP allocations from Lost Hills Water District of 15,000 AFY and Berrenda Mesa Water District of 7,000 AFY. Water secured from the Berrenda Mesa Water District serves the Dougherty Valley portion of DSRSD's service area. In December 2000, 10,000 AFY of SWP allocation from Belridge Water Storage District was acquired. An additional 2,219 AFY was obtained from the same source in October 2003. Finally, 400 AFY of water was acquired from the Tulare Lake Basin Water Storage District in 2003. Together, these transfers have raised Zone 7's current Table A allocation to 80,619 AFY.

In practice, the actual amount of SWP water available to Zone 7 under the Table A allocation process (presented as percent Table A) varies from year to year due to hydrologic conditions, water demands of other Contractors, existing SWP stored water, SWP facility capacity, and environmental/regulatory requirements. The Table A allocation is typically less than 100 percent of the Table A amount[10]. SWP reliability is defined based on the long-term average Table A allocation. DWR prepares a biennial report to assist SWP contractors and local planners in assessing the availability of supplies from the SWP. DWR issued its most recent update, the Final 2019 State Water Project Delivery Capability Report (2019 DCR)[11], in August 2020. In this update, DWR provides SWP supply estimates for SWP contractors to use in planning efforts, including the 2020 UWMP. The 2019 DCR includes DWR's estimates of SWP water supply availability under both existing (2020) and future conditions (2040).

DWR's estimates of SWP deliveries are based on a computer model that simulates monthly operations of the SWP and Central Valley Project (CVP) systems. Key inputs to the model include system facilities, hydrologic inflows to the system, regulatory and operational constraints on system operations, and contractor demands for SWP water. In conducting its model studies, DWR must make assumptions regarding each of these key inputs.

[11] Department of Water Resources, 2020. State Water Project Delivery Capability Report 2019. https://data.cnra.ca.gov/dataset/state-water-project-delivery-capability-report-dcr-2019/resource/119da5c5-1c47-4142-8896-334628ca61cd?inner_span=True

In the 2019 DCR model for existing (2020) conditions, DWR assumed: existing facilities, hydrologic inflows to the model based on 82 years of historical inflows (1922 through 2003), current regulatory and operational constraints, and contractor demands at maximum Table A Amounts. Note that the regulatory and operational constraints include the 2018 Coordinated Operations Agreement (COA) Amendment, 2019 Biological Opinions, and 2020 Incidental Take Permit. The 2018 COA Amendment lays out the terms under which the CVP operates with the SWP. The 2019 Biological Opinions for the Long-Term Operation of the CVP and SWP reflect the federal government's (U.S. Fish and Wildlife Service's) opinion as to whether or not the operation of the CVP and SWP is likely to jeopardize the continued existence of threatened and endangered species or result in the destruction or adverse modification of critical habitat. Finally, the 2020 Incidental Take Permit is a requirement for the SWP's California Endangered Species Act (CESA) compliance with regards to state-protected longfin smelt and state- and federally-protected delta smelt, winter-run Chinook, and spring-run Chinook.

To evaluate SWP supply availability under future conditions, the 2019 DCR included a model study representing hydrologic and sea-level rise conditions at 2040. The future condition study used all of the same model assumptions as the study under existing conditions but reflected changes expected to occur from climate change, specifically, projected temperature and precipitation changes centered around 2035 (2020 to 2049) and a 45 cm sea-level rise.

For Zone 7's Table A supply, the 2019 DCR's existing condition was assumed to represent 2020 (59 percent Table A reliability, 47,600 AFY)[12], and the future condition (54 percent Table A reliability, 43,500 AFY)[12] was applied to 2040; the years in between were interpolated between these two bookends[13]. Note that the effect of the proposed Delta Conveyance Project on SWP water supply yield is still being analyzed and has not been included.

As a SWP contractor, Zone 7 has the option to store unused Table A water from one year to the next in the SWP's San Luis Reservoir, when there is storage capacity available. This "carryover" water is also called Article 12e or 56c water, in reference to the relevant contract terms. Article 12e water must be taken by March 31 of the following year, but Article 56c water may remain as carryover as long as San Luis Reservoir storage is available. The analysis in Zone 7's 2020 UWMP assumes Zone 7 carries over 10,000 AF of water each year on average.

6.2.1.2.1.3 Article 21 Water (Interruptible or Surplus Water)

Under Article 21 of Zone 7's SWP contract, Zone 7 also has access to excess water supply from the SWP that is available only if: 1) it does not interfere with SWP operations or Table A allocations, 2) excess water is available in the Delta, and 3) it will not be stored in the SWP system. As described in the 2019 DCR, Article 21 water deliveries are highly variable. This water becomes available during short time windows in the wet season when there is excess water in the system (due to storms) that DWR cannot store in San Luis Reservoir. When Article 21 water becomes available, SWP contractors can request delivery, and the available water is distributed generally in proportion to the Table A contract amounts of those contractors requesting delivery. Delivery of Article 21 water requires accessible storage during very wet conditions and/or the ability to use the water directly without impacting Table A deliveries to Zone 7. Historically,

[12] Existing condition: Table A-4 of the Technical Addendum to the 2019 DCR. Future condition: Table B-6.

[13] For comparison, Zone 7's 2015 UWMP assumed 62 percent Table A reliability (50,000 AFY). Zone 7's 2019 WSE Update assumed 49 percent Table A reliability (39,500 AF). Table A allocations over the last ten years have ranged between 5 percent and 85 percent, with an average of 48 percent.

these conditions have been difficult to meet for Zone 7 and have resulted in infrequent and low yields. Therefore, Zone 7 is not assuming any water supply yield from Article 21 at this time. As Zone 7 increases its local storage and ability to capture Article 21 water (e.g., via the Chain of Lakes project), Zone 7 will re-evaluate the potential increase in Article 21 yield.

6.2.1.2.1.4 Article 56d Water (Turnback Pool Water) and Multi-Year Pool Demonstration Program

Article 56d is a contract provision that allows SWP contractors with unused Table A water to sell that water to other SWP contractors via a "turnback pool" administered by DWR on an annual basis. Historically, only a few SWP contractors have been able to make turnback pool water available for purchase, particularly in normal or dry years.

With the enhanced ability to directly transfer or exchange SWP water from one SWP contractor to another under the Water Management Tools contract amendment described earlier, it is expected that there will not be much water available under Article 56d in the future. Zone 7 is therefore assuming no supplies are available from this source under normal conditions.

6.2.1.2.1.5 Yuba Accord

In 2008, Zone 7 entered into a contract with DWR to purchase additional water under the Lower Yuba River Accord (Yuba Accord). The original contract expires in 2025, and several amendments have been made to the original agreement over the years, including a new pricing agreement executed in 2020.

There are four different types ("Components") of Yuba Accord water made available as a water purchase or transfer; Zone 7 has the option to purchase Components 1, 2, and 3 water during drought conditions, and Component 4 water when the Yuba County Water Agency has determined that it has water supply available to sell.

Water is primarily available during dry years under the Yuba Accord, and the amount is highly variable: 400 AF in 2014, approximately 300 AF in 2015, and 3,000 AF in 2020. For planning purposes, Zone 7 currently does not assume any water supply yield specifically from the Yuba Accord, although water transfers obtained by Zone 7 (see Section 6.2.7) could potentially include supplies from the Yuba Accord.

6.2.1.2.2 Local Surface Water Runoff

Zone 7, along with ACWD, has a water right (Permit 11319 [Application 17002]) to divert flows from Arroyo Valle. Runoff from the Arroyo Valle watershed above Lake Del Valle is stored in the lake, which is managed by DWR as part of the SWP. Lake Del Valle also stores imported surface water deliveries from the SWP and serves both a flood control function, as well as a recreational one. In late fall, DWR typically lowers lake levels in anticipation of runoff from winter storm events. Water supply in Lake Del Valle is made available to Zone 7 via the SBA through operating agreements with DWR. Inflows to Lake Del Valle, after accounting for permit conditions, are equally divided between ACWD and Zone 7 under their respective permits.

Zone 7's latest modeling forecasts future average yields from Arroyo Valle to Zone 7 at approximately 5,500 AFY, using historical hydrology adjusted for climate change impacts. Previous planning documents, including Zone 7's 2015 UWMP, assumed an average yield of 7,300 AFY, and the ten-year calendar year average (2011-2020) has been 3,500 AFY; local climate change effects on the watershed—specifically a net average reduction in precipitation—are expected to reduce the yield over time. Construction of the Chain of Lakes Arroyo Valle diversion structure and pipeline will allow Zone 7 to capture more of the storm releases from Lake Del Valle, and likely increase the yield from this water supply in the future. The conservative

average yield estimate of 5,500 AFY is consistent with the 2019 WSE Update; it will be re-evaluated as more climate change downscaled information is developed and as the Chain of Lakes projects progress.

6.2.1.2.3 Local Storage

Zone 7 has two existing local storage options: Lake Del Valle and the Main Basin. Lake Del Valle stores both runoff from the Arroyo Valle watershed and imported surface water deliveries from the SWP. Zone 7 can store up to about 7,500 AF of its share of Arroyo Valle runoff in the lake; runoff collected in any given year is required to be delivered to Zone 7 by the end of the following year. The Main Basin is used conjunctively and is artificially recharged with SWP water. Zone 7 relies on the operational storage capacity of 126,000 AF in the Main Basin. Section 6.2.2.1. provides additional information on the Main Basin.

6.2.1.2.4 Non-Local Storage

In addition to local storage, Zone 7 also participates in the two non-local (also called "out-of-basin") groundwater banking programs described below; both banks are located in Kern County. Note that while these banking programs provide a water source during drought years, they represent water previously-stored from Zone 7's surface water supplies during wet years. Therefore, they do not have a net contribution to Zone 7's water supply over the long-term and in fact result in some operational losses as described below. While the out-of-basin groundwater banks significantly enhance system reliability, this banked water supply requires Banks Pumping Plant in the Delta and the SBA to be operational; low SWP Table A allocations (and generally low levels of water movement in the SWP system) can limit the delivery of these banked supplies via exchange. Figure 6-1 shows the historical operation of the Kern County banks—note the successful use of the groundwater banks to augment water supplies during the recent drought, and the recovery in the following years.

Point of Delivery Agreements with DWR and Kern County Water Agency, a SWP contractor, allow Zone 7 to store SWP water in and recover water from Semitropic Water Storage District (Semitropic) and Cawelo Water District (Cawelo). Semitropic and Cawelo are member units of Kern County Water Agency, which manages water deliveries to these agencies. Zone 7 has been storing water in the water banks operated by Semitropic since 1998 and by Cawelo since 2006. In November 2020, the Zone 7 Board of Directors (Zone 7 Board) authorized the execution of amendments to existing Point of Delivery Agreements that would extend water delivery terms for storage in Semitropic and Cawelo through 2030 and recovery of banked water through 2035.

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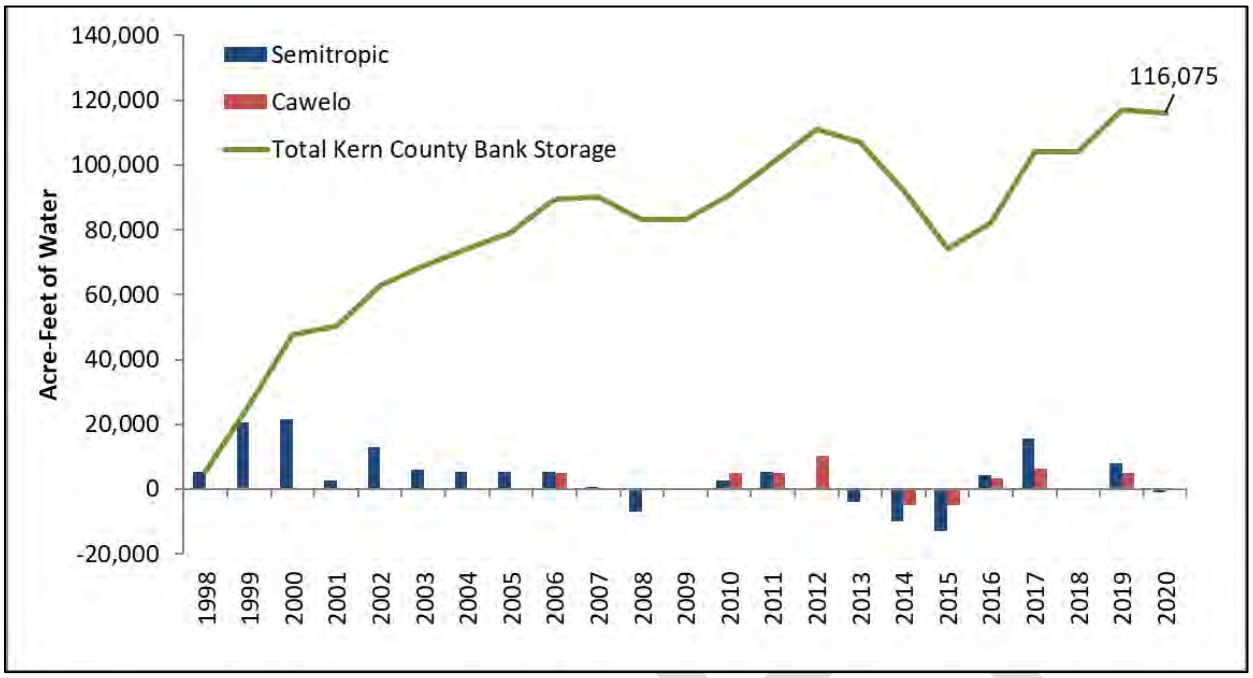


Figure 6-1. Kern County Groundwater Banks Operations

6.2.1.2.4.1 Semitropic Water Storage District

Zone 7 originally acquired a storage capacity of 65,000 AF in the Semitropic groundwater banking program in 1998. Subsequently, Zone 7 agreed to participate in Semitropic's Stored Water Recovery Unit, which increased pumpback capacity and allowed Zone 7 to contractually store an additional 13,000 AF. Zone 7 currently has a total of 78,000 AF of groundwater banking storage capacity available to augment water supplies during drought and emergency conditions and as needed. Zone 7 can store up to 5,883 AFY in the Semitropic groundwater bank. Note that a 10 percent loss is associated with water stored in Semitropic.

Under the contract terms, Zone 7 can request up to 9,100 AF of pumpback and up to 8,645 AF of exchange water. Pumpback is water that is pumped out of the Semitropic aquifer and into the SWP system. Exchange water is water that is transferred between Zone 7 and Semitropic by adjusting the amounts of Table A water delivered to Zone 7 and Semitropic; the availability of this type of water depends on the SWP allocation. During the recent drought, Zone 7 was able to recover 9,900 AF in 2014 and about 12,800 AF in 2015. Zone 7 has largely been storing water in Semitropic over the past few years but did recover 324 AF in 2016 and 1,000 AF in 2020.

6.2.1.2.4.2 Cawelo Water District

Similar to the arrangements with Semitropic, Zone 7 has 120,000 AF of groundwater banking storage capacity available with Cawelo, as executed in a 2006 agreement. Zone 7 can store up to 5,000 AFY in the bank. Zone 7 can request up to 10,000 AFY of pumpback (or SWP exchange water) from Cawelo. During the recent drought, Zone 7 was able to recover 10,000 AF, delivered evenly over 2014 and 2015. Most of this water was used directly, while the rest was stored in San Luis Reservoir for use the following year. Zone 7 only accumulates 50 percent of the water sent to storage in Cawelo; the other 50 percent goes towards water loss and compensation to Cawelo.

6.2.2 Groundwater

This section describes the Livermore Valley Groundwater Basin and Zone 7's Groundwater Management Plan[14] that is used to manage the basin. Each year, Zone 7 prepares an Annual Report for the Groundwater Management Program. The associated Annual Report for the 2020 Water Year[15] is available online, www.zone7water.com/library/reports-planning-documents, and is incorporated herein by reference.

DSRSD does not itself extract groundwater as a water supply. By contract, Zone 7 conducts this groundwater pumping operation to provide water supply services to DSRSD. This groundwater supply is then blended with water from Zone 7's other water supply sources and delivered to DSRSD. In accordance with their water supply agreement, Zone 7 pumps DSRSD's groundwater supply from local storage. Zone 7 does not have a groundwater pumping quota and it can only pump groundwater it has recharged from its other supplies.

DSRSD's groundwater resource is described below.

6.2.2.1 Groundwater Basin Description

Zone 7 has managed local surface water and groundwater resources for beneficial uses in the Livermore Valley Groundwater Basin for more than 50 years. Consistent with its management responsibilities, duties, and powers, Zone 7 is designated in the 2014 Sustainable Groundwater Management Act (SGMA) as the exclusive Groundwater Sustainability Agency (GSA) within its jurisdictional boundaries.

As defined in DWR Bulletin 118 Update 2003 (California's Groundwater), the Basin (DWR Basin 2-10, shown on Figure 6-2) covers 69,600 acres (109 square miles), extending from the Pleasanton Ridge east to the Altamont Hills and from the Livermore Uplands north to the Tassajara Uplands. The Basin is not adjudicated, and DWR has identified it as medium priority—Basin 2-10 is not identified as either in overdraft or expected to be in overdraft. Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo Las Positas as principal streams, with Alamo Creek, South San Ramon Creek and Tassajara Creek as minor streams. All streams converge on the west side of the basin to form Arroyo de la Laguna, which flows south and joins Alameda Creek in Sunol Valley and ultimately drains to the San Francisco Bay. Some geologic structures restrict the lateral movement of groundwater, but the general groundwater gradient is from east to west, towards Arroyo de la Laguna, and from north to south along South San Ramon Creek and Arroyo del la Laguna.

The entire floor of the Livermore Valley and portions of the upland areas on all sides of the valley overlie groundwater-bearing materials. The materials are primarily continental deposits from alluvial fans, outwash plains, and lakes. They include valley-fill materials, the Livermore Formation, and the Tassajara Formation. Under most conditions, the valley-fill and Livermore Formation yield adequate to large quantities of groundwater to all types of wells, with the larger supply wells being in the Main Basin. The Main Basin is composed of the Castle, Bernal, Amador, and Mocho II sub-basins, with an estimated total storage capacity of 254,000 AF.

[14] Groundwater Management Plan for Livermore-Amador Valley Groundwater Basin, prepared for Zone 7 Water Agency, prepared by Jones & Stokes, September 2005. (http://www.water.ca.gov/urbanwatermanagement/2005uwmps/AlamedaZone7/GMP%202005%20Submittal%20-%20Complete.pdf)

[15] Zone 7 Water Agency, 2020. Annual Report for the Groundwater Management Program 2020 Water Year.

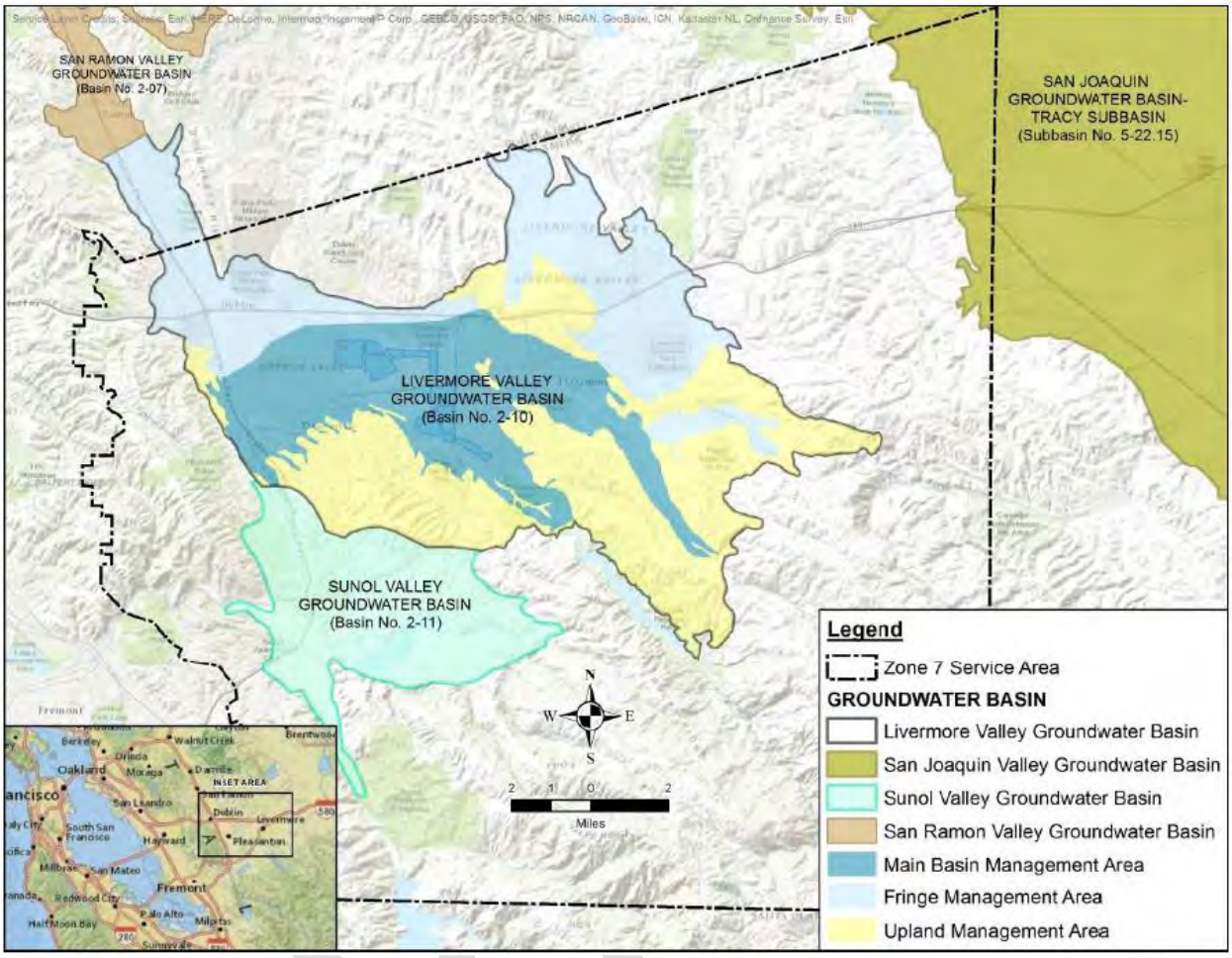


Figure 6-2. Livermore Valley Groundwater Basin and Subbasins

6.2.2.2 Groundwater Management

Zone 7's GMP documented all of Zone 7's then-current groundwater management policies and programs and was developed to satisfy the requirements set forth in the California Groundwater Management Planning Act (Water Code Sections 10750, *et seq*.). More recently, a Salt and Nutrient Management Plan has been incorporated into the GMP. Zone 7 prepares annual reports that summarize the results of the groundwater monitoring, evaluation, and management efforts by water year; the most recent version of the annual report is for the 2019 water year (October 1, 2018 through September 30, 2019). In addition to the annual reports completed over the years, Zone 7 completed the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin (Alternative GSP) in 2016 as required under SGMA.

For Zone 7's operations, the Main Basin is considered a storage facility and not a long-term water supply, because Zone 7 does not have access to naturally recharged water ("sustainable yield"). Zone 7 only pumps groundwater that has been artificially recharged with surface water supplies. As part of this conjunctive use program, Zone 7's policy maintains groundwater levels above historic lows in the Main Basin to minimize the risk of inducing land subsidence. Currently, this is accomplished by releasing SWP water to the arroyos for percolation and replenishment of the aquifers and by managing pumping activities.

Zone 7 established historic lows based on the lowest measured groundwater elevations in various wells in the Main Basin. The difference between water surface elevations when the Main Basin is full and water surface elevations when the Main Basin is at historic lows defines Zone 7's operational storage. Of the estimated total storage capacity of 254,000 AF, operational storage is about 126,000 AF based on Zone 7's experience operating the Main Basin, with the remaining 128,000 AF considered emergency reserve storage.

6.2.2.2.1 Groundwater Level Monitoring and Storage Estimates

Zone 7 routinely monitors groundwater levels within the Main Basin. Some of the data collected is submitted to DWR under the California Statewide Groundwater Elevation Monitoring (CASGEM) program. All the data is reflected in the annual reporting on the Groundwater Management Program.

Two independent methods are used to estimate groundwater storage: 1) Hydrologic Inventory, and 2) Nodal Groundwater Elevation. The Hydrologic Inventory method computes storage change each quarter from basin supply and demand data; this method can also be used to forecast future water storage conditions. The Nodal Groundwater Elevation method computes storage from hundreds of water level measurements. Zone 7 continues to refine the calculation methods; the average of the two results is generally used as the estimate of total groundwater storage volume.

Figure 6-3 depicts Main Basin storage levels calculated using the average of these two methods in thousand acre-feet (TAF). Note the declines in storage due to drought, particularly between 1987 and 1992 and more recently between 2012 and 2015. Stored groundwater at the end of the 2020 water year (October 1, 2019 through September 30, 2020) was approximately 240,000 AF, with 112,000 AF of groundwater available as operational storage.

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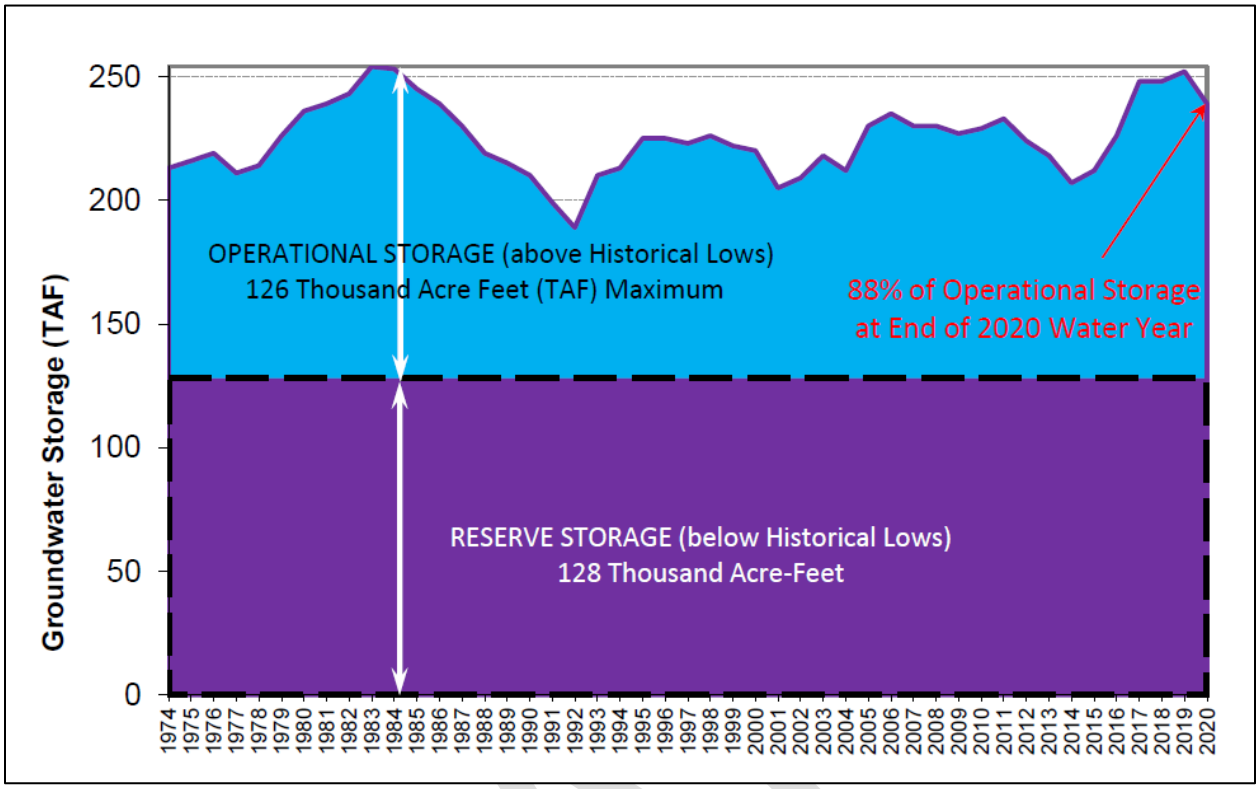


Figure 6-3. Main Basin Groundwater Storage

6.2.2.2.2 Current Sustainable Yield and Groundwater Pumping Quotas

Long-term natural sustainable yield is contractually defined as the average amount of groundwater annually replenished by natural recharge in the Main Basin—through percolation of rainfall, natural stream flow, and irrigation waters, and inflow of subsurface waters—and which can therefore be pumped without lowering the long-term average groundwater volume in storage. In contrast, "artificial recharge" is the aquifer replenishment that occurs from artificially induced or enhanced stream flow. With artificial recharge, more groundwater can be sustainably extracted from the Main Basin each year. Zone 7 only uses groundwater that has been artificially recharged by Zone 7.

The natural sustainable yield of the Main Basin has been determined to be about 13,400 AFY, which is about 11 percent of the operational storage. This long-term natural sustainable yield is based on over a century of hydrologic records and projections of future recharge conditions.

Each Zone 7 retailer has an established GPQ, formerly referred to as the "Independent Quota" in the original Municipal and Industrial water supply contract between Zone 7 and each retailer. GPQs are 3,069 AFY for Cal Water, 645 AFY for DSRSD, and 3,500 AFY for Pleasanton. Pleasanton and Cal Water pump their own GPQ, while Zone 7 pumps DSRSD's GPQ. Livermore has not had any groundwater pumping capability for many years and has therefore not been using their GPQ. Averages are maintained by the allowance of "carryover"—limited to 20 percent of the GPQ—when less than the GPQ is used in a given year. A retailer must pay a "recharge fee" for all groundwater pumped exceeding their GPQ and any carryover. This practice helps avoid a repeat of historical over-drafting of the basin by the larger municipal users. The fee covers the cost of importing and recharging additional water into the Main Basin. The balance of the natural sustainable yield is pumped for other municipal, agricultural, and gravel mining uses.

Zone 7's groundwater extraction for its treated water system does not use the natural sustainable yield from the Main Basin; instead, Zone 7 pumps only water that has been recharged as part of its artificial recharge program using its available surface water supplies. During high-demand periods, groundwater is used to supplement the surface water supply delivered via the SBA. Groundwater is also used when the SBA is out of service due to maintenance and improvements or when Zone 7's surface water treatment plants are operating under reduced capacity due to construction, repairs, etc. Finally, Zone 7 taps into its stored groundwater under emergency or drought conditions, when there may be insufficient surface water supply available.

Zone 7 also pumps groundwater out of the Main Basin during normal water years to help reduce the salt loading in the Main Basin in accordance with the Salt Management Plan [16] (SMP). The Mocho Groundwater Demineralization Plant (MGDP) has been in operation since 2009 to achieve additional salt removal. During emergency or drought conditions, MGDP operations may be reduced to maximize available water supply and avoid water loss due to brine disposal from the MGDP.

On average, Zone 7 plans to recharge about 9,200 AFY in the future, which means that Zone 7 can pump an equivalent 9,200 AFY from the Main Basin on average.

6.2.2.2.3 Artificial Recharge and Groundwater Extraction by Zone 7

Before the construction of the SWP in the early 1960s, groundwater was the sole water source for the Livermore-Amador Valley. This resource has gone through several periods of extended withdrawal and subsequent recovery. The Main Basin was over-drafted in the 1960s when approximately 110,000 AF of groundwater was extracted. The Main Basin was allowed to recover from 1962 to 1983. It was during this era that Zone 7 first conducted a program of groundwater replenishment by recharging imported surface water via its streams or arroyos ("in-stream recharge" or "artificial recharge") for storage in the Main Basin, began supplying treated surface water to customers to augment groundwater supplies, and regulating municipal pumping by other users.

Figure 6-4 shows Zone 7's total annual artificial recharge amounts, pumping amounts, and their cumulative net impacts to operational storage from the 1974 water year to the 2020 water year. Zone 7's operational policy is to maintain the balance between the combination of natural and artificial recharge and withdrawal or pumping to maintain groundwater levels above the emergency reserve storage. Zone 7 has generally been able to pump as much groundwater as it has needed to over the last five years; however, during the recent drought, decreases in groundwater elevation did noticeably affect the production of certain wells. Zone 7 is continuing to study the groundwater basin and developing new tools (such as an improved groundwater model) to better understand the levels of groundwater extraction possible under various conditions and contributing factors such as groundwater connectivity, spatial distribution of groundwater in the Main Basin, and others.

Since 1974, Zone 7 has artificially recharged over 67,000 AF more water than it has pumped, helping to offset demands and keeping the Main Basin's groundwater levels above the historical lows. Between 1974 and 2007 Zone 7 had artificially recharged approximately 70,000 AF more than it had pumped during that same time; however, since 2007, Zone 7 has artificially recharged about 3,000 AF less than it has pumped, primarily due to construction work on the SBA, recent drought conditions, and lower-than-average SWP

[16] Zone 7 Water Agency, 2004. Salt Management Plan. http://www.zone7water.com/publications-reports/reports-planning-documents/158-salt-management-plan-2004

allocations over that same time period. Overall net groundwater storage remains significantly above historical lows, as shown in Figure 6-3.

Zone 7 plans to augment its current groundwater in-stream recharge capacity with off-stream recharge using the future Chain of Lakes.

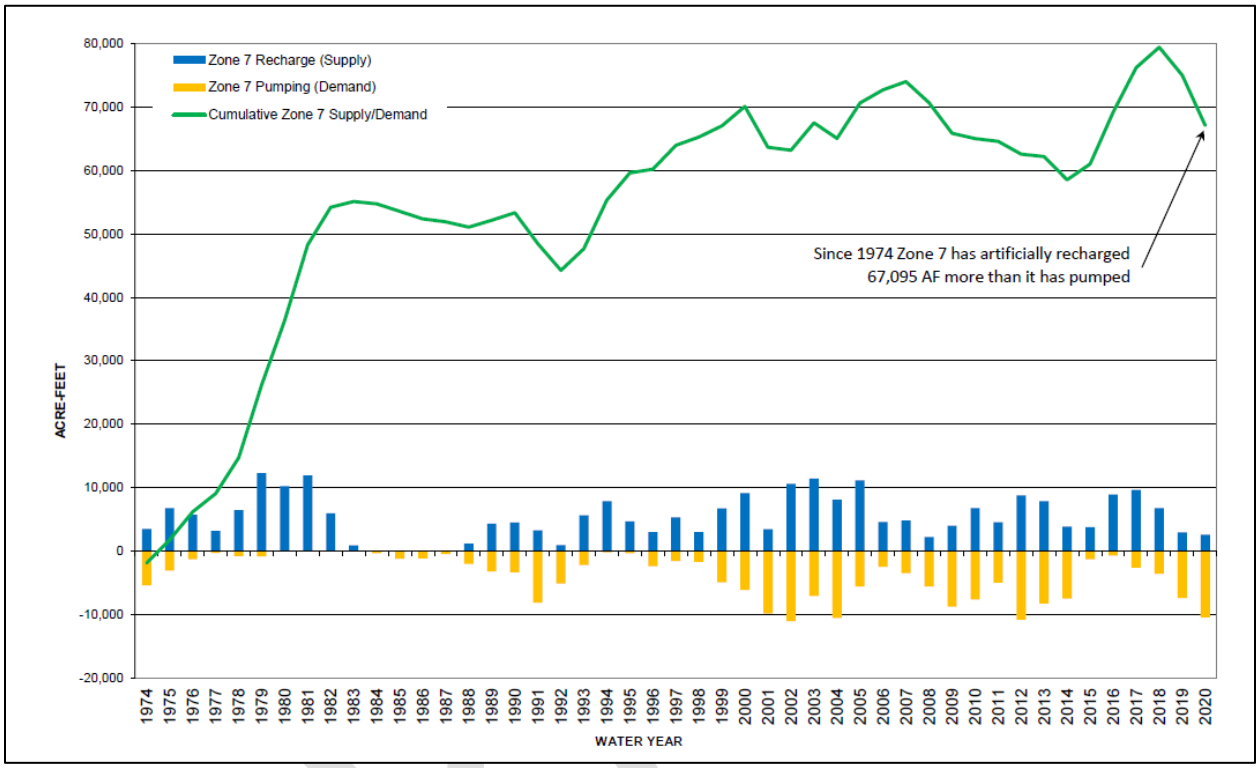


Figure 6-4. Artificial Recharge, Pumping, and Net Cumulative Impacts to Operational Storage

6.2.2.2.4 Groundwater Quality Monitoring and Protection

In general, the Main Basin contains good-quality groundwater that meets all state and federal drinking water standards; groundwater is chloraminated to match the disinfectant residual in the transmission system. Zone 7 has several groundwater wells with naturally-occurring hexavalent chromium (Cr(VI)) concentrations near the Maximum Contaminant Level (MCL) and per- and polyfluoroalkyl substances (PFAS) above the notification limit. In response, Zone 7 is actively managing flows from the affected wells. For example, Cr(VI) levels at the Stoneridge well are being managed through system blending and/or blending with other wells. Also, the PFAS levels in groundwater from the Mocho 2 well currently require blending with groundwater from other wells in that wellfield and/or are being sent through the MGDP. These conditions are being monitored and may change in the future.

Over the last few decades, there has been a slow degradation of groundwater quality as evidenced by rising total dissolved solids (TDS) and hardness levels. To address this problem, Zone 7 developed a SMP, which was approved by the Regional Water Quality Control Board (RWQCB) in 2004, satisfying a condition of the Master Water Recycling Permit. The SMP was incorporated into Zone 7's Groundwater Management Plan (GMP) in 2005. Salinity levels are being addressed primarily through groundwater

pumping and demineralization[17]. Zone 7 completed construction of the 6.1-MGD MGDP in 2009 in the Mocho wellfield. The facility simultaneously allows for the removal and export of concentrated minerals or salts from the Main Basin and the delivery of treated water with reduced TDS and hardness levels to Zone 7's customers. Table 6-1 lists the average TDS and hardness for each year from 2016 through 2020.

Table 6-1. Groundwater Quality: TDS and Hardness (2016-2020)

Year	Total Dissolved Solids (TDS), mg/L	Hardness, mg/L
2016	685	416
2017	673	395
2018	673	409
2019	687	417
2020	683	433

Zone 7 implements a wastewater and recycled water monitoring program as part of the GMP. In the 2020 water year, about 14 percent (1,036 AF) of the recycled water produced in the Tri-Valley area was applied to landscapes over the Main Basin; the remainder was applied on areas outside of the Main Basin, primarily on areas overlying the Dublin and Camp fringe basins and the Tassajara uplands. There is also a small amount of untreated wastewater (681 AF in the 2020 water year) that is discharged to the Main Basin as leachate from wastewater treatment ponds located in southern Livermore, from onsite domestic wastewater systems (septic systems), and from leaking wastewater and recycled water pipelines that run throughout the Basin.

Nitrates and salinity have historically been the primary water quality constituents-of-concern in wastewater and recycled water, but nitrates have become less of a concern since 1995, when the Livermore Water Reclamation Plant and DSRSD's Wastewater Treatment Plant, the regions' two wastewater treatment facilities and producers of recycled water, reduced nitrates in their effluent. Salinity is addressed by the SMP, as discussed above. In 2015, Zone 7 completed a Nutrient Management Plan (NMP)[18], which provides an assessment of the existing and future groundwater nutrient concentrations relative to the current and planned expansion of recycled water projects and future development in the Livermore Valley. The NMP also presents planned actions for addressing positive nutrient loads and high groundwater nitrate concentrations in localized Areas of Concern where septic systems are the predominant method for sewage disposal. The NMP was prepared as a supplement to the SMP; together, they are a Salt and Nutrient Management Plan (SNMP), which has been incorporated into the GMP and Alternative GSP.

[17] The brine concentrate resulting from the treatment system is exported to the San Francisco Bay via a regional wastewater export pipeline.

[18] Zone 7 Water Agency, 2015. Nutrient Management Plan – Livermore Valley Groundwater Basin. http://www.zone7water.com/images/pdf_docs/groundwater/nmp-2015_final.pdf

Under the Toxic Sites Surveillance Program, Zone 7 documents and tracks polluted sites across the groundwater basin that pose a potential threat to drinking water and interfaces with lead agencies to ensure that the Main Basin is protected. Information is gathered from state, county, and local agencies, as well as from Zone 7's well permitting program and the State Water Resources Control Board's GeoTracker website and compiled in a geographic information systems (GIS) database. In general, there are two types of spills potentially threatening the Livermore Valley Groundwater Basin: petroleum-based fuel products and industrial chemical contaminants. In the 2020 water year, Zone 7 tracked the progress of 38 active sites where contamination has been detected in groundwater or is threatening groundwater. More details on the affected sites and their remediation can be found in the annual report.[19]

6.2.2.2.5 Land Surface Elevation Monitoring Program

Previously, Zone 7's Land Surface Elevation Monitoring Program involved contracting with a licensed land surveyor to measure land surface elevations within the Main Basin boundary twice per year. The program included a network of approximately 40 elevation benchmarks encompassing Zone 7's production wellfields and spanning the Bernal and Amador Subareas within the Main Basin.

In the 2016 water year, Zone 7 contracted with TRE Altamira (TRE) to evaluate Interferometric Synthetic Aperture Radar (InSAR) as an alternative to land surveying for subsidence monitoring. TRE analyzed InSAR data from three different satellites 24 years (from 1992 to 2016), including approximately 120 satellite images with between 415 and 1,202 measuring points per square mile. Each measuring point contains a deformation time series, including cumulative displacement, average deformation rate, acceleration, and seasonal amplitude. The study results correlated well with topographic surface measurements taken by land surveys within the same time period. An added benefit of the InSAR dataset was that it included a larger area (i.e., the entire Main Basin) than the land surveying.

Starting in the 2019 water year, Zone 7 retired the land surveying program and transitioned to InSAR for monitoring land subsidence. In general, observed land surface elevation changes between September 2018 to September 2019 near Zone 7's municipal wells were within the range Zone 7 considers to be "elastic deformation" (i.e., rebounds to their original location when groundwater levels return to previous levels).

6.2.2.3 Historical and Projected Groundwater Use

For the 2019 Water Year, rainfall in the Livermore-Amador Valley was 116 percent of the average. According to Zone 7's 2019 Annual Report for the Groundwater Management Program, the groundwater supplies stored locally in the Main Basin increased by approximately 3,900 AF during the 2019 water year. As a result, the 2019 water year ended with an estimated 249,000 AF of groundwater in total storage and 123,000 AF in operational storage. This represents about 98 percent of the Main Basin's operational storage capacity.

As described above, DSRSD has a GPQ of 645 AFY in the Livermore Valley Main Groundwater Basin (Main Basin), which Zone 7 pumps on DSRSD's behalf as part of its water contract. DSRSD itself does not pump any groundwater, as shown in Table 6-2.

[19] Zone 7 Water Agency, 2020. Annual Report for the Sustainable Groundwater Management Program, 2019 Water Year (October 2018-2019), Livermore Valley Groundwater Basin. https://www.zone7water.com/36-public/content/76-groundwater-management-program-annual-report

Table 6-2. Groundwater Volume Pumped (DWR Table 6-1 Retail)

☑	Supplier does not pump groundwater. The supplier will not complete the table below.
NOTES: Zone 7 pumped 645 AFY on behalf of DSRSD GPQ.	

6.2.3 Surface Water

As described above in Section 6.2.1, DSRSD receives surface water supplies from Zone 7. Zone 7's surface water supplies consist of imported surface water from the SWP and local surface water captured in the Del Valle Reservoir.

6.2.4 Stormwater

DSRSD does not currently use stormwater as part of its water supply source. DSRSD's service area lies within the northern region of the Alameda Creek Watershed. Rainfall not captured by local stormwater retention facilities within the service area is conveyed by minor streams, or by Zone 7 flood control channels to Alameda Creek. The runoff is then captured by Alameda County Water District (ACWD) at the lower portion of the watershed. ACWD captures the runoff behind large inflatable rubber dams which span the width of the Alameda Creek Flood Control Channel. These dams divert water to ponds where the water recharges the Niles Cone Groundwater Basin.

6.2.5 Wastewater and Recycled Water

DSRSD is responsible for treating and discharging treated wastewater for Dublin, South San Ramon, and Pleasanton. In addition, DSRSD owns and operates a RWTF at its regional Wastewater Treatment Plant (WWTP) and participates with EBMUD in a Joint Powers Authority (DERWA) which operates the San Ramon Valley Recycled Water Program (SRVRWP). The SRVRWP provides recycled water that meets Title 22 disinfected tertiary recycled water requirements to landscape irrigation customers of DSRSD and EBMUD, including the San Ramon, Dublin, and Dougherty Valley areas of Alameda and Contra Costa Counties. In 2014, Pleasanton also began using recycled water from DERWA facilities under contract with DERWA.

Wastewater produced from the Dougherty Valley area of San Ramon is conveyed north to Central Contra Costa Sanitary District's (CCCSD) wastewater treatment plant. Wastewater flows are transported via the San Ramon Interceptor located within the Iron Horse Trail corridor.

6.2.5.1 Recycled Water Coordination

In 1995, DSRSD and EBMUD executed an agreement to form DERWA, a Joint Powers Authority (JPA), for the purpose of implementing the SRVRWP. The SRVRWP further treats secondary effluent from the DSRSD Regional Wastewater Treatment Plant to produce disinfected tertiary recycled water suitable for irrigation and other approved uses. Deliveries of recycled water began in 2006.

The DERWA main transmission pipeline connects to DSRSD and EBMUD pipelines that serve recycled water to golf courses, parks, greenbelts, streetscapes, schools, office complexes, and homeowner associations. DSRSD currently supplies recycled water to parts of Dublin and Dougherty Valley, while EBMUD serves recycled water to portions of San Ramon. In future phases, EBMUD also plans to supply recycled water to areas within Blackhawk and Danville.

In 2014, the City of Pleasanton signed agreements for DERWA to produce recycled water for the City. These agreements paved the way for a recycled water program in Pleasanton and expansion of the DERWA water recycling plant. Recycled water deliveries to the City of Pleasanton began in 2015. The City of Pleasanton is not a DERWA member agency and receives recycled water on a wholesale basis from DERWA.

DSRSD is responsible for the operation and maintenance of the DERWA recycled water facilities under a 2005 Operations Agreement with DERWA. DSRSD monitors recycled water uses and files reports with the State Water Resources Control Board Division of Drinking Water and the San Francisco Bay RWQCB, in conformance with DSRSD's General Water Reuse Order No. WQ 2016-0068-DDW (General Order 2016).

6.2.5.2 Wastewater Collection, Treatment, and Disposal

DSRSD owns and operates a regional WWTP, which treats wastewater from Dublin, South San Ramon, and Pleasanton. Wastewater from the Dougherty Valley (San Ramon) portion of DSRSD's water service area is collected and treated at CCCSD's wastewater treatment plant located in Martinez, California. DSRSD treats Pleasanton's wastewater influent by contract.

DSRSD's wastewater treatment plant includes conventional secondary treatment facilities, as well as tertiary and advanced recycled water treatment facilities. DSRSD's conventional secondary wastewater treatment facilities include primary sedimentation, activated sludge secondary treatment, secondary sedimentation, chlorine disinfection, and effluent pumping. The secondary treatment facilities currently have an average dry weather flow (ADWF) capacity of 17.0 MGD.

In DSRSD's RWTF (also known as the Jeffrey G. Hansen Water Recycling Plant), a portion of the secondary effluent from the WWTP is treated further to produce Title 22 disinfected tertiary recycled water. Recycled water is produced using sand filtration and ultraviolet disinfection facilities (SFUV) during the dry season when demands are high. The sand filtration tertiary treatment facility capacity is approved by RWQCB for 16.2 MGD, and the ultraviolet disinfection system has been approved to be operated at up to 17.6 MGD.

DSRSD's RWTF also includes microfiltration and ultraviolet disinfection facilities (MFUV) with a treatment capacity of 3.0 MGD. These facilities currently act as backup facilities for the SFUV facilities and are used during times of low and high demands. The SFUV facilities have less flexible startup and shutdown requirements, whereas the MFUV facilities have a wide turndown range; therefore, they are used during low flow periods. During high-demand periods, the MFUV and SFUV facilities may be operated in parallel to meet demand. The MFUV facilities also provide redundancy, increasing reliability when units in the SFUV facilities are undergoing maintenance, repair, or replacement.

Wastewater that is not recycled is discharged into the San Francisco Bay through a pipeline owned by the LAVWMA, a joint powers agency created in 1974 by DSRSD, Livermore, and Pleasanton. Operations began in September 1979, with an expansion in 2005, for a current design capacity of 41.2 MGD. The wastewater effluent from the Livermore and DSRSD wastewater treatment facilities are conveyed to the LAVWMA pump station in Pleasanton. The wastewater effluent is then pumped out of the Livermore-Amador Valley via a 16-mile pipeline from Pleasanton to San Leandro and enters the East Bay Regional Discharge Authority system for dechlorination and discharge through a deepwater outfall to the San Francisco Bay.

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6.2.5.2.1 Wastewater Collected Within Water Service Area

DSRSD's water service area is smaller than its wastewater service area, which includes Pleasanton and the southern portion of San Ramon. In Table 6-3, wastewater volume collected from DSRSD's water service area in 2020 is summarized. The wastewater collected from Dougherty Valley was estimated using Dougherty Valley's 2020 population and an average daily wastewater flow of 60 gallons per person per day.[20] Wastewater influent from Pleasanton and south San Ramon are excluded.

Table 6-3. Wastewater Collected Within Water Service Area in 2020 (DWR Table 6-2 Retail)

Wastewater Collection			Recipient of Collected Wastewater			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2020[1]	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
DSRSD (City of Dublin)[2]	Metered	9,078	DSRSD	DSRSD WWTP	No	No
DSRSD (Dougherty Valley)[3]	Estimated	1,831	CCCSD		No	No
Total Wastewater Collected from Service Area in 2020:		10,909				

NOTES:
[1]Volumes are in AF
[2]Dublin San Ramon Services District, DERWA Demand Summary 2020 Revised. April 2021.
[3]Estimated using Doughtery Valley's 2020 population and an average daily wastewater flow of 60 gallons per person per day.

In Table 6-4, the total wastewater treated by DSRSD in 2020 is summarized. Wastewater that originated outside of DSRSD's water service area, is included. The recycled water discharged outside of the water service area includes recycled water delivered by DERWA to EBMUD and Pleasanton, and recycled water used by DSRSD for treatment plant processes and site landscaping.

[20]West Yost Associates, DSRSD 2017 Collection System Master Plan, Table 3-8, https://www.dsrsd.com/about-us/library/plans-studies.

Table 6-4. DSRSD's 2020 Wastewater Treatment and Discharge, AF[a,b]

Discharge Location Name or Identifier	Discharge Location Description	Does this Plant Treat Wastewater Generated Outside of Service Area?	Treatment Level	Waste water Treated	Discharged Treated Wastewater[c]	Recycled Within Service Area	Recycled Outside of Service Area[d]
LAVWMA & EBDA	Deepwater outfall to San Francisco Bay	Yes	Tertiary	11,555	6,360	2,888	2,307

(a) Volumes are in AF.
(b) Dublin San Ramon Service District, DERWA Demand Summary 2020 Revised, April 2021.
(c) Discharged treated wastewater equals the wastewater treated (i.e., WWTP influent) minus the total volume recycled (i.e., within service area and outside service area).
(d) DSRSD's WWTP and RWTF are located in Pleasanton, outside of its service area. Volume of recycled water used outside of the DSRSD service area includes recycled water for WWTP and RWTF processes and site landscaping and recycled water delivered to EBMUD and Pleasanton.

6.2.5.2.2 Wastewater Treatment and Discharge Within Water Service Area

DSRSD's WWTP is physically located in Pleasanton's water service area. Therefore, as shown in Table 6-5, DWR Table 6-3 has not been completed[21].

Table 6-5. Wastewater Treatment and Discharge Within Service Area in 2020 (DWR Table 6-3 Retail)

☑	**No wastewater is treated or disposed of within the UWMP service area.** The supplier will not complete the table below.

6.2.5.3 Recycled Water System Description

As described above, DSRSD owns and operates the RWTF at its WWTP, which produces recycled water that DERWA delivers to DSRSD, EBMUD, and Pleasanton. EBMUD, through its partnership with DERWA, has capacity rights in the DSRSD RWTF. DSRSD's recycled water distribution system extends from the DERWA distribution system and includes 55.3 miles of pipeline; three pump stations, R300A, R300B, and R20; and two reservoirs, R20 and R300. DSRSD's recycled water system map is provided in Figure 3-3.

The DERWA facilities include 16.6 miles of transmission main, Pump Stations R1 (at the WWTP), R200B, and R200A, as well as Reservoirs R100 and R200. EBMUD owns and operates the recycled water distribution pipeline system contained within its service area and will have two pump stations and a reservoir (future facilities). Pleasanton began using recycled water from the recycled water treatment facilities in 2014 and will continue to expand its use in the future. Pleasanton ties into the DERWA system near the corner of DSRSD's Dedicated Land Disposal (DLD) site adjacent to Stoneridge Drive near the WWTP. Under a 2014 agreement, the City of Pleasanton has capacity rights in the DSRSD RWTF.

[21] Since DSRSD's WWTP is physically located in Pleasanton, DWR Table 6-3 has not been completed in this 2020 UWMP for DSRSD (as shown in Table 6-5 above). However, DWR Table 6-3 in Pleasanton's 2020 UWMP includes the 2020 wastewater treatment and discharge data for DSRSD's WWTP.

6.2.5.4 Potential, Current, and Projected Recycled Water Uses

Prior to 1999, recycled water was used in DSRSD's water service area only for compaction, dust control, and sewer cleaning. In 1999, DSRSD began delivering recycled water to the Dublin Sports Grounds for landscape irrigation. Through subsequent connection to the SRVRWP backbone, DSRSD's recycled water distribution system expanded to serve newly developed areas in Dougherty Valley and the eastern portion of Dublin. Recycled water service was extended to large landscape irrigation water users in the established areas of central Dublin between 2013 and 2015 to reduce potable water demand. Where recycled water distribution mains are adjacent to construction sites, DSRSD allows temporary connection to the distribution main so that construction contractors may obtain recycled water for construction use. Further, DSRSD maintains a commercial recycled water fill station at its RWTF and purple hydrants within its water service area to provide recycled water to contractors for grading and compaction, dust control, landscape irrigation, and sewer flushing.

In response to the 2012-2016 drought, DSRSD made recycled water available to the public for residential landscaping. With hundreds of people coming to pick up water daily, DSRSD expanded the original station at the treatment plant and opened a second location in Dublin in June 2015. The program promoted water conservation and demonstrated the value of DSRSD's investments in recycled water to the community. It received recognition in the water and wastewater industry. Recycled water agencies across California have opened fill stations based on DSRSD model. DSRSD's Residential Recycled Water Fill Station is now closed and may reopen if mandatory water conservation is declared.

Table 6-6 summarizes the amount of recycled water being used in 2020 for each direct beneficial use, as well as projected volumes and uses into the future. The 2020 projected estimates of recycled water use from DSRSD's 2015 UWMP are compared to the actual 2020 recycled water use in Table 6-7.

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Table 6-6. Recycled Water Direct Beneficial Uses Within Service Area (DWR Table 6-4 Retail)

Name of Supplier Producing (Treating) the Recycled Water:	DSRSD									
Name of Supplier Operating the Recycled Water Distribution System:	DERWA									
Beneficial Use Type	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1,2]	2025 [1,2]	2030 [1,2]	2035 [1,2]	2040 [1,2]	2045 [1,2] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)				Tertiary	2,681	2,681	2,681	2,681	2,681	2,681
Golf course irrigation				Tertiary	195	195	195	195	195	195
Commercial use				Tertiary	12	12	12	12	12	12
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)					156	156	156	156	156	156
				Total:	3,044	3,044	3,044	3,044	3,044	3,044
2020 Internal Reuse										

NOTES:

[1]Volume are in AF

[2]Dublin San Ramon Services District, 2020 Billing Data, April 2021.

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Table 6-7. 2015 Recycled Water Use Projection Compared to 2020 Actual (DWR Table 6-5 Retail)

Beneficial Use Type	2015 Projection for 2020[1,2]	2020 Actual Use[1,2]
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	3,364	2,681
Golf course irrigation	254	195
Commercial use	8	8
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Construction)	279	3
Other (Facility Processes and Landscaping)		156
Total	3,905	3,044

NOTE:
[1]Volumes are in AF.
[2]Dublin San Ramon Services District, 2020 Billing Data, April 2021.

DSRSD has been extremely successful in the implementation of its recycled water program within its service area, serving 348 sites within its service area. In 2020, over 40 percent of the annual flow to the Regional Wastewater Treatment Plant was recycled for irrigation uses. The demand for recycled water now occasionally exceeds the available supply on peak summer days, resulting in zero discharge of treated secondary effluent from the DSRSD WWTP to San Francisco Bay during these peak periods.

On March 25, 2019, DERWA found that it cannot meet the combined peak demands and projected demands of its member agencies and Pleasanton. DERWA approved Resolution 19-3 (Appendix I) requesting that its member agencies take action to reduce recycled water demands and implement a connection moratorium to the DERWA recycled water system. On July 7, 2020, the DSRSD Board adopted a revised Recycled Water Policy that reflects the reduced availability of wastewater and decreasing reliability of potable water supplies. Under the Recycled Water Policy, DSRSD may not connect new irrigation customers to the recycled water system until such time as there is sufficient wastewater supply to meet DSRSD recycled water demands for a minimum 10-year time horizon.

DSRSD, in partnership with DERWA and EBMUD, has pursued options to secure a permanent supplemental supply source for the DERWA program, including pursuing wastewater effluent from neighboring agencies, supplementing with groundwater, and looking at seasonal storage options. Although some progress has been made, to date, DERWA has not been able to secure a permanent recycled water supply source that would support lifting the moratorium on new recycled water customers.

Therefore, DSRSD recycled water demands are expected to remain constant within the planning horizon of this 2020 UWMP and expansion of recycled water is identified in Table 6-8.

Table 6-8. Methods to Expand Future Recycled Water Use (DWR Table 6-6 Retail)

☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.
6-23	Provide page location of narrative in UWMP

As described in Section 6.2.8.2, DSRSD completed an Alternative Water Supply Study (AWSS) in May 2021 that evaluated potential supplemental supply sources for the recycled water program. The study recommended working with Zone 7 to further explore the potential to use groundwater as a supplemental supply source. The executive summary of DSRSD's 2021 AWSS is included as Appendix J.

6.2.6 Desalinated Water

Desalination has been identified as a potentially viable additional source of water for several Bay Area water suppliers including the Zone 7. The Bay Area Regional Desalination Project (BARDP) is detailed in Section 6.2.8.2.1.

6.2.7 Water Exchanges and Transfers

Zone 7 periodically supplements existing supplies with short-term transfers when needed and intends to more regularly acquire water transfers over the coming decade until major supply reliability project(s) come online starting around 2030. A transfer agreement with another SWP contractor using the SWP system—which Zone 7 is already invested in—is likely the most expedient and cost-effective transfer option. Transfer water would be conveyed to Zone 7 through the Delta and the SBA; the transfer amount could vary from year-to-year depending on hydrology but could average between 5,000 to 10,000 AFY. For the 2020 UWMP, Zone 7 is assuming 5,000 AFY in water transfers through 2030.

Zone 7 will continue to pursue and evaluate transfer opportunities in the Bay Area and statewide. Through the Bay Area Regional Reliability Partnership, Zone 7 is participating in a reclamation grant-funded project to develop a "Regional Water Market Program," which will identify transfer types and opportunities and develop a road map to facilitate transfers and exchanges in the Bay Area. Zone 7's existing water transfer supply sources and non-local storage options are detailed in Chapter 6 of Zone 7's 2020 UWMP.

6.2.8 Future Water Projects

Zone 7 anticipates future supply deficits as SWP reliability continues to decline and Zone 7's service area population grows. As a result, Zone 7 is pursuing several water supply reliability projects to obtain additional water storage and water supplies, address the need for alternative conveyance in the Delta, and improve access to groundwater and local emergency supplies. The 2019 WSE Update evaluated potential future water projects and their impacts on the reliability of Zone 7's water supply system. Zone 7 expects that a portfolio (likely a subset) of these projects will be needed to address future supply deficits. These projects are presented in Table 6-9 and described in Section 6.2.8.1.

Table 6-9. Zone 7 Expected Future Water Supply Projects or Programs

Name of Future Projects or Programs	Joint Project with other suppliers?		Description *(if needed)*	Planned Implementation Year	Planned for Use in Year Type *Drop Down list*	Expected Increase in Water Supply to Supplier*
	Drop Down Menu	*If Yes, Supplier Name*				
Bay Area Regional Desalination Project	*Yes*	Contra Costa Water District, SFPUC, Santa Clara Valley Water District	Brackish water desalination in eastern Contra Costa County	2030	All Year Types	5,600
Delta Conveyance Project	*Yes*	Department of Water Resources and other SWP contractors	Construction of new intakes and tunnel as part of the State Water Project	2040	All Year Types	TBD
Potable Reuse	*Yes*	Livermore, DSRSD, Pleasanton, Cal Water	Use of purified water derived from wastewater effluent to supplement potable water supplies	2030	All Year Types	4,000-7,000
Sites Reservoir	*Yes*	Sites Project Authority and Sites Reservoir Project Committee members	Construction of a new 1.5 million AF off-stream reservoir in Colusa County	2030	All Year Types	10,000
SWP Transfers	*Yes*	Other SWP contractor/s	Temporary water transfer agreement/s until major projects are implemented	2021	All Year Types	varies

NOTES: Volumes are in AF. These projects are in the conceptual or planning stages. Zone 7 is participating in the planning efforts of these potential future water supply and/or storage projects to evaluate their benefits, including water supply yield. Implementation of these projects has not been approved by the Zone 7 Board but it is expected that a subset of these projects will be needed to meet future water demands and increase the reliability of Zone 7's system. The partners listed above are potential partners; final participation will be determined when the project has been approved by the respective agencies' governing boards. The 'expected increase in water supply...' are estimates at this time and may need to be adjusted when a final project has been approved. The 'planned implementation year' may also vary depending on project progress.

DSRSD completed an Alternative Water Supply Study in May 2021 that provides a framework for building a resilient and sustainable water future for DSRSD customers. The results of this study identified potential near-term actions that DSRSD could implement that would be complementary to Zone 7's water supply reliability efforts. DSRSD's water supply efforts are presented in Table 6-10 and described in Section 6.2.8.2.

Table 6-10. DSRSD Expected Future Water Supply Projects or Programs (DWR Table 6-7 Retail)

☑	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.
6-33 to 6-34	Provide page location of narrative in the UWMP

6.2.8.1 Future Zone 7 Water Supply Projects

Zone 7 is currently evaluating several water supply projects to address potential future supply deficits as SWP reliability declines and Zone 7's service area population grows. These projects include reliability improvements for existing supplies and new supplies. Zone 7's "new supply" projects are described below. A complete list of potential programs and projects, along with additional detail, is available in Zone 7's 2019 WSE Update and 2020 UWMP.

6.2.8.1.1 Bay Area Regional Desalination Project (BARDP)

Brackish water desalination for Zone 7 would be accomplished through a joint venture among Bay Area water agencies—CCWD and potentially EBMUD, the San Francisco Public Utilities Commission (SFPUC), Zone 7, and VW—known as the BARDP. This project is shown on Figure 6-5 and would involve constructing a regional brackish water treatment plant in eastern Contra Costa County producing 10-20 MGD. Water would be diverted using CCWD's Mallard Slough Pump Station. Using an existing water right license and permit, both held by CCWD, and/or a new water right, Zone 7 could potentially receive up to 5,600 AFY. Zone 7 could take delivery of this new water supply through a reliability intertie with EBMUD or through the Delta/SBA by exchanging water with CCWD. Furthermore, this project could potentially provide a new water supply component for the Los Vaqueros Reservoir Expansion (LVE) project and make use of LVE's additional storage and new conveyance facilities.

There has been recent renewed interest in desalination as part of the Bay Area Regional Reliability Partnership, and there may be new developments in the near-term. The water yield of the project is being re-evaluated, and the participating agencies may change. The BARDP is still in the planning phase, and there is no formally approved project at this time. If a project is approved over the next few years, it could be in service by 2030.

In Zone 7's 2020 UWMP, 5,000 AFY was assumed as the total potential yield from BARDP and/or potable reuse (described in Section 6.2.8.2.3) with either or both systems operational by 2030. As noted above, BARDP water could potentially be conveyed through a new intertie supplying the west side of Zone 7's transmission system. This mode of delivery provides an alternative conveyance not subject to Delta outages.

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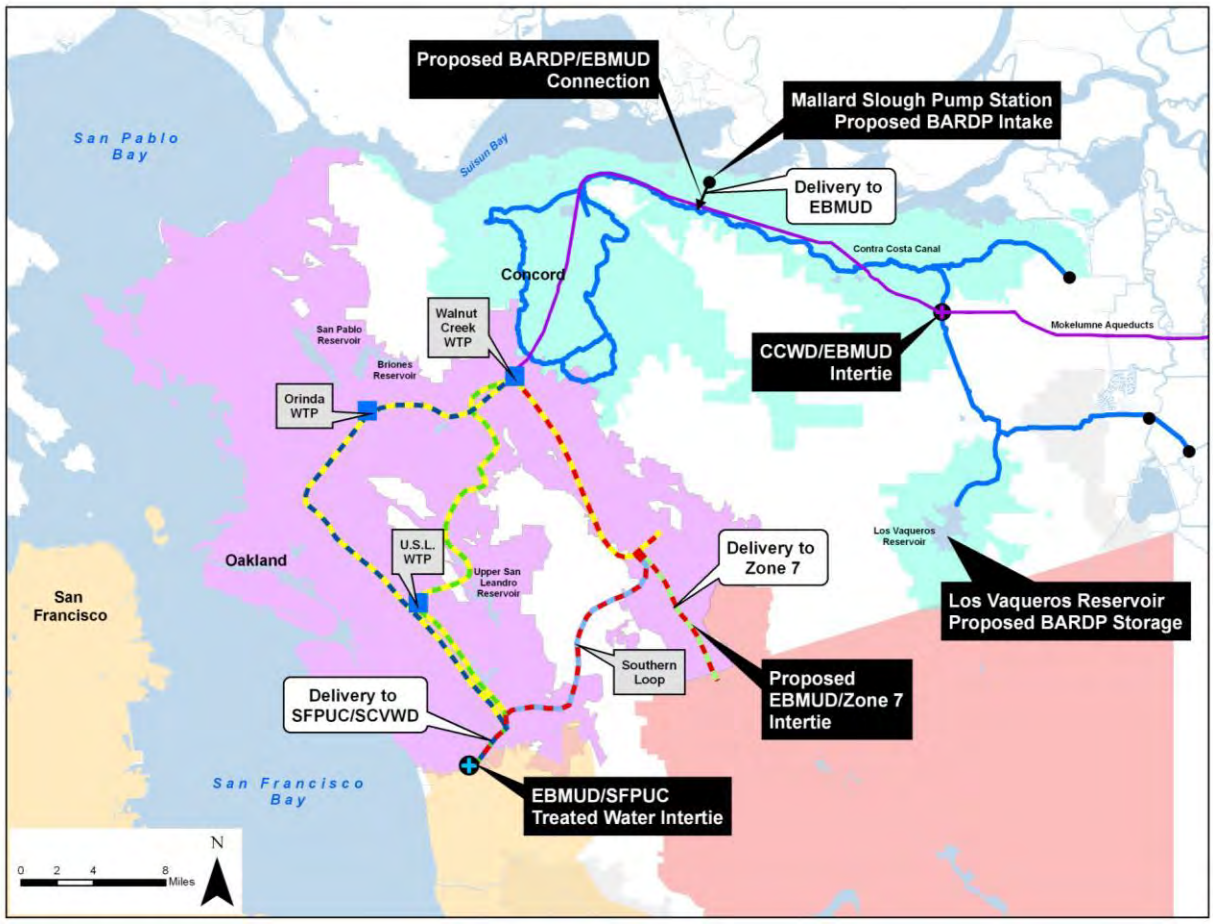


Figure 6-5. Bay Area Regional Desalination Project: Diversion and Conveyance Facilities

6.2.8.1.2 Delta Conveyance Project

Accounting for imported and local surface water, the retailers' GPQs, and recycled water, the Tri-Valley area receives approximately 70 percent of its incoming water supplies through the Delta as delivered by DWR. For Zone 7, the Delta conveys about 90 percent of its existing incoming supplies under normal conditions. SWP water, carryover water, water banked in Kern County and transfer water all come through the Delta.

This key conveyance component of the SWP is increasingly threatened by ecosystem considerations, seismic risk, and climate change/sea level rise, reducing the reliability of the SWP system. DWR's proposed Delta Conveyance Project (DCP) would install a new tunnel to convey freshwater from north of the Delta to a point south of the Delta. The DCP will likely increase SWP reliability and improve water quality, but an alternate conveyance system for the majority of Zone 7's water is the significant benefit as follows:

- A major Northern California earthquake could take out levees in the Delta. Experts suggest that fresh water supply through the Delta could be lost for months, if not a year or two. The DCP would provide an alternative conveyance of freshwater from north of the Delta (near Sacramento) to a point south of the Delta (near Byron) while levee repairs and other work are being completed.

- The South Delta is currently about 3 feet above sea level, while the North Delta is about 15 feet above sea level. Climate change projections call for sea-level rise of 5 to 10 feet. This could render the South Delta unusable for portions of the year due to saltwater intrusion. The DCP would provide an alternative conveyance of freshwater from north of the Delta to a point south of the Delta when the Delta is too saline.

In July 2017, DWR approved the California WaterFix Project, a dual conveyance project involving two new diversion points and two tunnels moving water from the Sacramento River north of the Delta under the Delta to SWP and Central Valley Project water pumping facilities in the South Delta. In the California State of the State address in January 2019, Governor Newsom announced that he did not support WaterFix as configured but he did support a single-tunnel conveyance project. Consistent with this, in May 2019 DWR rescinded its approvals of the WaterFix project and began planning for a single-tunnel option.

In January 2020, DWR released a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) pursuant to CEQA for the DCP. Note that the DCP is part of Governor Newsom's portfolio approach to water management. While the proposed project in the DCP is a single tunnel up to 6,000 cubic feet per second (cfs), DWR is considering alternatives including capacities ranging from 3,000 to 7,500 cfs. Anticipated benefits include: 1) water supply reliability and SWP resiliency (climate change adaptation/stormwater capture, sea-level rise adaptation, seismic resilience), 2) South Delta flow pattern improvements for fisheries, 3) water transfer capacity and carriage water savings, and 4) water quality improvements for SWP deliveries. Potential DCP facilities are shown in Figure 6-6.

As described in Section 6.2.1.2.1.1, Zone 7 has a long-term contract with DWR for a Table A amount of 80,619 AFY from the SWP, but SWP reliability has decreased significantly over the years. Estimates of SWP reliability (i.e., projected long-term average of Table A allocations) have been adjusted over the years as they account for changing regulatory and operational conditions, among other factors. The 2019 DCR estimates SWP reliability will decrease from an average Table A allocation of 59 percent in 2020 to 54 percent Table A in 2040. The potential increase in SWP reliability from the DCP has not been incorporated and will be evaluated once the project and its operational and permitting terms are better defined. Zone 7's 2020 UWMP, therefore, assumes no additional yield from the DCP at this time.

Through mid-2024, DWR will be completing environmental planning efforts on the DCP. In November 2020, the Zone 7 Board approved continued participation in the DCP at a 2.2 percent participation level based on Zone 7's Table A amount of 80,619 AF. The Board also approved Zone 7 funding of these efforts up to $2,800,000 for calendar years 2021 and 2022. A separate future request for Zone 7 Board action would address participation and funding beyond 2022.

Continued participation by Zone 7 in the planning efforts will allow Zone 7 to elect to participate in the DCP implementation in the future based on information developed in the planning process, allow access by Zone 7 to information related to benefits and costs, and provide Zone 7 influence throughout the process. The work over the next two to four years will inform the Zone 7 Board's decision-making as the DCP continues to advance.

As a contractor of the SWP, Zone 7 is working very closely with DWR and other water agencies, environmental groups, regulatory agencies, and natural resource agencies to address the declining reliability of the SWP through the DCP and other efforts.

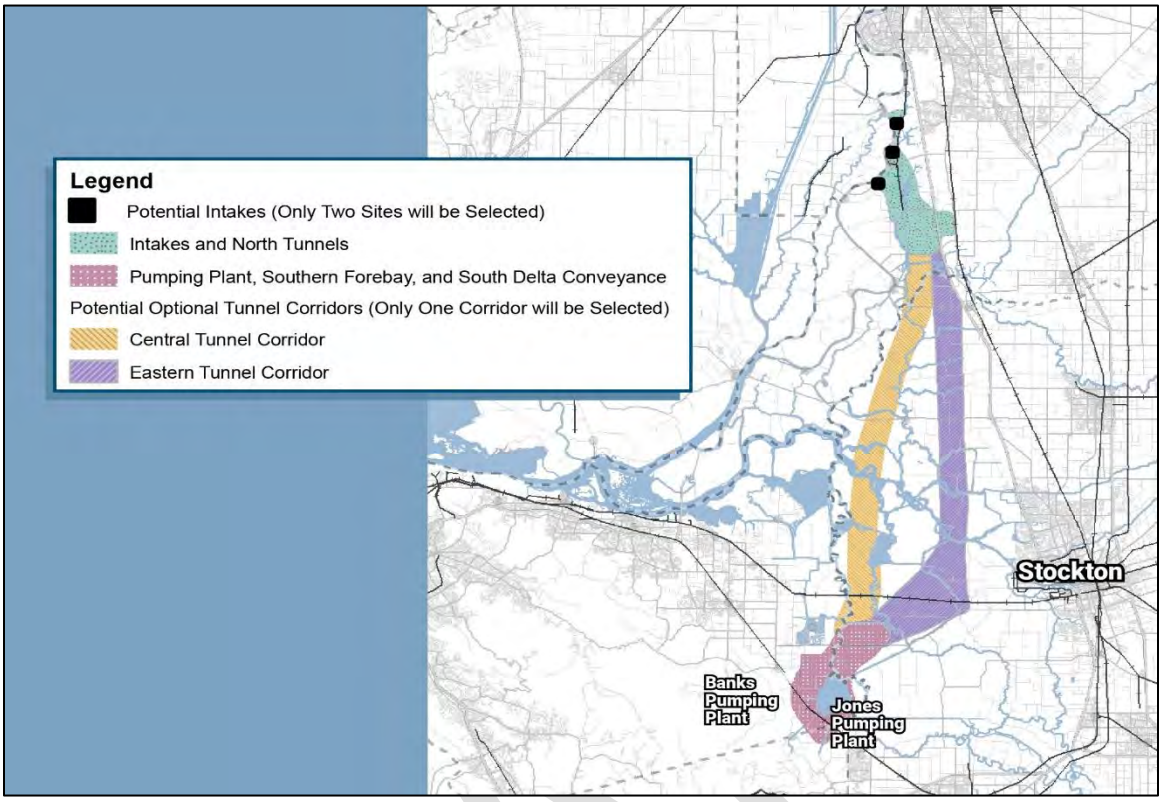


Figure 6-6. Delta Conveyance Project: Potential Facilities

6.2.8.1.3 Potable Reuse

Potable reuse is the use of purified water derived from wastewater effluent to supplement potable water supplies. While recycled water, the use of treated wastewater for non-potable uses such as irrigation, has been available for many years in the Tri-Valley, potable reuse would be a new use of local wastewater resources collected by DSRSD and Livermore. Its main benefits include local production and control, drought resistance, and the use of an existing water resource.

In 2018, the Tri-Valley Water Agencies completed the Joint Tri-Valley Potable Reuse Technical Feasibility Study[22] (Potable Reuse Study) with these goals: 1) to evaluate the feasibility of a wide range of potable reuse options for the Tri-Valley based on technical, financial, and regulatory considerations, and 2) assuming that potable reuse is found to be technically feasible, to recommend next steps for the agencies. The Potable Reuse Study also refined cost estimates for potable reuse.

The Potable Reuse Study investigated three potential end uses for purified water in detail: 1) groundwater augmentation or recharge via injection wells, 2) groundwater recharge via Chain of Lakes surficial recharge, and 3) raw water augmentation to Zone 7's Del Valle Water Treatment Plant. Looking at annual yields ranging from 5,500 to 10,000 AFY, the Potable Reuse Study concluded that potable reuse is technically feasible for the Tri-Valley, with benefits to reliability and water quality. The lower yield would use only Livermore wastewater supply with year-round operations, while the higher yield would be

[22]Tri-Valley Agencies and Carollo Engineers, 2018. Joint Tri-Valley Potable Reuse Technical Feasibility Study. https://www.dropbox.com/s/pxcyajryga5j61s/potable_reuse_feasibility_study_May-2018.pdf?dl=0

achieved with seasonal availability of DSRSD wastewater supply. Water availability would increase over time as development occurs in the Tri-Valley and more wastewater is generated and collected. In other words, the maximum yield is expected to only be available after a certain point in the future; only a fraction of the maximum yield is available before buildout.

In the 2019 WSE Update, raw water augmentation was modeled with the option for a two-phased project that initially produces a lower yield but increases to the maximum yield in 2035 (following a growth in available wastewater). Reflecting a more conservative estimate of future wastewater availability, the 2019 WSE Update used a reduced yield of 4,000 AFY starting in 2027 and 7,000 AFY after 2035. Conservation regulations have set low indoor water use targets for California, which are expected to reduce future wastewater flows. The estimates in the Potable Reuse Study had not incorporated the recently set statewide indoor water use targets. Future analyses will adjust estimates as necessary based on actual indoor water use trends and updated projections of wastewater availability for potable reuse.

Zone 7, with the support of some of the Tri-Valley's retailers, is completing a number of technical studies over the next few years that will support the continued evaluation of potable reuse options and their costs and benefits. For planning purposes, the Zone 7 2020 UWMP assumes 5,000 AFY of future supply from BARDP (discussed in Section 6.2.8.2.1) and/or potable reuse, with either or both systems online by 2030.

6.2.8.1.4 Sites Reservoir

Sites Reservoir is a proposed new 1,500,000 AF off-stream storage reservoir in northern California near Maxwell. Sacramento River flows will be diverted during excess flow periods and stored in the off-stream reservoir and released for use in the drier periods. As shown in Figure 6-7, Sites Reservoir aims to supplement and optimize use of the State's existing storage and conveyance systems such as the CVP's Shasta Reservoir and the SWP's Oroville Reservoir, which collects much of the water for the SWP system.

The participants in the Sites Reservoir project include 31 entities, including Zone 7 and several other SWP contractors. Sites Reservoir is currently undergoing environmental planning and permitting and is expected to provide approximately 240 TAF per year[23] of additional deliveries on average to participating agencies under existing conditions. Operations modeling will continue to be refined over the next few years to reflect a range of permit and operational conditions, which will define the ultimate yield. For example, it is uncertain at this time whether the delivery of Sites Reservoir releases using SWP facilities in the Delta could result in a "carriage loss," which would reduce the net yield to Zone 7 and other SWP contractors. Full operation of the Sites Reservoir is estimated to start by 2029 following environmental planning, permitting, and construction.

Sites Reservoir is expected to provide water supply and environmental, flood, and recreational benefits. Consequently, Sites Reservoir was conditionally awarded $816 million from the California Water Commission for the ecosystem, recreation, and flood control benefits under Proposition 1. The United States Bureau of Reclamation (Reclamation) may also invest in Sites Reservoir under the Water Infrastructure Improvements for the Nation Act and recently transmitted a final Federal Feasibility Report to Congress for the project.

[23] Sites Project Management Team, 2020. Sites Project Value Planning Alternatives Appraisal Report. https://3hm5en24txyp2e4cxyxaklbs-wpengine.netdna-ssl.com/wp-content/uploads/2020/04/INT-REP-Value-Planning-Appraisal-Report-FinalV2Compressed.pdf

The Sites Project Authority (Authority) was formed on August 26, 2010 as a joint powers authority to pursue the development and construction of Sites Reservoir. The Authority is governed by a 12-member Board of Directors representing Sacramento Valley leadership in government and water management. Water agencies across California—including Zone 7—that are investing in the project are members of the Sites Reservoir Project Committee. The Sites Reservoir Project Committee oversees the planning efforts and provides recommendations to the Authority.

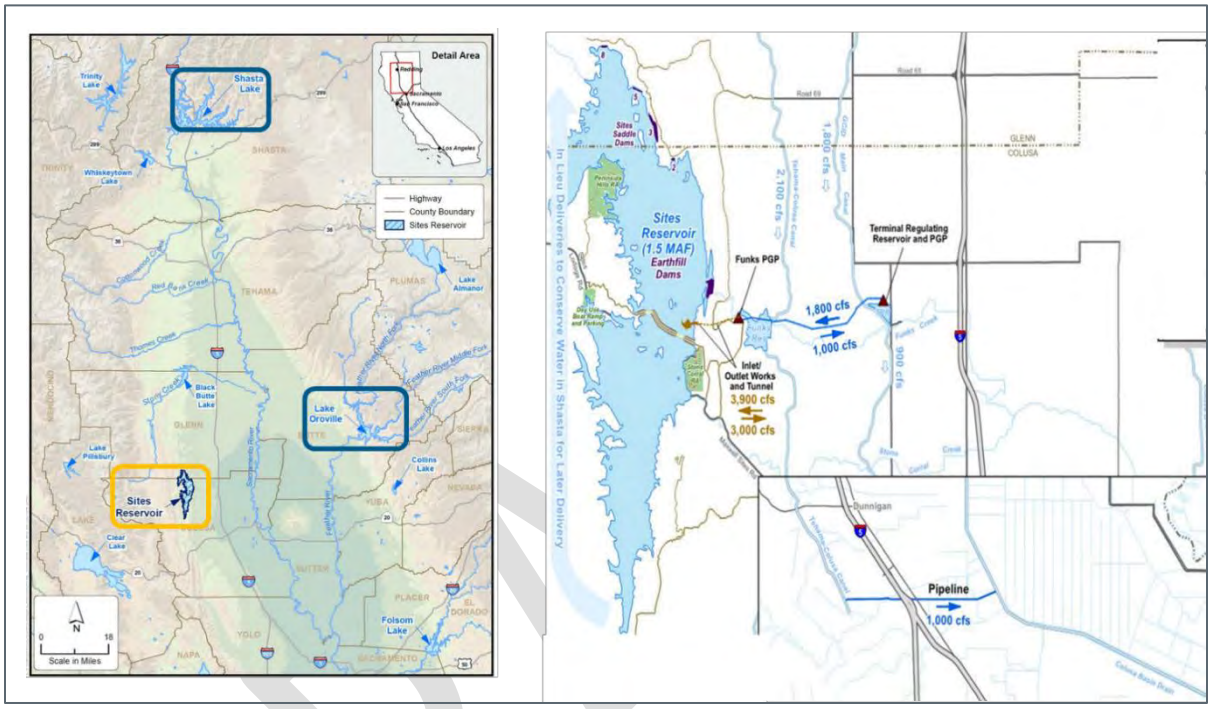


Figure 6-7. Sites Reservoir Project: Location and Facilities

Sites Reservoir could provide both water supply and storage for Zone 7. In December 2016, the Zone 7 Board authorized participation in Phase 1 at a cost of $850,000. In December 2019, the Zone 7 Board authorized participation in Phase 2 (2019 Sites Reservoir Project Agreement) at a cost of $600,000. The Zone 7 Board then approved continued participation in Phase 2 through December 2021 at an amount not-to-exceed $1,000,000 in July 2020. Key work under these two phases include planning, design, financial analysis, and environmental review and permitting.

In the 2019 WSE Update, Zone 7 considered 5,000 to 10,000 AFY of average yield from Sites Reservoir combined with other water supply options. The availability of this supply was varied based on hydrology, with more water delivered to Zone 7 during dry years. At Zone 7's request, water would be released from Sites Reservoir annually to the Sacramento River, then conveyed by the SWP system through the Delta and to the SBA. Based on model results, Sites Reservoir's key benefit is the availability of water during dry years when the shortage risk is greatest. Sites Reservoir is a good complement to the DCP, which could potentially increase SWP yield during wet years. Because Sites Reservoir provides both storage and new supply, it adds flexibility to Zone 7's water supply system; for example, the timing of deliveries from Sites Reservoir could be modified to maximize yields from other water supplies and/or to accommodate delivery timing restrictions of other supplies. For Zone 7, water could be released from Sites Reservoir annually to the Sacramento River, generally during dry and critical years, then conveyed by the SWP system through the Delta and to the SBA. Recently, the Zone 7 Board re-affirmed continued participation

in Sites Reservoir at a 10,000 AFY share. Zone 7's 2020 UWMP therefore assumes an average water supply of 10,000 AFY to Zone 7 from Sites Reservoir.

6.2.8.1.5 Storage Project – Los Vaqueros Reservoir Expansion

Constructed in 1997, Los Vaqueros Reservoir is an off-stream reservoir owned by CCWD and located in southeastern Contra Costa County (see Figure 6-8). It currently has a capacity of 160,000 AF following its expansion (Phase 1) from 100,000 AF in 2012. CCWD is planning to further expand the reservoir to 275,000 AF (Phase 2) and construct the Transfer-Bethany Pipeline, which would connect the reservoir to the SBA and the California Aqueduct. The LVE's key objectives are to: 1) develop water supplies for environmental water management, and 2) increase water supply reliability for Bay Area water agencies. In addition, the LVE would improve water quality for municipal and industrial customers in the San Francisco Bay Area while providing improved habitat and recreation and flood control benefits.

Recognizing LVE's potential benefits as emergency conveyance and storage, the Zone 7 Board approved participation in the LVE Project Planning in September 2016, with a $100,000 cash contribution. In January 2019, the Zone 7 Board approved continued participation in the project's planning activities through execution of the Multi-Party Agreement in an amount not-to-exceed $355,000. In August 2020, the Zone 7 Board approved continued participation in the LVE Multi-Party Agreement through December 2021 at a cost up to $1.014 million.

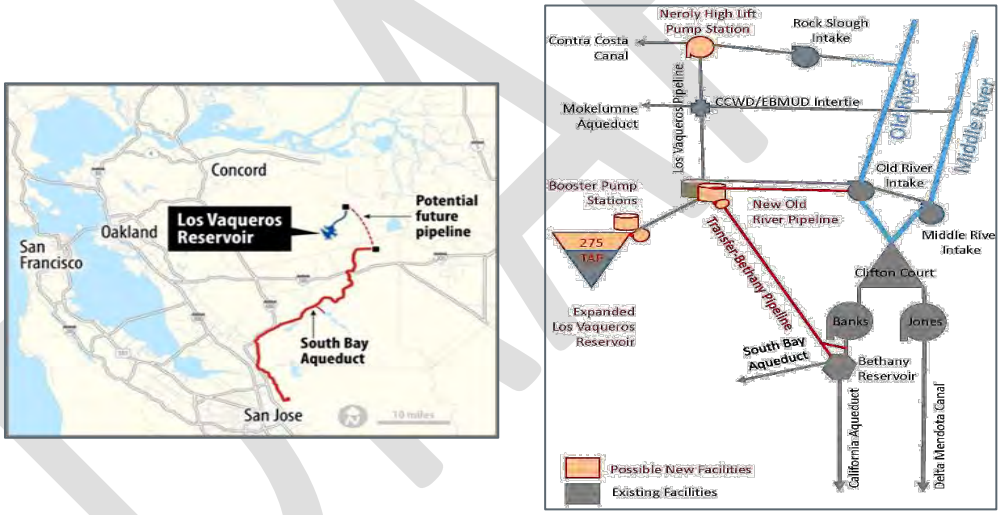


Figure 6-8. Los Vaqueros Reservoir: Location and Facilities (Source: CCWD)

Under the LVE, water would be diverted from the Delta at CCWD's Rock Slough, Old River, and Middle River Intakes, and at the Freeport Intake on the Sacramento River. This water could then be delivered to agencies within CCWD's service area, the Bay Area, the Delta, neighboring regions, and the south-of-Delta wildlife refuges. Under existing and new water right and permit conditions, CCWD would be able to divert different types of water, including: Delta surplus water under CCWD's Los Vaqueros water right, Central Valley Project water, SWP water, Mokelumne River water, and other water acquired by project partners through transfer agreements. Existing and new facilities would be used to store and convey water under the LVE (Figure 6-8).

Water could be stored in Los Vaqueros Reservoir for later use or delivered directly to partners. Potential LVE participants envision different operational schemes for the reservoir and associated facilities, and these various scenarios are continuing to be evaluated through modeling by CCWD staff. While some new water supply may be available from LVE, Zone 7 is primarily evaluating the project as storage due to the uncertainty of the availability of such supplies given increasing Delta restrictions. The 2019 WSE Update assumed emergency storage in Los Vaqueros Reservoir at 10,000 AF.

In 2017, CCWD and Reclamation completed the Draft Supplement to the Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the LVE. The project was successfully selected for funding under the State's Water Storage Investment Program (WSIP) in July 2018 of up to $459 million based on its environmental and other public benefits. Reclamation also contributes to LVE costs, which are estimated to total $1.1 billion. Reclamation and CCWD published final environmental documents for the LVE in February 2020. A JPA is planned to be formed in spring 2021 to oversee project planning, design, and operation. Work is proceeding on the project's design, engineering, environmental and other permitting, financial analysis, and operations planning. The Transfer-Bethany Pipeline is scheduled for completion by around 2025 and the expanded reservoir by around 2030.

6.2.8.1.6 Reliability Intertie with EBMUD

Zone 7 is planning to construct a 30-inch diameter treated water pipeline connection with EBMUD on the west side of Zone 7's transmission system. This reliability would provide an additional or alternative means of delivering water to Zone 7 during Delta and/or SBA outages, and is planned to be in service by around 2030.

6.2.8.2 DSRSD Alternative Water Supply Study

In September 2015, DSRSD completed an Alternative Water Supply Study (2015 AWSS) to identify conceptual alternatives for improving the long-term reliability of the DSRSD's water supplies. The 2015 AWSS was driven by unprecedented drought conditions in 2014 and 2015 and DSRSD's desire to reduce dependence on imported water supplies through the SWP. In 2014, DWR announced an initial State Water Project allocation of 0 percent, which was increased to 5 percent later in the year. The very low 2014 SWP allocation and limitations on when water could be pumped through the Delta exposed vulnerabilities with Zone 7's heavy reliance on the current SWP system for bringing water supplies into the Tri-Valley.

The 2015 Study included a high-level assessment of regional and local supply alternatives that DSRSD could explore collaboratively with other neighboring water and wastewater agencies to diversify the DSRSD's water supplies and reduce reliance on Zone 7 and imported water supplies. The results of the 2015 Study informed and provided the framework for DSRSD's Water Supply, Storage, Conveyance, Quality and Conservation Policy (2015 Water Policy), which was adopted by the Board in October 2015.

In August 2020, DSRSD initiated an effort to update the 2015 AWSS to incorporate new and refined information and serve as the basis for updating the 2015 Water Policy. The *2021 Alternative Water Supply Study: A Framework for a Resilient and Sustainable Water Future* (2021 AWSS) was completed in May 2021. The 2021 AWSS highlights how information has changed or evolved over the past five years and the progress Zone 7 has made towards achieving a more diversified portfolio of supply, storage, and conveyance projects. Zone 7's efforts are described in Section 6.2.8.1.

The AWSS provides a framework for guiding DSRSD's near-term water supply efforts, which include:

- Supporting Zone 7's efforts to pursue additional supply, storage, and conveyance projects and advocating for continued participation in the LVE and Transfer-Bethany Pipeline Project and evaluating Sites Reservoir in combination with Delta Conveyance;
- Exploring potential near-term pilot projects to gather information and inform longer-term water solutions; and
- Continuing to seek supplemental non-potable supplies to expand the recycled water program.

Based on the results of the 2021 AWSS, the DSRSD Board approved the Water Resiliency Policy on April 20, 2021. The Water Resiliency Policy, which replaces the 2015 Water Policy, will guide DSRSD efforts to build a resilient and sustainable water future for DSRSD customers. The Water Resiliency Policy emphasizes the need for collaborative partnerships, advocates for an "all of the above" approach to exploring projects that build water resiliency for the Tri-Valley, and prioritizes local and sustainable water projects that contribute to regional self-reliance.

The executive summary of DSRSD's 2021 AWSS is included as Appendix J and DSRSD's Water Resiliency Policy is included as Appendix K.

6.2.9 Summary of Existing and Planned Sources of Water

Table 6-11 summarizes the actual water supplies for DSRSD. Table 6-12 summarizes the future projected water supplies for DSRSD.

Table 6-11. Water Supplies - Actual (AF) (DWR Table 6-8 Retail)

Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume[1]	Water Quality	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Purchased or Imported Water	Zone 7	10,966	Drinking Water	
Recycled Water[2]	From DSRSD RWTF	2,888	Recycled Water	
	Total	13,854		0

NOTES:

[1]Volumes in AF.

[2]Recycled water volume excludes recycled water used for processing and landscape irrigation at the DSRSD WWTP.

Table 6-12. Water Supplies - Projected (AF) (DWR Table 6-9 Retail)

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable									
		2025		2030		2035		2040		2045 (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water	Zone 7	11,993		13,363		13,807		13,820		14,034	
Recycled Water		3,044		3,044		3,044		3,044		3,044	
Total		15,037	0	16,407	0	16,851	0	16,864	0	17,078	0
NOTES: Volumes in AF.											

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6.2.10 Climate Change Impacts

There are concerns that a warming trend that occurred during the latter part of the 20th century will likely continue through the 21st century. Numerous studies have been conducted to evaluate the potential impacts of these changes to water resources. Based on these studies, climate change could impact California's water resources in the following ways:

- Reductions in the average annual snowpack due to a rise in the snowline and a shallower snowpack in the low and medium elevation zones, such as in the Tuolumne River basin, and a shift in snowmelt runoff to earlier in the year;
- Changes in the timing, intensity and variability of precipitation, and an increased amount of precipitation falling as rain instead of as snow;
- Long-term changes in watershed vegetation and increased incidence of wildfires that could affect water quality;
- Sea level rise and an increase in saltwater intrusion;
- Increased water temperatures with accompanying potential adverse effects on some fisheries and water quality;
- Increases in evaporation and concomitant increased irrigation need; and
- Changes in urban and agricultural water demand.

As described above, the SWP has been and will continue to be the largest source of Zone 7's, and hence DSRSD's, water supplies. In 2020, for example, the supplies derived from the SWP (existing SWP supplies, groundwater (stored SWP supplies), and SWP carryover) are projected to represent nearly 90 percent of Zone 7's supplies.

The following provides a summary of the potential impacts of climate change to water supply operations in the Delta, as they relate to water supply reliability, water quality and flood control:

- Water Supply Reliability
  - The operation of storage reservoirs could be impacted by shifting runoff and snowmelt patterns, requiring a greater volume of flood control storage, and making it more difficult to refill reservoir flood control storage during late spring or early summer, and potentially reducing the volume of surface water available for use during the summer/fall season.
  - Levee breaks, either as a result of the impacts of rising sea levels, lack of maintenance, earthquake, or some combination, could have adverse effects on Delta water quality (due to the intrusion of salt water into these potable water supplies) and water system operations. Major levee breaks could take months or years to repair, and will impact the availability of water supplies from the Delta.
- Water Quality
  - More intense storms and increased runoff could impact Delta water quality in two ways: 1) Increased sediment load, and 2) Increased contaminants from increased urban and agricultural runoff.

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  - Sea level rise could push salt water from the Bay into the Delta, impacting overall water quality and potentially impacting Delta operations.
  - Levee breaks, either as a result of the impacts of climate change or an earthquake, could cause large amounts of salt water from the Bay to enter the Delta and would have adverse effects on Delta water quality and water system operations. The saltwater intrusion could take months to dissipate depending on the severity of the levee break and the amount of saltwater intrusion which occurs.
- Flood Control
  - Reservoir operations, including the need for more flood storage reservoir space, could be impacted by snowpack changes, shifts in snowmelt patterns and changes in rainfall intensity.
  - Deteriorating levees could fail as a result of increased runoff, more intense storms, sea-level rise, or lack of maintenance. Failure of the levees would have catastrophic impacts on the Delta, including its islands and have enormous implications for water supply operations.

Climate change may also impact Zone 7's other operations. Specifically, with respect to groundwater management, the SMP, groundwater recharge operations and COL operations may be impacted by changes in precipitation patterns and intensities. Similarly, the operation of Lake Del Valle could be impacted by the need to maintain more flood control storage capacity to deal with more intense rainfall events. Lastly, flood control operations, in general, may be impacted by more intense and more frequent flooding events.

The scenarios in the 2019 DCR account for climate change impacts based on 2035 emissions levels and 45-centimeter sea-level rise; therefore, these impacts have been incorporated into Zone 7's water supply planning efforts. Zone 7 has also evaluated the impacts of climate change on local water supplies and documented those evaluations in the 2019 WSE Update.

6.3 ENERGY INTENSITY

In accordance with CWC §10631.2(a), the energy intensity to provide water service to DSRSD's customers over a one-year period is presented in this section to the extent that the information is available. The amount of energy to divert, pump, treat, and distribute DSRSD's water supply within the system it owns and operates is included. The amount of energy that Zone 7 requires to treat raw water and deliver potable water to DSRSD is excluded.

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Water energy intensity is the total amount of energy, calculated on a whole-system basis, used to deliver water to DSRSD's customers for use. Energy intensity is the total amount of energy in kilowatt-hours (kWh) expended per acre-foot to take water from DSRSD's source to its point of delivery. Understanding the whole-system energy intensity would allow DSRSD to develop the following water supply management and system operation strategies:

- Identifying energy-saving opportunities, as energy consumption is often a large portion of the cost of delivering water;
- Calculating energy savings and GHG emissions reductions associated with water conservation programs;
- Identifying potential opportunities for receiving energy efficiency funding for water conservation programs;
- Informing climate change mitigation strategies; and
- Benchmarking energy use at each water acquisition and delivery step and comparing energy use among similar agencies.

In Table 6-13, the energy intensity of DSRSD's water service is calculated for 2019, as it provides a typical year's energy use. In 2020, shelter-in-place orders and business restrictions related to the COVID-19 pandemic may have altered water use by DSRSD's customers. The total energy intensity for DSRSD's water service is 379 kWh/AF. Note, 2019 energy consumption information is from billing statements received in 2019, which may not exactly reflect energy use from January 1 through December 31.

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Table 6-13. Recommended Energy Intensity (DWR Table O-1B)

Enter Start Date for Reporting Period	1/1/2019	Urban Water Supplier Operational Control		
End Date	12/31/2019			
☐ Is upstream embedded in the values reported?		Sum of All Water Management Processes	Non-Consequential Hydropower	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit) [1]		*10,152*	*0*	*10,152*
Energy Consumed (kWh) [2]		*3,843,152*	*0*	*3,843,152*
Energy Intensity (kWh/volume)		*379*	*0.0*	*379*

NOTES:
1. Dublin San Ramon Services District, Zone 8 Water Billing 2019, April 2021.
2. Dublin San Ramon Services District, Energy Data Account Usage, April 2021.

Quantity of Self-Generated Renewable Energy

0 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Data is provided by the District from flow meters in the water distribution system and electric meters at its water facilities.

Narrative:

Water management processes consuming energy include distribution/pumping, storage tank operations, and groundwater pumping and treatment.

As discussed in Section 6.2.5, DSRSD collects and transports wastewater and recycled water. The energy intensity associated with DSRSD's wastewater services and recycled water services for 2019 is provided in Table 6-13. The DSRSD WWTP has includes a cogeneration system that provides electricity and heat for operation of the WWTP and its supporting infrastructure; energy produce by the cogeneration system is included in the table. The total energy intensity for DSRSD's wastewater services and recycled water services is 668 kWh/MG and 299 kWh/MG, respectively.

Table 6-14. Recommended Energy Intensity – Wastewater & Recycled Water (DWR Table O-2)

Enter Start Date for Reporting Period	1/1/2019	Urban Water Supplier Operational Control			
End Date	12/31/2019	Water Management Process			
☐ Is upstream embedded in the values reported?		Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Water Units Used	MG				
Volume of Wastewater Entering Process (volume units selected above) [1]		1670	3796	2291	7758
Wastewater Energy Consumed (kWh) [2]		12086	5010137	162646	5184870
Wastewater Energy Intensity (kWh/volume)		7.2	1320	71	668
Volume of Recycled Water Entering Process (volume units selected above) [1]			1505	1505	3010
Recycled Water Energy Consumed (kWh) [2]			451239	447255	898494
Recycled Water Energy Intensity (kWh/volume)		0.0	300	297	299

Notes
1. Dublin San Ramon Services District, DERWA Demand Summary 2020_rvsd 2103.08.xlsx, March 2019.
2. Dublin San Ramon Services District, Energy Data Account Usage, April 2021.

Quantity of Self-Generated Renewable Energy related to recycled water and wastewater operations

9,990,771 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Influent and effluent at the WWTP and RWTF are metered.

Narrative:

Collection system includes two DSRSD lift stations. DSRSD owns and operates WWTP and RWTF. Wastewater effluent not recycled is pumped out of the Tri-Valley and discharged through LAVWMA and EBDA facilities as described in Section 6.2.5.2

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CHAPTER 7
Water Service Reliability and Drought Risk Assessment

This chapter describes DSRSD's water service reliability under various hydrologic conditions, including a severe drought for the next five years. DSRSD's existing and planned water management tools for increasing water supply reliability are also addressed. Responses to actual water shortage conditions are detailed in Chapter 8 of this plan.

The reliability of DSRSD's potable water supply is largely dependent upon its water supply contract with Zone 7 and Zone 7's water supply reliability policy. On October 17, 2012, the Zone 7 Board approved a revised Water Supply Reliability Policy (Resolution No. 13-4230, included as Appendix L), which adopts the following level of service goals to guide the management of Zone 7's treated water (also referred to as municipal and industrial or M&I) supplies and its Capital Improvement Program (CIP):

- **Goal 1**: Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent UWMP, during normal, average, and drought conditions, as follows:
  - At least 85 percent of M&I water demands 99 percent of the time
  - 100 percent of M&I water demands 90 percent of the time
- **Goal 2**: Provide sufficient treated water production capacity and infrastructure to meet at least 80 percent of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

7.1 WATER SERVICE RELIABILITY ASSESSMENT

DSRSD serves both potable and recycled water to its customers. DSRSD's potable water supply is purchased from Zone 7, which is comprised of treated surface water blended with some local groundwater. Approximately 80 percent of Zone 7's water supply comes from surface water, primarily the State Water Project, which is subject to legal and environmental issues surrounding the San Francisco Bay Delta. As discussed in Chapter 6, the groundwater basin is managed by Zone 7, and DSRSD has a 645 AFY GPQ pumped on its behalf by Zone 7. Further, DSRSD produces recycled water at its RWTF and distributes it within its water service area. Approximately 20 percent of the water DSRSD distributes is recycled water. DSRSD's recycled water capacity is constrained by the wastewater influent it collects from its wastewater service area and treats at its WWTP as discussed in Section 6.2.5.4.

DSRSD's exclusive potable water wholesaler is Zone 7. Zone 7's water supply reliability greatly affects DSRSD's potable water supply reliability and vulnerability, which is directly related to a seasonal and climatic shortage that may impact Zone 7's water supplies. Therefore, a significant portion of this section presents the constraints on Zone 7's existing and planned water sources and summarizes the historical basis for projecting available supplies in various hydrologic conditions (i.e., normal year, single dry year, and five consecutive dry years).

DSRSD's water service reliability is presented in five-year increments through 2045 based on earlier analysis of water use in Chapter and water supply in Chapter 6 of this plan. This section also discusses DSRSD's water management tools and options to promote regional supply reliability and minimize the need to import water from other regions.

7.1.1 Constraints on Water Sources

This section discusses the constraints on DSRSD's potable water supply from Zone 7 and the recycled water supply that it produces. Strategies for managing the risks associated with each supply are also discussed.

7.1.1.1 Potable Water Supply from Zone 7

One of the main limitations of Zone 7's water system is the lack of interties. All of Zone 7's imported water supplies are conveyed through the Delta and the SBA; Arroyo Valle water is also conveyed through the SBA. Zone 7 has been working closely with DWR, VW, and ACWD to improve the reliability of the SBA. Between 2003 and 2012, DWR made improvements to the SBA within Zone 7's service area to increase capacity and improve reliability. The work included the construction of a new pump station (180 cfs, inline reservoir [500 AF]) and other improvements to increase the canal carrying capacity to 380 cfs. As part of this project, Zone 7 installed an emergency slide gate to maintain service upstream in the event of a pipeline rupture downstream. Zone 7 will continue coordinating with DWR and SBA Contractors to improve the reliability of the entire SBA system.

In addition, Zone 7 is pursuing the following projects to diversify its conveyance options:

- **Reliability Intertie** – Zone 7 is also planning to construct a reliability intertie with another major water agency that would provide an alternative means of conveying water to Zone 7's service area when the Delta and/or the SBA experience an outage. For example, an intertie with EBMUD could convey the treated water supply to the western portion of Zone 7's service area.
- **Chain of Lakes Pipeline** – This pipeline would allow for access to water stored in the Chain of Lakes as an alternative local water supply; water would be accessible to the Del Valle Water Treatment Plant (DVWTP) via one of the SBA turnouts.

Specific constraints for each of Zone 7's supplies are discussed below.

7.1.1.1.1 Imported Water: State Water Project

Two key constraints on imported water from the SWP are Delta conveyance and water quality. Each constraint is detailed below.

7.1.1.1.1.1 Delta Conveyance

Zone 7's long-term contract with DWR for SWP water provides Zone 7 access to Table A water (and Article 56c water or carryover), Article 21 water, Article 56d water, and Yuba Accord water. As an SWP contractor, Zone 7 is also able to use SWP facilities for conveying water transfers or exchanges of SWP water (from another contractor) or from another water agency outside of the SWP system. SWP water moves through the Delta before it is conveyed by the California Aqueduct and the SBA to Zone 7's water facilities.

The instability of the aging levees in the Delta (including their vulnerability to seismic events and climate change), regulatory uncertainty, water quality issues including saltwater intrusion, and the declining health of the Delta ecosystem all challenge the long-term reliability of the SWP and, more generally, the water conveyance capability of the Delta. These issues directly challenge the Tri-Valley's long-term water supply reliability, since a majority of Zone 7's water supply is and will continue to be tied to the Delta and SWP system.

In 2018, DWR published their Delta Flood Emergency Management Plan, which provides strategies for responding to Delta levee failures. This plan includes a strategy to establish an emergency freshwater pathway from the central Delta along the Middle River and Victoria Canal to the export pumps in the south Delta. The plan also includes the pre-positioning of emergency construction materials at existing and new stockpile and warehouse sites in the Delta. The plan has found that using pre-positioned stockpiles of rock, sheet pile and other materials, multiple earthquake-generated levee breaches and levee slumping along the freshwater pathway can be repaired in less than six months.

The DWR Delta Levees Subventions and Special Projects Programs have prioritized, funded, and implemented levee improvements along the emergency freshwater pathway and other water supply corridors in the central and south Delta. These efforts are complementary to the Delta Flood Emergency Management Plan, which, along with pre-positioned emergency flood-fighting materials, ensures the reasonable seismic performance of levees and timely pathway restoration after a severe earthquake.

Furthermore, Zone 7 and other SWP contractors are currently working with DWR and other key stakeholders to address the many complex issues undermining the Delta through the proposed DCP. The proposed new diversion structure in the northern Delta provides alternative intakes in case the Delta is affected by an earthquake, levee failure, or some other catastrophic event that impacts water quality and prevents pumping from the Delta. The DCP would also provide alternative intakes that could be used to minimize harm to endangered and threatened species in the Delta. DWR is working closely with regulatory and natural resource agencies to address regulatory uncertainty and protect the Delta ecosystem under an adaptive management framework based on the best available science. With these benefits, the DCP is expected to significantly alleviate constraints on SWP operation and provide more water supply reliability.

Zone 7 is also participating in the Los Vaqueros Reservoir Expansion project, which includes the construction of the Transfer-Bethany Pipeline. This pipeline would provide an alternative means of conveying water supply to Zone 7 when the Delta is inaccessible. More details can be found in Chapter 6 of Zone 7's 2020 UWMP.

7.1.1.1.1.2 Water Quality

There are water quality concerns associated with transport through the Delta. In 1982, DWR formed the Interagency Delta Health Aspects Monitoring Program to monitor water quality in the Delta and protect human health. The program was renamed the Municipal Water Quality Investigations Program in 1990. From a municipal water supply perspective, water quality issues in the Delta are associated with salinity from seawater intrusion, wastewater effluent discharges, agricultural drainage from the islands, and recreational activities. Water quality issues of specific concern to Zone 7 are:

- *Algal byproducts* – Parameters of concern include compounds that cause taste and odor (T&O) and algal toxins. T&O is primarily a problem in the warmer months when algal blooms may be present. It can affect supplies from the Delta and from Lake Del Valle (which stores SWP water). Algae produce geosmin and 2-methylisoborneol, which are key T&O-causing compounds in the surface water supply. Algal toxins derived from blue-green algae can also be a concern. Zone 7's new ozonation facilities (recently installed at the Del Valle WTP and scheduled for completion at the Patterson Pass WTP in 2022) effectively treat algal byproducts. Without ozonation, high levels of algal byproducts in both Delta and Lake Del Valle supplies may necessitate temporarily switching to groundwater supplies; blending of sources is also an option depending on the source of algal byproducts and severity.

- *Total and dissolved organic carbon (TOC/DOC)* – Zone 7 treats organic carbon with coagulant and disinfectant chemicals; therefore higher levels of organic carbon increase costs. In addition, TOC/DOC helps form disinfectant byproducts (DBPs), which are regulated compounds in drinking water. Historically, Zone 7's WTPs have managed high TOC/DOC by increasing coagulant dosages. However, this operational change results in greater sludge production and limits plant production. The use of ozone reduces coagulant and chlorine demands, resulting in reduced chlorination DBPs. However, the use of ozone forms ozonation DBPs, such as bromate. The formation of ozonation DBPs will need to be controlled.
- *Turbidity* – like TOC/DOC, turbidity affects the amount of chemicals used in treatment and Zone 7's ability to meet drinking water standards. It also can reduce the production capacities of Zone 7's WTPs, requiring increased groundwater production under high demands. Coagulant dosages can be adjusted to address high turbidity (which can happen after big storms), but if filters require more frequent backwashing, production may decrease.
- *Salinity or TDS* – salinity has significant impacts on SWP operations and the availability of water. To meet the salinity objectives in the Delta, water exports from the Delta may be restricted, reducing the amount of water supply available during certain times of the year. Salinity intrusion can be a problem during dry years, when there is insufficient freshwater to repel salinity. Sea level rise due to climate change is also expected to increase salinity in Delta. Finally, levee breaks—due to earthquakes and other factors—would result in significant saltwater intrusion from the Bay as water floods affected islands in the Delta that are below sea level.
- *Algal blooms* – in addition to T&O and the threat of algal toxins, algal blooms can significantly degrade filter performance through clogging. This reduces plant production capacities and could require supplemental groundwater use.

As noted above, Zone 7 will have state-of-the-art ozonation facilities at both of its WTPs in 2022, improving the treatment of T&O, TOC/DOC, turbidity, and algal blooms and significantly increasing the surface water system's reliability.

In 2008, the SBA contractors (ACWD, VW, and Zone 7) developed the SBA Watershed Protection Program to protect water quality once the water from the Delta reaches the SBA. The primary objectives of the SBA Watershed Protection Program include developing a Watershed Management Program for the SBA system, including Lake Del Valle and Bethany Reservoir, and protecting local drinking water and water resources from identified contaminant sources (e.g., septic tanks) for urban, agricultural, recreational, and environmental uses.

7.1.1.1.2 Arroyo Valle and Lake Del Valle

ACWD and Zone 7 both have water rights to divert water from the Arroyo Valle. This water is captured and stored in Lake Del Valle, which is owned and operated by DWR. Since Lake Del Valle is used for water supply storage, flood control, and recreation, access to water from the lake needs to be coordinated with the lake's other uses. Typically, DWR lowers the lake elevation each year after Labor Day for flood control purposes, allowing Zone 7 and ACWD to put runoff from the Arroyo Valle to beneficial use. In the summer months, lake elevations are raised for recreational purposes. Historically, access to Zone 7's stored water in Lake Del Valle has not been problematic, unless there is an outage on the Del Valle Branch pipeline. Zone 7 closely coordinates the use of Arroyo Valle water with both ACWD and DWR.

Water collected from the local watershed is protected under the SBA Watershed Protection Program Plan. In general, the water quality of Arroyo Valle runoff is good and does not affect the reliability of this water supply; however, as noted above, T&O can also affect supplies from Lake Del Valle. Zone 7 treats T&O using ozonation, although a switch to groundwater supplies is sometimes necessary under excessive levels of T&O compounds. Algal blooms in the lake can also reduce production capacities, though new ozonation facilities at the Del Valle WTP have significantly reduced the impact.

7.1.1.1.3 Chain of Lakes

The future Chain of Lakes will provide significant local storage, but uncertainty surrounds its complete transfer to Zone 7. Favorable economic conditions could extend gravel mining operations, and even after mining ceases, reclamation must occur. This could delay a full transition of the Chain of Lakes to Zone 7 to about 2060. Zone 7 continues to work closely with the mining companies and quarry operators so planning efforts can be coordinated.

With future completion of the Chain of Lakes Pipeline around 2025, Zone 7 can begin to use the available lakes to store imported or local surface water. This will also enhance groundwater recharge in the Main Basin.

7.1.1.1.4 Non-Local Storage

Access to banked water in Semitropic and Cawelo—both located downstream of Zone 7—requires exchange(s) with other SWP contractors located south of Kern County (e.g., Metropolitan Water District). There must be sufficient water flowing through the Delta and California Aqueduct system to facilitate these exchanges, which could be challenging during a drought. Furthermore, the banked water must be conveyed through the Delta, rendering this supply susceptible to the Delta disruptions described in Section 7.1.1.1.

During the recent drought, access to banked water became uncertain because of the historically low Table A allocation (leading to minimal amounts of water moving through the SWP) and the potential cessation of pumping in the Delta to control salinity intrusion. DWR was able to manage salinity so that Delta pumping could continue, and, with coordination among stakeholders including Zone 7, DWR prioritized the delivery of banked water to Zone 7 and other SBA contractors. Ultimately, even during the serious drought conditions in 2014 and the minimal 5 percent SWP allocation, Zone 7 was able to successfully recover almost 15,000 AF, or approximately 78 percent of the maximum recovery requested by Zone 7. In 2015, Zone 7 recovered approximately 18,000 AF from non-local storage.

Zone 7 will continue to coordinate closely with DWR, other SWP contractors, Semitropic, and Cawelo to ensure the future reliability of the banked water supplies.

Some of Semitropic's wells are affected by arsenic. This condition is currently being managed through treatment before the affected groundwater water is pumped into the California Aqueduct. Arsenic criteria have been established for this "pump-in" by the DWR Facilitation Group to mitigate any impacts to the downstream SWP contractors. Semitropic and the banking partners have developed a coordination process for discussing arsenic treatment. While the presence of arsenic in the Semitropic groundwater bank is likely to increase the cost of this water storage option, it is not likely to affect its overall reliability.

7.1.1.2 Groundwater

Chapter 6 of this plan details the issues affecting DSRSD and Zone 7's use of the Main Basin, specifically water quality management and prevention of overdraft.

Zone 7 is actively implementing its Salt and Nutrient Management Plan. Salinity levels are being addressed primarily through groundwater pumping and demineralization using the MGDP in the Mocho wellfield. The facility simultaneously allows for the export of concentrated minerals or salts from the Main Basin while improving the water quality of treated water.

Zone 7 has several groundwater wells with naturally-occurring Cr(VI) concentrations near the MCL and PFAS above the notification limit. In response, Zone 7 is actively managing flows from the affected wells. Conditions are regularly monitored, and management actions may change in the future. A PFAS treatment facility is under consideration for construction based on pending regulations.

Zone 7 continues to study the groundwater basin and develop new tools (e.g., an improved groundwater model) to better understand the levels of groundwater extraction possible under various conditions while maintaining levels above the historical levels that have been reached in certain portions of the Main Basin ("historic lows"). Zone 7 also plans to augment its ability to recharge the Main Basin (e.g., through the Chain of Lakes) to increase local storage and allow for more pumping when necessary, which will improve both water supply reliability and salt management. Zone 7 plans to build an additional demineralization facility to continue to decrease the salt content of the Main Basin.

Finally, Zone 7 plans to build additional wells to allow for improved management of groundwater levels and to increase groundwater production capacity during droughts and surface water-related outages. A new booster pump station will improve Zone 7's ability to convey groundwater throughout Zone 7's service area and increase production capacity.

7.1.1.3 Recycled Water

The recycled water that DSRSD distributes comes from DSRSD's RWTF, which is described in Section 6.2.5 (Wastewater and Recycled Water). Wastewater effluent from DSRSD's regional wastewater treatment plant is treated to produce Title 22 disinfected tertiary recycled water. DSRSD anticipates no significant changes to the land uses in DSRSD's wastewater service area; therefore, it does not anticipate any changes to the quality of the wastewater effluent that it treats to recycled water quality. DSRSD's water service area is over the Livermore-Amador Valley's fringe basin, which is not used for potable water supplies; thus, its recycled water distribution is not constrained by its impact on groundwater supplies. For all of these reasons, DSRSD does not expect recycled water quality issues to impact its ability to reliably deliver recycled water to its customers.

On March 25, 2019, DERWA found that it cannot meet the combined peak demands and projected demands of its member agencies (DSRSD and EBMUD) and its retailer, Pleasanton. DERWA approved Resolution No. 19-3 (Appendix I) requesting that its member agencies take action to reduce recycled water demands and implement a connection moratorium due to limited recycled water supply during the peak months. Under this resolution, DSRSD implemented a connection moratorium for new recycled water connections starting March 25, 2019.

7.1.2 Year Type Characterization

DSRSD's potable water supply reliability and vulnerability are directly related to seasonal and climatic shortages that impact Zone 7's water supplies. DSRSD's projected supply and demand for Normal Years, Single Dry Years, and Multiple Dry Years are quantified and discussed below.

7.1.2.1 Types of Years

The quantity available from different supply sources varies annually depending on hydrologic conditions. Consequently, Zone 7 reviewed historical data and developed a projected yield for each water supply source (including the Main Basin) under three conditions: (1) normal water year, (2) single dry year, and (3) five-consecutive-year drought. Under all scenarios, Zone 7 assumes that Delta conveyance is operational. Each condition is defined as follows:

- *Normal Water Year*: The year in the historical sequence most closely representing average runoff or allocation levels and patterns.
- *Single Dry Year*: The year in the historical sequence with the lowest annual runoff or allocation.
- *Five-Consecutive-Year Drought*: The driest five-year historical sequence.

Zone 7's water supply reliability is used to represent DSRSD's available supplies during the above hydrologic conditions. The projected yield of Zone 7's water sources under these three scenarios, as reported in detail in Zone 7's 2020 UWMP, are summarized below.

In its 2020 UWMP, Zone 7 provides a basis of the water year data table (DWR Table 7-1) for each of its water supply sources. For simplicity, this plan leaves DWR Table 7-1 blank and summarizes Zone 7's base year information and water supply availability in Table 7-2 and Table 7-3, respectively.

DWR Table 7-1 is not compatible with Zone 7's bases of water year data because different water sources have different base years and volumes. As referred to in Table 7-1, Zone 7's bases of water year data are shown in Tables 7-2 and 7-3.

Table 7-1. Basis of Water Year Data (Reliability Assessment) (DWR Table 7-1 Retail)

Year Type	Base Year If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	Available Supplies if Year Type Repeats	
		☑	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location: Table 7-2 and 7-3
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.

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Table 7-2. Basis of Water Year Data for Zone 7 Supplies

Water Source	Normal Year	Single Dry Year	Five-Year Drought				
			Year 1	Year 2	Year 3	Year 4	Year 5
SWP – Table A	1965	2014	1987	1988	1989	1990	1991
SWP – Carryover	1965	2014	1987	1988	1989	1990	1991
Water Transfers	1965	2014	1987	1988	1989	1990	1991
Arroyo Valle	1919	1977	1987	1988	1989	1990	1991
Sites Reservoir	1965	2014	1987	1988	1989	1990	1991
BARDP and/or Potable Reuse	1965	2014	1987	1988	1989	1990	1991
From Storage							
Main Basin	1965	2014	1987	1988	1989	1990	1991
Semitropic	1965	2014	1987	1988	1989	1990	1991
Cawelo	1965	2014	1987	1988	1989	1990	1991
Chain of Lakes	1965	2014	1987	1988	1989	1990	1991

Source: Zone 7 2020 UWMP, Table 7-1 through Table 7-9

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Table 7-3. Zone 7's Water Supply Volume Available[a]

Water Source	Normal Year	Single Dry Year	Five-Year Drought				
			Year 1	Year 2	Year 3	Year 4	Year 5
SWP – Table A[b]	43,500	4,000	16,900	8,100	54,000	10,500	16,100
SWP – Carryover[c]	10,000	15,500	15,500	2,800	1,800	1,800	1,800
Water Transfers[d]	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Arroyo Valle	5,500	0	1,700	1,500	1,500	1,500	1,500
Sites Reservoir[e]	10,000	15,300	16,800	17,700	16,300	15,900	15,800
BARDP and/or Potable Reuse[f]	5,000	5,000	5,000	5,000	5,000	5,000	5,000
From Storage							
Main Basin[g]	29,200	27,600	27,600	25,100	20,600	15,100	9,700
Semitropic[h]	13,000	6,500	10,000	10,000	10,000	10,100	10,100
Cawelo[h]	9,700	7,100	9,700	9,700	9,700	9,700	9,700
Chain of Lakes[i]	10,100	8,300	8,800	7,900	6,900	6,000	5,200
Total	**141,000**	**94,300**	**117,000**	**92,800**	**130,800**	**80,600**	**79,900**
Percent of Normal	**100%**	**66.9%**	**83.0%**	**65.8%**	**92.8%**	**57.2%**	**56.7%**

Source: Zone 7 2020 UWMP, Table 7-1 through Table 7-9

(a) Volumes are shown in AFY.
(b) Based on 2040 future SWP reliability Table A allocations.
(c) Zone 7's operational target is typically 10,000 AFY for normal years.
(d) Zone 7 is pursuing water transfer agreements for the period through 2030. Amounts may vary from year-to-year, but variability has not been quantified.
(e) Supplies from Sites Reservoir are assumed to be available by 2030.
(f) Supplies from these sources are assumed to be available by 2030.
(g) These are estimated available supplies, not necessarily what would be pumped. Zone 7's typical operational target is around 9,200 AFY for normal years.
(h) Semitropic and Cawelo available supplies are typically not used during normal years.
(i) The Chain of Lakes Pipeline, which provides access to water stored in the Chain of Lakes, is assumed to be completed around 2025. Water stored in the Chain of Lakes is assumed to be available by 2030 and would not be used during normal years.

7.1.3 Water Service Reliability

This section presents comparisons of projected water supplies and demands from 2025 through 2045 under the following hydrologic conditions: normal year, single dry year, and five consecutive dry years. DSRSD's projected demands are presented in Chapter 4, while supply sources are described in Chapter 6. Unless otherwise noted, it is assumed demand projections will not change with hydrologic conditions. In other words, demands are assumed to be unconstrained unless they are limited by available supplies.

7.1.3.1 Water Service Reliability – Normal Year

DSRSD's normal year supplies include:

- Purchased supplies from Zone 7
- Between 2,500 and 3,000 AFY of recycled water

Table 7-4 shows that in normal years, DSRSD's supplies are adequate to meet projected demands.

Table 7-4. Normal Year Supply and Demand Comparison (DWR Table 7-2 Retail)

	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	15,037	16,407	16,851	16,864	17,078
Demand totals *(autofill from Table 4-3)*	15,037	16,407	16,851	16,864	17,078
Difference	0	0	0	0	0
NOTES: Units of measure is AF.					

7.1.3.2 Water Service Reliability – Single Dry Year

In Chapter 7 of its 2020 UWMP, Zone 7 has indicated it can meet retailer demands during single dry years through 2045. Therefore, Zone 7 supplies to DSRSD are assumed to equal DSRSD's projected potable water demands. Recycled water supply is assumed to be unaffected by the dry condition. Table 7-5 shows that DSRSD's supplies are adequate to meet projected demands during single dry years.

Table 7-5. Single Dry Year Supply and Demand Comparison (DWR Table 7-3 Retail)

	2025	2030	2035	2040	2045 (Opt)
Supplies					
Zone 7	11,993	13,363	13,807	13,820	14,034
Recycled Water	3,044	3,044	3,044	3,044	3,044
Supply totals*	15,037	16,407	16,851	16,864	17,078
Demands					
Portable Water	11,993	13,363	13,807	13,820	14,034
Recycled Water	3,044	3,044	3,044	3,044	3,044
Demand totals*	15,037	16,407	16,851	16,864	17,078
Difference	0	0	0	0	0
NOTES: Units of measure is AF.					

7.1.3.3 Water Service Reliability – Five Consecutive Dry Years

In Chapter 7 of its 2020 UWMP, Zone 7 has indicated it can meet retailer demands during five-year droughts beginning in 2025, 2030, 2035, and 2045. Therefore, Zone 7 supplies to DSRSD are assumed to equal DSRSD's projected potable water demands. Recycled water supplies are also assumed to be unaffected by dry conditions.

Table 7-6 shows that DSRSD's supplies are adequate to meet projected demands during five-year droughts through the planning period. For interim years (e.g., 2021-2024, 2026-2029), potable and recycled water demands are linearly interpolated between the values shown in Table 7-5.

Table 7-6. Multiple Dry Years Supply and Demand Comparison (DWR Table 7-4 Retail)

		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	15,037	16,407	16,851	16,864	17,078
	Demand totals	15,037	16,407	16,851	16,864	17,078
	Difference	0	0	0	0	0
Second year	Supply totals	15,311	16,496	16,854	16,907	17,078
	Demand totals	15,311	16,496	16,854	16,907	17,078
	Difference	0	0	0	0	0
Third year	Supply totals	15,585	16,585	16,856	16,950	17,078
	Demand totals	15,585	16,585	16,856	16,950	17,078
	Difference	0	0	0	0	0
Fourth year	Supply totals	15,859	16,673	16,859	16,992	17,078
	Demand totals	15,859	16,673	16,859	16,992	17,078
	Difference	0	0	0	0	0
Fifth year	Supply totals	16,133	16,762	16,862	17,035	17,078
	Demand totals	16,133	16,762	16,862	17,035	17,078
	Difference	0	0	0	0	0
NOTES: Units of measure is AF.						

7.2 WATER MANAGEMENT TOOLS AND OPTIONS

DSRSD and Zone 7 coordinate on regional efforts to improve long-term water supply reliability and reduce reliance on imported water.

7.2.1 Zone 7 Water Management Options

Zone 7 is evaluating new supply options (including potable reuse and brackish water desalination) and optimizing and expanding local storage. Zone 7 is a member of the Bay Area Regional Reliability (BARR) partnership, which brings together eight Bay Area water agencies to improve regional water supply reliability. Besides Zone 7, these agencies include ACWD, SFPUC, the Bay Area Water Supply and Conservation Agency (BAWSCA), CCWD, EBMUD, Marin Municipal Water District (MMWD), and VW. The BARR partners have agreed to work cooperatively to address water supply reliability concerns and drought preparedness on a mutually beneficial and regionally focused basis. Near- and long-term joint water supply reliability projects may be evaluated through BARR, such as use of the capacity of existing facilities, changes to infrastructure (including new interties, recycled water, water conservation, expanded treatment, regional desalination, and water transfers and exchanges), and other projects or institutional arrangements that encourage a regional approach to achieving water supply reliability in the Bay Area.

As part of its existing CIP, Zone 7 is planning to construct a reliability intertie with another major water agency (e.g., EBMUD or SFPUC) to help mitigate some of the risk during a major water supply interruption from the Delta and to create opportunities for transfers/exchanges. This intertie could allow Zone 7 to acquire emergency water supplies to help meet minimum health and safety water supply needs during a major Delta outage, assuming the partnering agency has available supply and the transmission capacity available during the emergency period. A conceptual 24- to 30-inch diameter intertie with EBMUD could connect to the west side of Zone 7's transmission system and convey up to 10 to 15 MGD of supply. Additional wells would also increase access to local groundwater and improve its management, while a new booster pump station would improve conveyance of groundwater across the Tri-Valley. The new Chain of Lakes Pipeline would allow for access to water stored locally in the Chain of Lakes.

7.2.2 DSRSD 2021 Alternative Water Supply Study

DSRSD completed an Alternative Water Supply Study in May 2021 that provides a framework for building a resilient and sustainable water future for DSRSD customers. As discussed in Section 6.2.8.2, the results of this study identified potential near-term actions that DSRSD could implement that would be complementary to Zone 7's water management options.

7.3 DROUGHT RISK ASSESSMENT

In accordance with CWC Section 10612, urban water suppliers must conduct a DRA, which evaluates the risk of a severe drought occurring for the next five consecutive years (2021-2025). Supply conditions for the DRA are based on the five driest consecutive years on record, with adjustments to consider plausible changes in climate, regulations, and other locally applicable criteria.

This section reviews the data and methods used to define the DRA water shortage condition and evaluates each water source's reliability under the proposed drought condition. Finally, total water supplies during the five-year drought are compared to projected demands, accounting for any applicable supply augmentation or demand reduction measures available to DSRSD.

7.3.1 Data, Methods, and Basis for Water Shortage Condition

The water shortage condition for the DRA is the same as the five-year drought presented in Section 7.1.2.1. Since the DRA can be updated outside of the five-year UWMP cycle, a summary of the data and basis for the water shortage condition is provided in this section.

As presented in Chapter 7 of Zone 7's 2020 UWMP, the DRA assumes 5, 11, 60, 13, and 25 percent Table A allocations for 2021-2025, respectively. Data for 2021 reflect current projected available supplies, while the last four years reflect the last four years of the multiple-dry year scenario previously discussed. Zone 7's supply projections are based on existing facilities and the expected availability of supplies from various sources given the constraints previously described.

DSRSD projected demands between 2021 and 2025 are as presented in Section 4.2.3.2.

7.3.2 DRA Water Source Reliability

Table 7-7 summarizes Zone 7's available supplies for each year of the DRA. For the DRA, recycled water supplies are assumed to be sufficient to meet recycled water demands.

Table 7-7. Projected Zone 7 Supplies for Drought Risk Assessment

Supply Source	Available Supply, AFY				
	2021	2022	2023	2024	2025
SWP Table A[(a)]	4,000	8,900	48,400	10,500	20,200
SWP Carryover	8,900	10,300	9,600	12,800	9,900
Water Transfers[(b)]	10,000	6,000	5,000	6,000	8,000
Arroyo Valle[(c)]	700	700	6,900	6,900	2,700
Main Basin	13,200	13,200	11,000	10,000	11,000
Semitropic	9,100	9,100	0	9,100	9,100
Cawelo	10,000	10,000	0	5,000	1,900
Total	**55,900**	**58,200**	**80,900**	**60,300**	**62,800**

(a) Assumes 5, 11, 60, 13, and 25 percent Table A allocations from 2021 through 2025, respectively. 2021 reflects current projected available supplies, while 2022 through 2025 reflect the last four years of a multiple-dry year scenario.
(b) Includes Yuba Accord transfers.
(c) Includes carryover and current year's yield.

7.3.3 Total Water Supply and Use Comparison

In Chapter 7 of its 2020 UWMP, Zone 7 has indicated it can meet retailer demands during a five-year drought beginning in 2021. Therefore, Zone 7 supplies are assumed to equal DSRSD's projected potable water demands. Recycled water demands remain constant from actual 2020 use and to projected demands for 2025 due to moratorium on new connections.

As shown in Table 7-8, during a five-year drought beginning in 2021, DSRSD's supplies are adequate to meet projected demands through 2025, even without water conservation assuming no Delta conveyance outage. However, DSRSD may still prioritize water conservation under such drought conditions to reduce demand and conserve supply for potentially future dry years.

Table 7-8. Five-Year Drought Risk Assessment Tables to Address Water Code Section 10635(b) (DWR Table 7-5)

2021	Total
Total Water Use	13,707
Total Supplies	13,707
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2022	Total
Total Water Use	14,039
Total Supplies	14,039
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2023	Total
Total Water Use	14,372
Total Supplies	14,372
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2024	Total
Total Water Use	14,704
Total Supplies	14,704
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%

2025	Total
Total Water Use	15,037
Total Supplies	15,037
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
NOTES: Units of measure is AF.	

CHAPTER 8
Water Shortage Contingency Plan

This chapter summarizes DSRSD's Water Shortage Contingency Plan (WSCP), seismic risk to DSRSD facilities, and WSCP adoption procedures. To allow for WSCP updates to be made outside of the UWMP preparation process, DSRSD's WSCP is included in this plan as Appendix M.

8.1 WATER SHORTAGE CONTINGENCY PLANNING BACKGROUND

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use due to several reasons, including population growth, climate change, drought, and catastrophic events. Drought, regulatory actions, and natural and manmade disasters may occur at any time. DSRSD's WSCP outlines its strategic urban water supplier plans to respond to a water shortage condition and helps prevent catastrophic service disruptions.

The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning; DSRSD's WSCP has been updated to be consistent with these requirements.

8.2 DSRSD WATER SHORTAGE CONTINGENCY PLAN

DSRSD's WSCP includes water shortage stages and associated shortage response actions, as well as DSRSD's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting.

DSRSD's WSCP is included in this plan as Appendix M to allow for updates outside of the UWMP preparation process. DSRSD intends for its WSCP to be dynamic, so that it may assess response action effectiveness and adapt to foreseeable and unforeseeable events. When an update to the WSCP is proposed, the revised WSCP will undergo the process described in Section 8.4.

8.3 SEISMIC RISK ASSESSMENT AND MITIGATION PLAN

CWC §10632.5(a) requires that UWMPs include a seismic risk assessment and mitigation plan to assess and mitigate a water system's seismic vulnerabilities. In coordination with Pleasanton, Livermore and Dublin, DSRSD developed a regional LHMP, which, among other hazards, addresses seismic risks. The *2018 Tri-Valley Local Hazard Mitigation Plan* (2018 LHMP) was adopted by Livermore, Dublin, Pleasanton and DSRSD during the summer of 2018. The Federal Emergency Management Agency (FEMA) found the 2018 LHMP in conformance with Title 44 Code of Federal Regulations Part 201.6 Local Mitigation Plans. The 2018 LHMP is available on DSRSD's website[24], and is incorporated into this UWMP by reference. The 2018 LHMP is also available on each of the collaborating city's websites:

- Dublin (dublin.ca.gov) – under the "Government" menu, click on the "Disaster Preparedness" department. Links to the 2018 LHMP is provided under "Additional Resources."
- Livermore: (www.cityoflivermore.net) – under the "City Government" menu, hover over "LPFD Home" and then "About Our Department." Click on "Disaster Preparedness," and then click on "City Preparation" under the navigation menu.

[24] Tetra Tech, 2018. *Tri-Valley Local Hazard Mitigation Plan*. https://www.dsrsd.com/about-us/library/plans-studies

- Pleasanton (www.cityofpleasantonca.gov) – under the "Government" menu, click on the "Community Development" department. On the "Community Development" page, click the "Planning Division" link. Under the navigation menu, hover over "Plans & Programs" and click on "Tri-Valley Hazard Mitigation Plan."

Earthquakes are common, relatively well-tracked, and studied in California. While California experiences hundreds of earthquakes each year, most are below 3.0 on the Richter Scale (i.e., magnitude 3.0) and cause minimal damage. The United States Geological Survey (USGS) roughly defines strong earthquakes (which can cause moderate damage to structures) as measuring greater than 5.0 on the Richter Scale, while major earthquakes measure more than 7.0 on the Richter Scale. In California, strong earthquakes occur every two to three years, and major earthquakes occur once a decade.

The Calaveras, Greenville, Hayward, and Mt. Diablo faults are in the vicinity of the Tri-Valley region. A 2016 report[25] by the USGS estimated the probabilities for magnitude-6.7 (or larger) earthquakes on major fault lines in the San Francisco Bay Area by 2043. The Hayward Fault has a 33 percent chance of one or more earthquakes of magnitude-6.7 or larger by 2043, while the Calaveras Fault has a 26 percent chance of one or more such earthquakes in that timeframe. The Greenville and Mt. Diablo faults each have a 16 percent chance of one or more earthquakes of magnitude-6.7 or larger by 2043.

The 2018 LHMP evaluated the impact of earthquakes on critical facilities and infrastructure using a Hazus analysis. Results for utilities infrastructure (including water system facilities) are presented in terms of level of damage and time to return to functionality. There are five damage levels (no damage, slight damage, moderate damage, extensive damage, and complete damage) and six time increments (1, 3, 7, 14, 30, and 90 days). Results are categorized by earthquake location; there are separate scenarios for earthquakes on each of the Calaveras, Greenville, Hayward, Mt. Diablo, and San Andreas faults.

According to the 2018 LHMP, earthquakes on the Hayward and Calaveras faults would be most significant. In its earthquake analysis, the 2018 LHMP identified 120 critical utility facilities (i.e., providing water, electricity, and communications service) in the Tri-Valley region. Over 80 percent of critical utility facilities would experience at least moderate damage for an earthquake on the Hayward Fault, while approximately 44 percent would be at least moderately damaged by a Calaveras Fault earthquake. For earthquakes on the other faults analyzed (Greenville, Mt. Diablo, San Andreas), this number is below 15 percent. Seven days after an earthquake on the Hayward Fault, a critical utility facility has an approximately 52 percent chance of being fully functional. This increases to approximately 84 percent for an earthquake on the Calaveras Fault and above 92 percent for earthquakes on the Greenville, Mt. Diablo, and San Andreas faults.[26]

Table 18-3 of the 2018 LHMP summarizes alternatives for mitigating the earthquake hazard on personal, corporate, and government scales. Mitigation options potentially applicable to DSRSD include the following:

- Locate critical facilities outside hazard area where possible
- Harden infrastructure

[25] U.S. Geological Survey (USGS), 2016. *Earthquake Outlook for the San Francisco Bay Region 2014-2043*. https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf

[26] TetraTech, *2018 Tri-Valley Local Hazard Mitigation Plan*, Section 8.5.3, Tables 8-15 to 8-24.

- Provide redundancy for critical functions
- Include retrofitting and replacement of critical system elements in capital improvement plan
- Warehouse critical infrastructure components such as pipe materials
- Develop and adopt a continuity of operations plan

DSRSD's has implemented efforts in addressing its facilities' seismic vulnerabilities. In accordance with America's Water Infrastructure Act (AWIA), DSRSD completed a Risk and Resilience Assessment (RRA) of its water system in December 2020. The RRA systematically evaluated DSRSD's assets, threats, and risks, as well as countermeasures that might be implemented to minimize overall risk to the system. To ensure the security of DSRSD's water system, the RRA is retained by DSRSD as a confidential document.

8.4 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

DSRSD's WSCP (Appendix M) was adopted concurrently with DSRSD's 2020 UWMP, by separate resolution. A copy of the resolution is included in Appendix P. Prior to adoption, a duly noticed public hearing was conducted. A hard copy of the WSCP will be submitted to DWR within 30 days of adoption, along with an electronic copy.

No later than 30 days after adoption, copies of the WSCP will be available at DSRSD's offices. Copies will also be provided to Alameda County and Contra Costa County. An electronic copy of the WSCP will also be available for public review and download on DSRSD's website.

DSRSD's WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that DSRSD's shortage response actions and mitigation strategies are effective and produce the desired results. When a revised WSCP is proposed, the revised WSCP will undergo the process described in this section for adoption by DSRSD Board of Directors and distribution to Alameda County, Contra Costa County, its customers, and the general public.

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CHAPTER 9
Demand Management Measures

DSRSD implements demand management measures to sustainably manage its water resources. The implementation of demand management measures help improve DSRSD's water service reliability and help meet DSRSD and State water conservation goals. This chapter describes DSRSD's historical and existing water conservation program, status of implementation of Demand Management Measures (DMMs), and projected future implementation of water conservation measures.

9.1 WATER CONSERVATION PROGRAM OVERVIEW

DSRSD has long been committed to reducing the demand for potable water through conservation and have implemented a recycled water program since the 2000's to offset potable water demands. DSRSD has continued to be a leader in developing and promoting water conservation programs and DSRSD's customers have responded positively. In this chapter, narrative descriptions addressing the nature and extent of each DMM implemented over the past five years, from 2016 through 2020, are provided. Planned or continued implementation of each of the DMMs are also discussed.

DSRSD's SB X7-7 per capita water use target for 2020 was confirmed to be 169 GPCD in its 2015 UWMP. The DMMs that DSRSD has implemented have allowed it to exceed its target. As shown in Chapter 5, DSRSD's overall per capita water use in 2020 was 110 GPCD.

9.2 EXISTING DEMAND MANAGEMENT MEASURES

DSRSD is required to provide a description of the DMM's associated with the following:

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Programs to assess and manage distribution system real loss
- Water conservation program coordination and staffing support

DSRSD is also required to describe any other DMMs it has implemented that have had significant impact on water use.

This section describes existing water conservation programs and those planned to be implemented in the future. For each DMM, the current program is described, followed by a description of how the DMM was implemented over the previous five years and future implementation plans.

DSRSD anticipates continuing and expanding its water conservation program to meet new legislative and upcoming regulatory requirements that may require water efficiency objectives less than the SB X7-7 target.

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9.2.1 Water Waste Prevention Ordinances

9.2.1.1 DMM Description

In June 1991, DSRSD instituted Ordinance No. 242 to prevent water waste by establishing regulations and restrictions on the delivery and consumption of water, and penalties for violations. Since that time, DSRSD's ordinances regarding water waste prevention and conservation have been updated. DSRSD's latest update, Ordinance No. 323 (June 2009), established an updated water conservation program and a program for management of its water supplies during any water shortage condition declared by DSRSD's Board of Directors, and established regulations and restrictions on the delivery and consumption of water and penalties for ordinance violations during a declared water shortage condition. A copy of Ordinance No. 323 is provided in Appendix N.

Further, District Code §4.10.030.G provides regulation for water usage and prohibits waste of water.

9.2.1.2 Implementation over the Past Five Years to Achieve Water Use Targets

The drought that commenced in 2012 prevailed into 2016, and DSRSD was under a State of Community Drought Emergency declaration. In March 2016, DSRSD's Board of Directors adopted Ordinance No. 338 (Appendix N) to authorize water use limitations to curtail system-wide water use in DSRSD by 12 percent in conformance with State mandated water conservation requirements. Ordinance No. 338 remained in effect until the State of Community Drought Emergency declaration ended. In June 2016, DSRSD Board of Directors rescinded mandatory limits on water use terminated the State of Community Drought Emergency that had been in effect since February 2014. DSRSD remained cautious about the future of the water supply condition and maintained Stage 1 Water Supply Shortage Rates, and adopted a 10 percent voluntary conservation goal. DSRSD Board rescinded Stage 1 Water Shortage rates and 10 percent voluntary conservation on June 1, 2017. Standard water consumption rates under normal conditions has since remained in effect. Outside of the State Community Drought Emergency declaration, Ordinance No. 323 and District Code §4.10.030.G remained in full effect.

9.2.1.3 Plans for Continued Implementation

Ordinance No. 323 remains in effect, and its provisions support DSRSD's water conservation program. This DMM is on-going and expected to help DSRSD achieve its water use targets by minimizing the nonessential uses of water so that water is available to be used for human consumption, sanitation, and fire protection.

9.2.2 Metering

9.2.2.1 DMM Description

All connections within DSRSD are metered and all customer sectors are billed based on metered consumption. When DSRSD declares a water shortage, potable water rates increase for all customers in stages to encourage water conservation and recover the revenue needed to operate the water system with declining water sales. For additional information on DSRSD's water rate structure, see Section 9.2.3 Conservation Pricing below.

In 2014, DSRSD implemented an advanced metering infrastructure (AMI) system, including a new customer portal on its website called AquaHawk Alerting. AquaHawk is a free service that enables customers to view their hourly consumption data in near real-time and set their own leak alerts and water

consumption thresholds. The system also analyzes a customer's water consumption and provides monthly comparisons from the previous year. If usage indicates a water leak or other issue, the customer is notified, allowing them to take timely actions in managing their water consumption.

9.2.2.2 Implementation over the Past Five Years to Achieve Water Use Targets

More than 67 percent of DSRSD's water customers subscribe to AquaHawk, where they can monitor their real-time use and adjust their notifications accordingly. Aquahawk sends notifications through text or email to registered customers when high consumption alerts are triggered and sends notices through mail to non-registered customers. DSRSD continuously works with its customers to address abnormal water use patterns, which usually indicate leaks or broken valves.

9.2.2.3 Plans for Continued Implementation

DSRSD continues implementing this DMM which is expected to help achieve its water use targets by providing accurate water use information to the customer and DSRSD. It also provides a means for customers to assess and address wasteful water use in a timely manner.

9.2.3 Conservation Pricing

9.2.3.1 DMM Description

DSRSD has practiced conservation pricing since 1992. As discussed above, all potable water customer sectors are billed for water service based on a volumetric charge from both DSRSD and Zone 7, in addition to the fixed meter charge and a power charge as applicable. Consequently, water usage reductions directly reduce the cost to the metered customer, while excessive water use results in increased costs. In addition, DSRSD has an established drought rate pricing for its potable water users to maintain sufficient operating revenues while consumption declines due to mandated conservation. DSRSD updates its water rates annually.

DSRSD also established a volumetric charge for its recycled water users. Because Zone 7 volumetric charges do not apply, recycled water use rates are lower than potable water rates. In 2020, the recycled water rates were approximately fifteen percent less than the potable water irrigation rate[27].

9.2.3.2 Implementation over the Past Five Years to Achieve Water Use Targets

DSRSD adopted multi-year water rates on October 17, 2018. DSRSD's current water rates are available on its website[28]. The consumption charges increase with the declared water shortage stage. Normal rates are in effect when no water shortage has been declared. When DSRSD declares a water shortage emergency, consumption charges increase in accordance with the water shortage stage determined by the Board.

Wastewater service for single-family residences is based on an annual rate (billed annually with property taxes) and multi-unit dwellings are based on a bimonthly rate per dwelling unit (billed bimonthly with water service charges). Commercial (businesses) and institutional customers are billed for wastewater service on a uniform rate structure based on business type and units of water usage, which further

[27] 2020 potable irrigation rate was $5.51 ($3.85 per unit for Zone 7 Cost of Water plus $1.66 per unit for potable irrigation). Recycled water irrigation rate was $4.38 per unit.

[28] https://www.dsrsd.com/your-account/rates-fees/water-rates

promotes water conservation by these customers. DSRSD's current wastewater rates and charges are also available on its website, www.dsrsd.com.

DSRSD evaluates the effectiveness of conservation rates by tracking changes in unit water use resulting from rate increases.

9.2.3.3 Plans for Continued Implementation

DSRSD plans to continue implementing this DMM to achieve its water use targets by ensuring water customers pay the true cost of water and to adequately fund water system operations and maintenance, including repair and replacement programs, and water conservation programs.

9.2.4 Public Education and Outreach

9.2.4.1 DMM Description

In promoting water conservation, DSRSD seeks to foster sustainable changes in behavior, not just temporary responses to drought. An annual outreach plan identifies key messages pertaining to wise water use and the value of recycled water in conserving potable water. The plan specifies strategies designed to reach residential, commercial, industrial and institutional (CII), and media audiences. Examples of public education and outreach materials are included in Appendix O.

9.2.4.2 Implementation over the Past Five Years to Achieve Water Use Targets

Bimonthly bills provide historical data on consumption for customer review. Bill inserts and customer newsletters often feature water conservation topics and encourage customers to visit DSRSD's website for information on current conditions and progress toward conservation goals (the latter is updated on the first of each month). The web site also features information about rebates, free water-saving devices, tips for efficient water use, instructions for optimizing irrigation, and an interactive landscape planning tool, *Water-Wise Gardening in the Tri-Valley*.

As discussed in Section 9.2.2, DSRSD maintains a webpage that encourages customers to sign up and participate in the AquaHawk Customer Portal. Participation in AquaHawk allows customers to make informed decisions in managing their water consumption.

9.2.4.2.1 Online Resources

DSRSD's website offers a water conservation section with information on gardening and irrigation, rebates for water-saving programs and devices, tips for using less water, how to check for leaks, and links to outside resources (including the Tri-Valley Water-Wise website).

DSRSD uses the social media platforms of Nextdoor, Facebook, and Twitterto reach the public with education efforts related to wise water use. The website and social media platforms also serve as a place to share profiles of DSRSD staff to help encourage others to pursue careers in water and wastewater.

9.2.4.2.2 Educational Efforts

In 2018, DSRSD started the Citizens Water Academy, a program offered to the community and open to DSRSD's water and wastewater customers. The goals of the program are as follows:

- understand the critical issues on water supply and water quality;
- engage with experts and other citizens who care about water;
- equip residences to lead the discussion as our community builds a more resilient water supply, adapts to a changing environment, and invests in vital infrastructure; and
- learn what it's like to serve on DSRSD's Board of Directors.

DSRSD holds a biennial Citizens Water Academy, a multi-session course (held virtually during the COVID-19 pandemic in 2020) focusing on the community's water, wastewater, and recycled water. Customers are encouraged to participate in this free program. The Citizen Water Academy also provides information about serving on the Board of Directors. Since the commencement of the program, an annual average of 20 customers participated in the Citizens Water Academy.

DSRSD coordinates with water wholesaler Zone 7 Water Agency to offer a water-wise gardening workshop each year where attendees can hear from experts in the field about gardening with drought-tolerant plants, converting lawns to native gardens, and irrigation tips.

Staff also hold quarterly tours of the Regional Wastewater Treatment Facility, which includes the Jeffrey G. Hansen Water Recycling Plant. Tour participants learn how treated wastewater is further processed to become recycled water used for irrigation in community parks, school grounds, roadway medians, and golf courses. During the pandemic, in-person tours were put on hold, with DSRSD offering short video tours via YouTube.

DSRSD's website has free lesson plans for grades K-6, which include *The Amazing Watershed* for third grade and *Every Drop Counts* for fifth-grade. DSRSD also distributes a *Give Water a Second Chance…Recycled It* activity booklet to fifth grade classrooms. In addition, Zone 7 does classroom programs in DSRSD's service area covering subjects such as *Creek and Stream Environments* for second grade and *The Wonder Down Under*, a groundwater lesson for middle schools.

DSRSD also sponsors Excellence in Water Research Awards at the Alameda County and Contra Costa County Science and Engineering fairs, which awards monetary prizes to middle and high school students with winning projects in water and wastewater research.

DSRSD participates in the Bay Area Consortium of Water and Wastewater Education in an effort to train new skilled workers for water and wastewater utilities. Sponsoring agencies cover students' tuition and books and provide working professionals as instructors.

DSRSD Staff Participation

Employees, both new and long-term, are included in outreach programs. DSRSD holds Employee Academies for staff from all departments to learn more about reliable water supply, wastewater treatment, recycled water, and water distribution.

Media Outreach

DSRSD extends key conservation messages through contact with the media (news releases, proactive contact with reporters) and opinion leaders (via DSRSD today and Why it Matters social media posts). Staff meets regularly with DSRSD's wholesale supplier and neighboring retailers to coordinate regional outreach efforts regarding wise water use.

Industry Groups

DSRSD staff actively participate in various industry groups to advance water conservation efforts.

Staff serve on the Bay Area Clean Water Agencies (BACWA), Recycled Water Committee, which is responsible for promoting and developing water recycling for environmental protection and improving water supply reliability for communities in this region.

Staff also serves on committees for industry groups, including the California Association of Sanitation Agencies (CASA) Communication Committee, California Water Efficiency Partnership (CalWEP), Association of California Water Agencies (ACWA), and WateReuse Communications Committee.

9.2.4.3 Plans for Continued Implementation

DSRSD conducts public outreach to encourage water conservation and wise water use year-round. This public outreach helps educate water users about the importance of improving water use efficiency and avoiding water waste.

9.2.5 Programs to Assess and Manage Distribution System Real Loss

9.2.5.1 DMM Description

DSRSD conducts a continuous water audit and maintains a Water Loss Program to minimize water loss in DSRSD's water distribution system. The Water Loss Program includes leak detection and water meter replacement.

A water audit is a process of accounting for water use throughout a water system in order to quantify the unaccounted-for water. Unaccounted-for water is the difference between metered production and metered consumption on a system-wide basis. DSRSD completed its first water system audit in 1994 and has implemented ongoing water audits since 2005. DSRSD engineering staff calculates and tracks unaccounted-for water on a monthly basis by comparing total potable water purchases with potable water sales. DSRSD uses the standard water audit technique developed by the AWWA to identify real losses and apparent losses in DSRSD's potable water system.

DSRSD's leak detection program typically consists of both visual inspection as well as audible inspection. Visual inspection includes the inspection of distribution system appurtenances (e.g., fire hydrants, valves, meters, etc.) to identify obvious signs of leakage. To perform audible leak detection, specialized electronic listening equipment is used to detect the sounds associated with distribution system leakage. This process allows the agency to pinpoint the location of suspected leaks. Water losses associated with pipeline leaks accounted for only 0.5 percent of total water use in the system. Since 1994, annual water losses due to leaks, have on average, been less than one percent of the annual water use.

9.2.5.2 Implementation over the Past Five Years to Achieve Water Use Targets

DSRSD's water meter replacement program was implemented to ensure that its meters read accurately. Meter replacement is an ongoing process where DSRSD tracks the cumulative throughput of water through the meters and the age of the meters. DSRSD replaces approximately 234 meters per year due to meter failure or meters reaching their operational limit. DSRSD monitors the effectiveness of its meter replacement program by tracking the number of meters replaced per year.

Between 2016 and 2020, 1,170 water meters were replaced under DSRSD's meter replacement program. During this period, DSRSD's average annual water loss is 6.9 percent. This percentage has remained steady from previous years (6.9 percent in 2015) and is relatively low compared to other water utilities.

9.2.5.3 Plans for Continued Implementation

DSRSD plans to continue performing water system audits, the accounting of water losses vs. system input, and leak detection programs. The water system audit, leak detection activities, and meter replacements will be performed on an on-going, year-round basis. DSRSD tracks the effectiveness of this program based on minimizing water loss throughout the system.

DSRSD plans to explore the acoustic leak detection devices for the system-wide program to identify sources of water loss so repairs can be made promptly, and losses are minimized.

9.2.6 Water Conservation Program Coordination and Staffing Support

9.2.6.1 DMM Description

DSRSD has a full-time Water Conservation Coordinator[29]. Staff in several divisions within DSRSD, including Planning, Public Information, and Customer Services, work collaboratively to coordinate and implement DSRSD's DMMs. DSRSD's Water Conservation Coordinator obtains periodic updates from each stakeholder in order to monitor DMM implementation.

Together, the staff from the Tri-Valley water agencies, Zone 7, DSRSD, Pleasanton, California Water Company, and Livermore, form the Tri-Valley Water Conservation Coordination Committee. The committee aims to coordinate conservation rebate programs, outreach efforts, and deliberate future conservation projects. Collaborating with other agencies enables DSRSD to reach a broader audience. Consistent messages and coordinated outreach are essential when handling larger-scale issues such as drought and water reliability.

DSRSD coordinates with Zone 7 to implement wholesale agency water conservation assistance programs. DSRSD, along with the other retailers in the Tri-Valley, work closely with Zone 7 in developing water demand projections and understanding water supply availability and reliability. DSRSD also participates and supports Zone 7's rebate programs discussed in Section 9.2.7.

Further, DSRSD partners with the EBMUD to provide recycled water for irrigation and other non-potable uses for the Cities of Dublin and San Ramon, with the City of Pleasanton as a customer. DSRSD and EBMUD coordinate to operate the San Ramon Valley Recycled Water Program.

[29] The water conservation coordinator at DSRSD is also referred as the Clean Water Program Administrator.

DSRSD evaluates the effectiveness of this program by developing and maintaining effective working relationships between DSRSD and Zone 7 and with the other retailers in the Tri-Valley area.

9.2.6.2 Implementation over the Past Five Years to Achieve Water Use Targets

As part of the Tri-Valley Conservation Coordination efforts, DSRSD customers have received 853 high-efficiency washing machine rebates and 283 weather-based irrigation controller rebates.

Through collaboration and coordination, DSRSD and the other Tri-Valley Water Agencies provided consistent messaging associated with the 2014-2016 drought. The effort resulted in DSRSD exceeding its water conservation goals during the drought.

9.2.6.3 Plans for Continued Implementation

Implementation of this DMM is on-going and is expected to help DSRSD achieve its water use targets by making water conservation and implementation of DSRSD's water conservation program a priority among its staff. It also provides the means for DSRSD to collaborate with Zone 7 and the other Tri-Valley Water retailers to consistently implement DMMs through the Tri-Valley.

9.2.7 Other Demand Management Measures

In addition to the six DMMs described above, DSRSD also implements the following programs:

- Direct conservation assistance;
- Enhanced rebate programs; and
- Expanded recycled water use.

These programs are described below.

9.2.7.1 Direct Conservation Assistance

DSRSD provides the following services to its customers to promote water conservation:

- Small device giveaway programs (including kitchen/bathroom faucet aerators, low-flow showerheads, toilet leak detection tablets, and hose nozzles);
- Landscape water audits; and
- Home water audit kits (Water Hero packets).

9.2.7.1.1 Implementation over the Past Five Years to Achieve Water Use Targets

Between 2016-2020, DSRSD maintained an average annual budget of $1,400 to distribute the above-listed water savings devices. DSRSD's average annual distribution of water-efficient devices are shown on Table 9-1.

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Table 9-1. Water Efficient Device Distribution (2016-2020)	
Device	Average Annual Distribution
Low Flow Showerheads	19
Kitchen Faucet Aerators	14
Bathroom Faucet Aerators	23
Toilet Flappers	1
Leak Detection Tablets	53
Flow Meter Bags	11
Garden Hose Nozzles	19

9.2.7.1.2 Plans for Continued Implementation

DSRSD intends to continue this program to encourage its customers to use water efficiently. The devices distributed result in immediate water savings when used. The water audits help customers become more aware of their water use.

9.2.7.2 Rebate Programs

DSRSD offers the following water conservation rebates in collaboration with Zone 7:

- Converting lawn to a water-efficient landscape--residential projects may qualify for up to $750 for a single-family home and $4,500 for a multi-family or non-residential property from Zone 7;
- Weather-based ("smart") irrigation controllers – rebates for up to $75 for single-family homes and $100 for multi-family properties, and $3,000 for commercial properties; and,
- High-efficiency clothes washers – rebates up to $75 for purchase of a qualifying ENERGY STAR Most Efficient labeled high-efficiency clothes washer.

During the 2014-2016 mandatory drought years, DSRSD offered an enhanced rebate program that added money to existing rebates and a rebate for pool covers. Additionally, DSRSD added a residential landscape contractor assistance program, which provided professional irrigation assistance and repair to qualifying homeowners. DSRSD's enhanced rebates were as follows:

- Converting lawn to water-efficient landscape – $0.50/square foot up to a maximum of $500 (residential) or $3,000 (multi-family or non-residential). DSRSD rebates front, side, and backyard conversions, full rock/mulch (no replanting), which Zone 7's rebates only front yard conversions, not the rest of the listed conditions.
- Weather-based ("smart) irrigation controllers – $75 for residential, $100 for multi-family and non-residential
- High-efficiency clothes washers – $25
- Pool covers – $50

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The enhanced rebates and residential irrigation assistance program ended June 21, 2016, when the local drought emergency was rescinded. In 2016, the following enhanced programs were distributed as follows:

- High-efficiency washing machines – 159
- Pool Covers – 1
- Lawn conversions – 2
- Weather-based controllers – 15
- Residential landscape irrigation assistance - 1

Information on active, available rebate programs is posted on DSRSD's website.

9.2.7.2.1 Implementation over the Past Five Years to Achieve Water Use Targets

Customer participation for these rebate programs is summarized in Table 9-2 between 2016 and 2020.

Table 9-2. DSRSD Rebate Program Participation (2016-2020)

Program	Average Annual Participation
Water Efficient Landscaping	23
Weather-based "smart" irrigation controllers	283
High-efficiency clothes washers	853

9.2.7.2.2 Plans for Continued Implementation

DSRSD intends to continue providing rebates to its customers in collaboration with Zone 7 in the future.

9.2.7.3 Recycled Water Fill Station and Hydrants

DSRSD encourages commercial users to use recycled water instead of potable water for acceptable uses listed in Title 22, such as for dust control, soil compaction, street sweeping, surface washing, and landscape irrigation. Thus, DSRSD installed a commercial recycled water fill station located at the recycled water treatment facility that has been operational since 2007. Additionally, DSRSD has installed 17 recycled water fire hydrants throughout Dublin and Dougherty Valley areas since 2008. Commercial users submit a permit application to DSRSD to obtain permission to use the recycled water fill station and/or hydrants. The permit allows users to use recycled water providing all regulations are followed.

Furthermore, in response to the drought, DSRSD opened the state's first Residential Recycled Water Fill Station at its Jeffrey G. Hansen Water Recycling Plant in 2014. DSRSD made recycled water available to the public for residential landscaping. DSRSD's Residential Recycled Water Fill Station provided 2.3 MG of free recycled water to 500 residents in 2014. In 2015, 28 MG of free recycled water was distributed to 3,600 residents.

9.2.7.3.1 Implementation over the Past Five Years to Achieve Water Use Targets

In 2014 and 2015, in the middle of the previous drought, the commercial recycled water fill station and fire hydrants had significant demand. In 2016, 74 permitted fill station users and 75 hydrant users utilized

39.24 MG of recycled water. By 2020, the commercial fill station activity decreased. DSRSD distributed 1.34 MG of recycled water to 4 permitted commercial fill station users, and 18 hydrant users.

In 2016, residential fill station use decreased by 50 percent due to the ease of potable water use restrictions, to where 14.26 MG of recycled water was distributed to 3,964 registered residential users. At the end of September 2016, DSRSD closed the residential recycled water fill station located in Dublin. On December 28, 2016, DSRSD decided to close its residential recycled water fill station at its WWTP to start a major construction project and avoid public safety hazards and traffic congestion. The improved water supplies enabled DSRSD to move to voluntary conservation measures in June of 2016, adding another factor for closing the residential fill station.

9.2.7.3.2 Plans for Continued Implementation

The commercial recycled water fill station and hydrant programs will remain in place and available for customer use.

The Residential Recycled Water Fill Station is currently closed due to the high operational cost and users coming from outside of DSRSD's service area to utilize the program. After the extreme drought ended in 2016, DSRSD service area residents received only 25 percent of the benefits of the Residential Recycled Water Fill Station. Additionally, several construction projects at the Regional Wastewater Plant have commenced since early 2017 that created construction zone traffic conflicts with the operation of the Residential Recycled Water Fill Station. In December 2016, DSRSD's Board directed staff to close the Residential Recycled Water Fill Station, with the provision that it may be reopened if mandatory conservation is reinstated. This direction was confirmed by the DSRSD's amendment of the DSRSD's Water Recycling Policy which was approved in July of 2020.

9.3 WATER USE OBJECTIVES (FUTURE REQUIREMENTS)

In 2018, the State Legislature enacted two policy bills, (SB 606 (Hertzberg) and AB 1668 (Friedman)), to establish long-term water conservation and drought planning to adapt to climate change and the associated longer and more intense droughts in California. These two policy bills build on SB X7-7 and sets authorities and requirements for urban water use efficiency. The legislation sets standards for indoor residential use. The legislation also requires the State Water Board to coordinate with DWR to adopt efficiency standards for outdoor residential use, water losses, and CII outdoor landscape areas with dedicated irrigation meters. At the time of preparation of this UWMP, DWR and the State Water Board are in the process of developing new standards for water loss and indoor and outdoor residential water use. These standards will require urban water retailers to develop agency-wide water use objectives, provide annual reports and update their UWMP.

The State Legislature established indoor residential water use standards as 55 GPCD until January 2025, 52.5 GPCD from 2025 to 2029, and 50 GPCD in January 2030, or a greater standard recommended by DWR and the State Water Board. By June 30, 2022, the State Water Board is anticipated to adopt an outdoor residential use standard, a standard for CII outdoor landscape area with dedicated irrigation meters, and performance measures for CII water use. At that time, the State Water Board will adopt guidelines and methodologies for calculating the water use objectives. In accordance with CWC §10609.20(c), the water use objective for urban water retailers will be based on the estimated efficient indoor and outdoor residential water use, efficient outdoor irrigation of CII landscaped areas, estimated water losses, and

estimated water use for variances approved by the State Water Board aggregated across the population in its water service area.

By November 1, 2023, and November 1 of every year thereafter, DSRSD will calculate its urban water use objective and actual water use and provide an annual report to the State. By January 1, 2024, DSRSD will prepare an UWMP supplemental incorporating DMMs and other water efficiency standards that it plans to implement to achieve its water use objective by January 1, 2027.

9.4 CALIFORNIA WATER EFFICIENCY PARTNERSHIP

DSRSD is a participating member of the CalWEP, which was established in 2018 to combine expertise on California water issues, challenges, and opportunities and advance water efficiency both on the agency-wide and statewide level. CalWEP evolved from the California Urban Water Conservation Council (CUWCC), which administered an agreement between DWR, water utilities, environmental organizations, and other interested groups to implement best water management practices for reducing consumption of California's water resources. DSRSD was a participating member of CUWCC.

CalWEP also provides opportunities for networking and partnerships to improve water efficiency and conservation. Members are voluntarily organized into two main committees. The Research and Evaluation Committee collaboratively identifies and pursues research projects to benefit CalWEP members. The Program Committee shares needs, successes, and challenges, and identifies actionable steps for addressing water conservation program needs.

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CHAPTER 10
Plan Adoption, Submittal, and Implementation

This chapter provides information regarding the notification, public hearing, adoption, and submittal of DSRSD's 2020 UWMP and updated WSCP. It also includes discussion on plan implementation and the process of amending the UWMP and the WSCP.

10.1 INCLUSION OF ALL 2020 DATA

Because 2020 is the final compliance year for SB X7-7, the 2020 UWMPs must contain data through the end of 2020. If a water supplier bases its accounting on a fiscal year (July through June) the data must be through the end of the 2020 fiscal year (June 2020). If the water supplier bases its accounting on a calendar year, the data must be through the end of the 2020 calendar year (December 2020).

As indicated in Section 2.4 of this UWMP, DSRSD uses a calendar year for water supply and demand accounting; therefore, this 2020 UWMP includes data through December 2020.

10.2 NOTICE OF PUBLIC HEARING

In accordance with the UWMP Act, DSRSD must provide an opportunity for the public to provide input on this 2020 UWMP and the WSCP. DSRSD must consider all public input prior to its adoption. There are two audiences to be notified for the public hearing: cities and counties, and the public.

10.2.1 Notices to Cities and Counties

DSRSD provided greater than a 60-day notice regarding the preparation of its 2020 UWMP and WSCP to cities and counties in its service area, including Dublin, San Ramon, Alameda County, and Contra Costa County, as discussed in Section 2.5 of this plan. The notices of preparation are included as Appendix E. In addition, DSRSD provided notices to the following agencies:

- Zone 7 Water Agency (Zone 7)
- California Water Service - Livermore District (Cal Water)
- City of Livermore (Livermore)
- City of Pleasanton (Pleasanton)
- U.S. Army Reserve's Parks Reserve Forces Training Area (Parks RFTA)
- Federal Bureau of Prison's Federal Correctional Institution at Dublin (FCI)
- Alameda County Santa Rita Jail
- Contra Costa Water District (CCWD)
- East Bay Municipal Utility District (EBMUD)
- East Bay Discharges Authority (EBDA)
- Livermore-Amador Valley Water Management Agency (LAVWMA)
- DSRSD-EBMUD Recycled Water Authority (DERWA)

DSRSD coordinated the preparation of its UWMP and WSCP internally, with the cities and counties listed in its service area, and with the above listed agencies. Upon substantial completion of this 2020 UWMP,

DSRSD provided the agencies listed above, including internally within DSRSD, a notice of availability and public hearing (Appendix E.).

Notifications to cities and counties in accordance with the UWMP Act, are summarized in Table 10-1.

Table 10-1. Notification to Cities and Counties (DWR Table 10-1 Retail)

City Name	60 Day Notice	Notice of Public Hearing
City of Dublin	Yes	Yes
City of San Ramon	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Alameda County	Yes	Yes
Contra Costa County	Yes	Yes

10.2.2 Notice to the Public

DSRSD issued a Notice of Public Hearing to the public and provided a public review period following the notice, and prior to adoption, to allow ample time for public comments to be prepared and received.

A Notice of Public Hearing was issued in accordance with Government Code Section 6066 and was published twice in the local newspaper (East Bay Times) to notify all customers and local governments of the public hearing. In addition, the notice was posted on DSRSD's website, www.dsrsd.com. A copy of the published Notice of Public Hearing is included in Appendix E.

10.3 PUBLIC HEARING AND ADOPTION

DSRSD encouraged community participation in the development of this 2020 UWMP, including its WSCP, using public notices and web-based communication. The public notices included the time and place of the public hearing, as well as the location where the plan is available for public inspection.

The public hearing provided an opportunity for DSRSD water users and the general public to become familiar with the 2020 UWMP, and ask questions about its water supply, DSRSD's continuing plans for providing a reliable, safe, high-quality water supply, and its plans to mitigate various potential water shortage conditions. Copies of the draft UWMP, including the WSCP, were made available for public inspection at DSRSD's offices, local public libraries, and on DSRSD website, www.dsrsd.com.

10.3.1 Public Hearing

A public hearing was held on June 1, 2021 during which DSRSD received and considered input from the public before adopting the 2020 UWMP and updated WSCP. As part of the public hearing, DSRSD provided a report on DSRSD's compliance with the Water Conservation Act of 2009. The report included information on DSRSD's baseline, water use targets, compliance, and implementation, as discussed previously in Chapter 5 of this plan.

10.3.2 Adoption

Subsequent to the public hearing, this 2020 UWMP was adopted by DSRSD's Board of Directors on June 15, 2021. The City adopted the updated WSCP separately so that it may be updated as necessary. Copies of the adopted resolutions are included in Appendix O.

10.4 PLAN SUBMITTAL

This 2020 UWMP will be submitted to DWR within 30 days of adoption and by July 1, 2021. The adopted 2020 UWMP will be submitted electronically to DWR using the Water Use Efficiency (WUE) data submittal tool. A copy of the adopted 2020 UWMP will also be submitted to the California State Library.

No later than 30 days after adoption, a copy of the adopted 2020 UWMP, including the WSCP, will be provided to the City of Dublin, City of San Ramon, Alameda County, and Contra Costa County to which DSRSD provides water.

10.5 PUBLIC AVAILABILITY

No later than 30 days after the submittal to DWR, copies of this Plan, including the adopted WSCP, will be available at the following locations for public review during normal business hours:

- DSRSD office at 7051 Dublin Boulevard, Dublin, California;
- City of Dublin City Hall at 100 Civic Plaza, Dublin, California; and
- City of San Ramon City Hall at 7000 Bollinger Canyon Road, San Ramon, California.

A copy of this 2020 UWMP will also be available for review and download on DSRSD's website, www.dsrsd.com.

10.6 AMENDING AN ADOPTED UWMP OR WATER SHORTAGE CONTINGENCY PLAN

DSRSD may amend its 2020 UWMP and WSCP jointly or separately. If DSRSD amends one or both documents, DSRSD will follow the notification, public hearing, adoption, and submittal process described in Sections 10.2 through 10.4 above. In addition to submitting amendments to DWR through the WUE data portal, copies of amendments or changes to the plans will be submitted to the California State Library, Dublin, San Ramon, Alameda County, and Contra Costa County within 30 days after adoption.

Appendix A

Legislative Requirements

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WATER CODE - WAT

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999]
(Heading of Division 6 amended by Stats. 1957, Ch. 1932.)

PART 2.55. SUSTAINABLE WATER USE AND DEMAND REDUCTION [10608 - 10609.42] *(Part 2.55 added by Stats.2009, 7th Ex. Sess., Ch. 4, Sec. 1.)*

CHAPTER 1. General Declarations and Policy [10608 - 10608.8] *(Chapter 1 added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1.)*

10608.

The Legislature finds and declares all of the following:

(a) Water is a public resource that the California Constitution protects against waste and unreasonable use.

(b) Growing population, climate change, and the need to protect and grow California's economy while protecting and restoring our fish and wildlife habitats make it essential that the state manage its water resources as efficiently as possible.

(c) Diverse regional water supply portfolios will increase water supply reliability and reduce dependence on the Delta.

(d) Reduced water use through conservation provides significant energy and environmental benefits, and can help protect water quality, improve stream flows, and reduce greenhouse gas emissions.

(e) The success of state and local water conservation programs to increase efficiency of water use is best determined on the basis of measurable outcomes related to water use or efficiency.

(f) Improvements in technology and management practices offer the potential for increasing water efficiency in California over time, providing an essential water management tool to meet the need for water for urban, agricultural, and environmental uses.

(g) The Governor has called for a 20 percent per capita reduction in urban water use statewide by 2020.

(h) The factors used to formulate water use efficiency targets can vary significantly from location to location based on factors including weather, patterns of urban and suburban development, and past efforts to enhance water use efficiency.

(i) Per capita water use is a valid measure of a water provider's efforts to reduce urban water use within its service area. However, per capita water use is less useful for measuring relative water use efficiency between different water providers. Differences in weather, historical patterns of urban and suburban development, and density of housing in a particular location need to be considered when assessing per capita water use as a measure of efficiency.

(*Added* by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

10608.4

It is the intent of the Legislature, by the enactment of this part, to do all of the following:

(a) Require all water suppliers to increase the efficiency of use of this essential resource.

(b) Establish a framework to meet the state targets for urban water conservation identified in this part and called for by the Governor.

(c) Measure increased efficiency of urban water use on a per capita basis.

(d) Establish a method or methods for urban retail water suppliers to determine targets for achieving increased water use efficiency by the year 2020, in accordance with the Governor's goal of a 20-percent reduction.

(e) Establish consistent water use efficiency planning and implementation standards for urban water suppliers and agricultural water suppliers.

(f) Promote urban water conservation standards that are consistent with the California Urban Water Conservation Council's adopted best management practices and the requirements for demand management in Section 10631.

(g) Establish standards that recognize and provide credit to water suppliers that made substantial capital investments in urban water conservation since the drought of the early 1990s.

(h) Recognize and account for the investment of urban retail water suppliers in providing recycled water for beneficial uses.

(i) Require implementation of specified efficient water management practices for agricultural water suppliers.

(j) Support the economic productivity of California's agricultural, commercial, and industrial sectors.

(k) Advance regional water resources management.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

10608.8

(a) (1) Water use efficiency measures adopted and implemented pursuant to this part or Part 2.8 (commencing with Section 10800) are water conservation measures subject to the protections provided under Section 1011.

(2) Because an urban agency is not required to meet its urban water use target until 2020 pursuant to subdivision (a) of Section 10608.24, an urban retail water supplier's failure to meet those targets shall not establish a violation of law for purposes of any state administrative or judicial proceeding prior to January 1, 2021. Nothing in this paragraph limits the use of data reported to the department or the board in litigation or an administrative proceeding. This paragraph shall become inoperative on January 1, 2021.

(3) To the extent feasible, the department and the board shall provide for the use of water conservation reports required under this part to meet the requirements of Section 1011 for water conservation reporting.

(b) This part does not limit or otherwise affect the application of Chapter 3.5 (commencing with Section 11340), Chapter 4 (commencing with Section 11370), Chapter 4.5 (commencing with Section 11400), and Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

(c) This part does not require a reduction in the total water used in the agricultural or urban sectors, because other factors, including, but not limited to, changes in agricultural economics or population growth may have greater effects on water use. This part does not limit the economic productivity of California's agricultural, commercial, or industrial sectors.

(d) The requirements of this part do not apply to an agricultural water supplier that is a party to the Quantification Settlement Agreement, as defined in subdivision (a) of Section 1 of Chapter 617 of the Statutes of 2002, during the period within which the Quantification Settlement Agreement remains in effect. After the expiration of the Quantification Settlement Agreement, to the extent conservation water projects implemented as part of the Quantification Settlement Agreement remain in effect, the conserved water created as part of those projects shall be credited against the obligations of the agricultural water supplier pursuant to this part.

(Added by Stats. 2009, 7th Ex. Sess., Ch. 4, Sec. 1. (SB 7 7x) Effective February 3, 2010.)

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES [10000 - 12999]
(Heading of Division 6 amended by Stats. 1957, Ch. 1932.)

PART 2.6. URBAN WATER MANAGEMENT PLANNING [10610 - 10657] *(Part* 2.6 *added by Stats. 1983, Ch. 1009, Sec..)*

CHAPTER 1. General Declaration and Policy [10610 - 10610.4] ***(Chapter 1 added by Stats. 1983, Ch. 1009, Alec. 1.)***

10610 This part shall be known and may be cited as the "Urban Water Management Planning Act."
(Added by Stats. 1983, Ch. 1009, Sec. 1.)

10610.2. (a) The Legislature finds and declares all of the following:

(1) The waters of the state are a limited and renewable resource subject to ever-increasing demands.

(2) The conservation and efficient use of urban water supplies are of statewide concern; however, the planning for that use and the implementation of those plans can best be accomplished at the local level.

(3) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate, and increasing long-term water conservation among Californians, improving water use efficiency within the state's communities and agricultural production, and strengthening local and regional drought planning are critical to California's resilience to drought and climate change.

(4) As part of its long-range planning activities, every urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry water years now and into the foreseeable future, and every urban water supplier should collaborate closely with local land-use authorities to ensure water demand forecasts are consistent with current land-use planning.

(5) Public health issues have been raised over a number of contaminants that have been identified in certain local and imported water supplies.

(6) Implementing effective water management strategies, including groundwater storage projects and recycled water projects, may require specific water quality and salinity targets for meeting groundwater basins water quality objectives and promoting beneficial use of recycled water.

(7) Water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives, and modifications to existing treatment facilities.

(8) Changes in drinking water quality standards may also impact the usefulness of water supplies and may ultimately impact supply reliability.

(9) The quality of source supplies can have a significant impact on water management strategies and supply reliability.

(b) This part is intended to provide assistance to water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies to meet existing and future demands for water.

(Amended by Stats. 201B, Ch. 14, Sec. 18. (SB 606) Effective January 1, 201 9.)

10610.4 The Legislature finds and declares that it is the policy of the state as follows:

(a) The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.

CHAPTER 2. Definitions [10611 - 1 0618] ***(Chapter 2 added by Stats. 1983, Ch. 1009, iec. 1.)***

10611. Unless the context otherwise requires, the definitions of this chapter govern the construction of this part.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

10611.3 "Customer" means a purchaser of water from a water supplier who uses the water for municipal purposes, including residential, commercial, governmental, and industrial uses.

Added by renumbering Section 10612 by Stats. 2018, Ch. 14, Sec. 20. (SB 606) Effective January 1, 2019.)

10611.5 "Demand management" means those water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable and efficient use and reuse of available supplies.

(Amended by Stats. 1995, Ch. 854, Sec. 3. Effective January 1, 1996.)

10612 "Drought risk assessment" means a method that examines water shortage risks based on the driest five- year historic sequence for the agency's water supply, as described in subdivision (b) of Section 10635.

(Added by Stats. 2018, Ch. 14, Sec. 21. (SB 606) Effective January 1, 201 9.)

10613. "Efficient use" means those management measures that result in the most effective use of water so as to prevent its waste or unreasonable use or unreasonable method of use.

(Added by :3tats. 1983, Ch. 1009, Exec. 1.)

10614. "Person" means any individual, firm, association, organization, partnership, business, trust, corporation, company, public agency, or any agency of such an entity.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

10615. "Plan" means an urban water management plan prepared pursuant to this part. A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities. The components of the plan may vary according to an individual community or area's characteristics and its capabilities to efficiently use and conserve water. The plan shall address measures for residential, commercial, governmental, and industrial water demand management as set forth in Article 2 (commencing with Section 10630) of Chapter 3. In addition, a strategy and time schedule for implementation shall be included in the plan.

(Amended by Stats. 1995, *Ch. 854, Sec. 4. Effective January 1, 1996.)*

10616. "Public agency" means any board, commission, county, city and county, city, regional agency, district, or other public entity.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

10616.5 "Recycled water" means the reclamation and reuse of wastewater for beneficial use.

(Added by Stats. 1995, Ch. 854, Sec. 5. Effective January 1, 1996)

10617. "Urban water supplier" means a supplier, either publicly or privately owned, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. An urban water supplier includes a supplier or contractor for water, regardless of the basis of right, which distributes or sells for ultimate resale to customers. This part applies only to water

supplied from public water systems subject to Chapter 4 (commencing with Section 116275) of Part 12 of Division 104 of the Health and Safety Code.

(Amended by Stats. 1996, *Ch. 1023, Sec. 428. Effective January 29, 1996.)*

10617.5. "Water shortage contingency plan" means a document that incorporates the provisions detailed in subdivision (a) of Section 10632 and is subsequently adopted by an urban water supplier pursuant to this article.

(Added by Stats. 2018, Ch. 14, Sec. 22. (SB 606) Effective January 1, 2019)

10618 "Water supply and demand assessment" means a method that looks at current year and one or more dry year supplies and demands for determining water shortage risks, as described in Section 10632.1.

(Added by Stats. 2018, Ch. 14, Sec. 23 (SB 606). Effective January 1, 2019)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] *(Chapter 3 added by* Stabs. *1983, Ch. 1009, Sec. 1.)*

ARTICLE 1. General Provisions [10620 - 1 0621] *(Article 1 added by Stats. 1 983, Ch. 1009, Sec. 1.)*

10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).

(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.

(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.

(d) (I) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation, efficient water use, and improved local drought resilience.

(2) Notwithstanding paragraph (1), each urban water supplier shall develop its own water shortage contingency plan, but an urban water supplier may incorporate, collaborate, and otherwise share information with other urban water suppliers or other governing entities participating in an areawide, regional, watershed, or basinwide urban water management plan, an agricultural management plan, or groundwater sustainability plan development.

(3) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.

(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.

(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

(Amended by Stats. 2018, Ch. 14, Sec. 24. (SB 606) Effective January 1, 2019.)

10621 (a) Each urban water supplier shall update its plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update.

(b) Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

(c) An urban water supplier regulated by the Public Utilities Commission shall include its most recent plan and water shortage contingency plan as part of the supplier's general rate case filings.

(d) The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640)

(e) Each urban water supplier shall update and submit its 2015 plan to the department by July1, 2016

(f) Each urban water supplier shall update and submit its 2020 plan to the department by July 1,2021

(Amended by Stats. 2019, Ch. 239, Sec. 7. (AB 1414) Effective January 1, 2020.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] *(Chapter 3 added by Stats. 1983, Ch. 1009, Sec. 1.)*

ARTICLE 2. Contents of Plans [10630 - 1 0634] *(Article 2 added by Stats. 1 983, Ch. 1009, Sec. 1.)*

10630 It is the intention of the Legislature, in enacting this part, to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied, while accounting for impacts from climate change.

(Amended by Stats. 2018, Ch. 14, Sec. 26. (SB 606) Effective January 1, 201 9.)

10630.5 Each plan shall include a simple lay description of how much water the agency has on a reliable basis, how much it needs for the foreseeable future, what the agency's strategy is for meeting its water needs, the challenges facing the agency, and any other information necessary to provide a general understanding of the agency's plan.

(Added by Stats. 2018, Ch. 14, Sec. 27. (SB 606) Effective January 1, 2019.)

10631 A plan shall be adopted in accordance with this chapter that shall do all of the following:

(a) Describe the service area of the supplier, including current and projected population, climate, and other social, economic, and demographic factors affecting the supplier's water management planning. The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier and shall be in five-year increments to 20 years or as far as data is available. The description shall include the current and projected land uses within the existing or anticipated service area affecting the supplier's water management planning. Urban water suppliers shall coordinate with local or regional land use authorities to determine the most appropriate land use information, including, where appropriate, land use information obtained from local or regional land use authorities, as developed pursuant to Article 5 (commencing with Section 65300) of Chapter 3 of Division 1 of Title 7 of the Government Code.

(b) Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a), providing supporting and related information, including all of the following:

(1) A detailed discussion of anticipated supply availability under a normal water year, single dry year, and droughts lasting at least five years, as well as more frequent and severe periods of drought, as described in the drought risk assessment. For each source of water supply, consider any information pertinent to the reliability analysis conducted pursuant to Section 10635, including changes in supply due to climate change.

(2) When multiple sources of water supply are identified, a description of the management of each supply in correlation with the other identified supplies.

(3) For any planned sources of water supply, a description of the measures that are being undertaken to acquire and develop those water supplies.

(4) If groundwater is identified as an existing or planned source of water available to the supplier, all of the following information:

The current version of any groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720), any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management for basins underlying the urban water supplier's service area.

(A) A description of any groundwater basin or basins from which the urban water supplier pumps groundwater. For basins that a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the urban water supplier has the legal right to pump under the order or decree. For a basin that has not been adjudicated, information as to whether the department has identified the basin as a high- or medium-priority basin in the most current official departmental bulletin that characterizes the condition of the groundwater basin, and a detailed description of the efforts being undertaken by the urban water supplier to coordinate with groundwater sustainability agencies or groundwater management agencies listed in subdivision (c) of Section 10723 to maintain or achieve sustainable groundwater conditions in accordance with a groundwater sustainability plan or alternative adopted pursuant to Part 2.74 (commencing with Section 10720).

(B) A detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(C) A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records.

(c) Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis.

(d) (I) For an urban retail water supplier, quantify, to the extent records are available, past and current water use, over the same five-year increments described in subdivision (a), and projected water use, based upon information developed pursuant to subdivision (a), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following:

(A) Single-family residential.

(B) Multifamily.

(C) Commercial.

(D) Industrial.

(E) Institutional and governmental.

(F) Landscape.

(G) Sales to other agencies.

(H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof.

(I) Agricultural.

(J) Distribution system water loss.

(2) The water use projections shall be in the same five-year increments described in subdivision (a).

(3) (A) The distribution system water loss shall be quantified for each of the five years preceding the plan update, in accordance with rules adopted pursuant to Section 10608.34.

(B) The distribution system water loss quantification shall be reported in accordance with a worksheet approved or developed by the department through a public process. The water loss quantification worksheet shall be based on the water system balance methodology developed by the American Water Works Association.

(C) In the plan due July 1, 2021, and in each update thereafter, data shall be included to show whether the urban retail water supplier met the distribution loss standards enacted by the board pursuant to Section 10608.34.

(4) (A) Water use projections, where available, shall display and account for the water savings estimated to result from adopted codes, standards, ordinances, or transportation and land use

plans identified by the urban water supplier, as applicable to the service area.

(B) To the extent that an urban water supplier reports the information described in subparagraph (A), an urban water supplier shall do both of the following:

(i) Provide citations of the various codes, standards, ordinances, or transportation and land use plans utilized in making the projections.

(ii) Indicate the extent that the water use projections consider savings from codes, standards, ordinances, or transportation and land use plans. Water use projections that do not account for these water savings shall be noted of that fact.

(e) Provide a description of the supplier's water demand management measures. This description shall include all of the following:

(1) (A) For an urban retail water supplier, as defined in Section 10608.12, a narrative description that addresses the nature and extent of each water demand management measure implemented over the past five years. The narrative shall describe the water demand management measures that the supplier plans to implement to achieve its water use targets pursuant to Section 10608.20.

(B) For the supplement required of urban retail water suppliers by paragraph (2) of subdivision (f) of Section 10621, a narrative that describes the water demand management measures that the supplier plans to implement to achieve its urban water use objective by January 1, 2027, pursuant to Chapter 9 (commencing with Section 10609) of Part 2.55.

(C) The narrative pursuant to this paragraph shall include descriptions of the following water demand management measures:

(i) Water waste prevention ordinances.

(ii) Metering.

(iii) Conservation pricing.

(iv) Public education and outreach.

(v) Programs to assess and manage distribution system real loss.

(vi) Water conservation program coordination and staffing support.

(vii) Other demand management measures that have a significant impact on water use as measured in gallons per capita per day, including innovative measures, if implemented.

(2) For an urban wholesale water supplier, as defined in Section 10608.12, a narrative description of the items in clauses (ii), (iv), (vi), and (vii) of subparagraph (C) of paragraph (1), and a narrative description of its distribution system asset management and wholesale supplier assistance programs.

(f) Include a description of all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use, as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in normal and single-dry water years and for a period of drought lasting five consecutive water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program.

(g) Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply.

(h) An urban water supplier that relies upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (f). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (f).

(Amended by Stats. 2018, Ch. 14, Sec. 28. (SB 606) Effective January 1, 2019.)

10631.1 (a) The water use projections required by Section 10631 shall include projected water use for single- family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier.

(b) It is the intent of the Legislature that the identification of projected water use for single-family and multifamily residential housing for lower income households will assist a supplier in complying with the requirement under Section 65589.7 of the Government Code to grant a priority for the provision of service to housing units affordable to lower income households.

(Added by Stats. 2005, Ch. 727, Sec. 2. Effective January 1, 2006.)

10631.2. (a) In addition to the requirements of Section 10631, an urban water management plan shall include any of the following information that the urban water supplier can readily obtain:

(1) An estimate of the amount of energy used to extract or divert water supplies.

(2) An estimate of the amount of energy used to convey water supplies to the water treatment plants or distribution systems.

(3) An estimate of the amount of energy used to treat water supplies.

(4) An estimate of the amount of energy used to distribute water supplies through its distribution systems.

(5) An estimate of the amount of energy used for treated water supplies in comparison to the amount used for nontreated water supplies.

(6) An estimate of the amount of energy used to place water into or withdraw from storage.

(7) Any other energy-related information the urban water supplier deems appropriate.

(b) The department shall include in its guidance for the preparation of urban water management plans a methodology for the voluntary calculation or estimation of the energy intensity of urban water systems. The department may consider studies and calculations conducted by the Public Utilities Commission in developing the methodology.

(c) The Legislature finds and declares that energy use is only one factor in water supply planning and shall not be considered independently of other factors.

(Amended by Stats. 2018, Ch. 14, Sec. 29. *(SB* 606a *Effective January 1, 2019.)*

10632 (a) Every urban water supplier shall prepare and adopt a water shortage contingency plan as part of its urban water management plan that consists of each of the following elements:

(1) The analysis of water supply reliability conducted pursuant to Section 10635.

(2) The procedures used in conducting an annual water supply and demand assessment

that include, at a minimum, both of the following:

(A) The written decision making process that an urban water supplier will use each year to determine its water supply reliability.

(B) The key data inputs and assessment methodology used to evaluate the urban water supplier's water supply reliability for the current year and one dry year, including all of the following:

(i) Current year unconstrained demand, considering weather, growth, and other influencing factors, such as policies to manage current supplies to meet demand objectives in future years, as applicable.

(ii) Current year available supply, considering hydrological and regulatory conditions in the current year and one dry year. The annual supply and demand assessment may consider more than one dry year solely at the discretion of the urban water supplier.

(iii) Existing infrastructure capabilities and plausible constraints.

(iv) A defined set of locally applicable evaluation criteria that are consistently relied upon for each annual water supply and demand assessment.

(v) A description and quantification of each source of water supply.

(3) (A) Six standard water shortage levels corresponding to progressive ranges of up to 10, 20, 30, 40, and 50 percent shortages and greater than 50 percent shortage. Urban water suppliers shall define these shortage levels based on the suppliers' water supply conditions, including percentage reductions in water supply, changes in groundwater levels, changes in surface elevation or level of subsidence, or other changes in hydrological or other local conditions indicative of the water supply available for use. Shortage levels shall also apply to catastrophic interruption of water supplies, including, but not limited to, a regional power outage, an earthquake, and other potential emergency events.

(B) An urban water supplier with an existing water shortage contingency plan that uses different water shortage levels may comply with the requirement in subparagraph (A) by developing and including a cross-reference relating its existing categories to the six standard water shortage levels.

(4) Shortage response actions that align with the defined shortage levels and include, at a minimum, all of the following:

(A) Locally appropriate supply augmentation actions. Locally appropriate demand reduction actions to adequately respond to shortages.

(B) Locally appropriate operational changes.

(C) Additional, mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions and appropriate to the local conditions.

(D) For each action, an estimate of the extent to which the gap between supplies and demand will be reduced by implementation of the action.

(5) Communication protocols and procedures to inform customers, the public, interested parties, and local, regional, and state governments, regarding, at a minimum, all of the following:

(A) Any current or predicted shortages as determined by the annual water supply and demand assessment described pursuant to Section 10632.1.

(B) Any shortage response actions triggered or anticipated to be triggered by the annual water supply and demand assessment described pursuant to Section 10632.1.

(C) Any other relevant communications.

(6) For an urban retail water supplier, customer compliance, enforcement, appeal, and exemption

procedures for triggered shortage response actions as determined pursuant to Section 10632.2.

(7) (A) A description of the legal authorities that empower the urban water supplier to implement and enforce its shortage response actions specified in paragraph (4) that may include, but are not limited to, statutory authorities, ordinances, resolutions, and contract provisions.

(B) A statement that an urban water supplier shall declare a water shortage emergency in accordance with Chapter 3 (commencing with Section 350) of Division 1.

(C) A statement that an urban water supplier shall coordinate with any city or county within which it provides water supply services for the possible proclamation of a local emergency, as defined in Section 8558 of the Government Code.

(8) A description of the financial consequences of, and responses for, drought conditions, including, but not limited to, all of the following:

(A) A description of potential revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(B) A description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions described in paragraph (4).

(C) A description of the cost of compliance with Chapter 3.3 (commencing with Section 365) of Division 1.

(9) For an urban retail water supplier, monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance and to meet state reporting requirements.

(10) Reevaluation and improvement procedures for systematically monitoring and evaluating the functionality of the water shortage contingency plan in order to ensure shortage risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented as needed.

(b) For purposes of developing the water shortage contingency plan pursuant to subdivision (a), an urban water supplier shall analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas, as defined in subdivision (a) of Section 115921 of the Health and Safety Code.

(c) The urban water supplier shall make available the water shortage contingency plan prepared pursuant to this article to its customers and any city or county within which it provides water supplies no later than 30 days after adoption of the water shortage contingency plan.

(Repealed and added by Stats. 2018, Ch. 14, Sec. 32. (SB 606) Effective January 1, 2019.)

10632.1 An urban water supplier shall conduct an annual water supply and demand assessment pursuant to subdivision (a) of Section 10632 and, on or before June 1 of each year, submit an annual water shortage assessment report to the department with information for anticipated shortage, triggered shortage response actions, compliance and enforcement actions, and communication actions consistent with the supplier's water shortage contingency plan. An urban water supplier that relies on imported water from the State Water Project or the Bureau of Reclamation shall submit its annual water supply and demand assessment within 14 days of receiving its final allocations, or by June 1 of each year, whichever is later.

(Added by Stats. 2018, Ch. 14, Sec. 33. (SB 606) Effective January 1, 2019.)

10632.2. An urban water supplier shall follow, where feasible and appropriate, the prescribed procedures and implement determined shortage response actions in its water shortage contingency plan, as identified in subdivision

(a) of Section 10632, or reasonable alternative actions, provided that descriptions of the alternative actions are submitted with the annual water shortage assessment report pursuant to Section

10632.1. Nothing in this section prohibits an urban water supplier from taking actions not specified in its water shortage contingency plan, if needed, without having to formally amend its urban water management plan or water shortage contingency plan.

(Added by Stats. 2018, Ch. 14, Sec. 34. (SB 606) Effective January 1, 2019.)

10632.3 It is the intent of the Legislature that, upon proclamation by the Governor of a state of emergency under the California Emergency Services Act (Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code) based on drought conditions, the board defer to implementation of locally adopted water shortage contingency plans to the extent practicable.

(Added by Stats. 2018, Ch. 14, Sec. 35. (SB 606) Effective January 1, 2019.)

10632.5 (a) In addition to the requirements of paragraph (3) of subdivision (a) of Section 10632, beginning January 1, 2020, the plan shall include a seismic risk assessment and mitigation plan to assess the vulnerability of each of the various facilities of a water system and mitigate those vulnerabilities.

(b) An urban water supplier shall update the seismic risk assessment and mitigation plan when updating its urban water management plan as required by Section 10621.

(c) An urban water supplier may comply with this section by submitting, pursuant to Section 10644, a copy of the most recent adopted local hazard mitigation plan or multihazard mitigation plan under the federal Disaster Mitigation Act of 2000 (Public Law 106-390) if the local hazard mitigation plan or multihazard mitigation plan addresses seismic risk.

(Added by Stats. 2015, Ch. 681, Sec. 1. (SB 664a *Effective January 1, 2OJ* 6.g

10633 The plan shall provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area, and shall include all of the following:

(a) A description of the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal.

(b) A description of the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.

(c) A description of the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use.

(d) A description and quantification of the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses.

(e) The projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision.

(f) A description of actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year.

(g) A plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use.

(Amended by Stats. 2009, Ch. 534, Sec. 2. (AB 1465) Effective January 1, 2010.)

10634 The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability.

(Added by Stats. 2001, Ch. 644, Sec. 3. Effective January 1, 2002.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] ***(Chapter 3 added by* Stabs. *1983, Ch. 1009, Sec. 1.)***

ARTICLE 2.5. Water Service Reliability [10635- 10635.] ***(Article 2.5 added by Stats. 1995, Ch. 854, Sec. 11.)***

10635. (a) Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier.

(b) Every urban water supplier shall include, as part of its urban water management plan, a drought risk assessment for its water service to its customers as part of information considered in developing the demand management measures and water supply projects and programs to be included in the urban water management plan. The urban water supplier may conduct an interim update or updates to this drought risk assessment within the five-year cycle of its urban water management plan update. The drought risk assessment shall include each of the following:

(1) A description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts five consecutive water years, starting from the year following when the assessment is conducted.

(2) A determination of the reliability of each source of supply under a variety of water shortage conditions. This may include a determination that a particular source of water supply is fully reliable under most, if not all, conditions.

(3) A comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.

(4) Considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.

(c) The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan.

(d) Nothing in this article is intended to create a right or entitlement to water service or any specific level of water service.

(e) Nothing in this article is intended to change existing law concerning an urban water supplier's obligation to provide water service to its existing customers or to any potential future customers

(Amended by Stats. 2018, Ch. 14, Sec. 36. (SB 606) Effective January 1, 2019.)

CHAPTER 3. Urban Water Management Plans [10620 - 10645] ***(Chapter 3 added by* Stabs. *1983, Ch. 1009, Sec. 1.)***

ARTICLE 3. Adoption and Implementation of Plans [1 0640 - 10645] ***Article 3 added by Stats. 1983, Ch. 1009, Sec. 1.)***

10640. (a) Every urban water supplier required to prepare a plan pursuant to this part shall prepare its plan pursuant to Article 2 (commencing with Section 10630). The supplier shall likewise periodically review the plan as required by Section 10621, and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(b) Every urban water supplier required to prepare a water shortage contingency plan shall prepare a water shortage contingency plan pursuant to Section 10632. The supplier shall likewise periodically review the water shortage contingency plan as required by paragraph (10) of subdivision (a) of Section 10632 and any amendments or changes required as a result of that review shall be adopted pursuant to this article.

(Amended by Stats. 2018, Ch. 14, Sec. 37. (SB 606a *Effective January 1, 2OJ* 9.g

10641 An urban water supplier required to prepare a plan or a water shortage contingency plan may consult with, and obtain comments from, any public agency or state agency or any person who has special expertise with respect to water demand management methods and techniques.

(Amended by Stats. 2018, Ch. 14, Sec. 38. (SB 606a *Effective January 1, 20J* 9.g

10642. Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of both the plan and the water shortage contingency plan. Prior to adopting either, the urban water supplier shall make both the plan and the water shortage contingency plan available for public inspection and shall hold a public hearing or hearings thereon. Prior to any of these hearings, notice of the time and place of the hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of a hearing to any city or county within which the supplier provides water supplies. Notices by a local public agency pursuant to this section shall be provided pursuant to Chapter 17.5 (commencing with Section 7290) of Division 7 of Title 1 of the Government Code. A privately owned water supplier shall provide an equivalent notice within its service area. After the hearing or hearings, the plan or water shortage contingency plan shall be adopted as prepared or as modified after the hearing or hearings.

(Amended by Stats. 2018, Ch. 14, Sec. 39. (SB 606$ *Effective January 1, 70J* 9.g

10643 An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan.

(Added by Stats. 1983, Ch. 1009, Sec. 1.)

10644 (a) (1) An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption.Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption.

(2) The plan, or amendments to the plan, submitted to the department pursuant to paragraph (1)

shall be submitted electronically and shall include any standardized forms, tables, or displays specified by the department.

(b) If an urban water supplier revises its water shortage contingency plan, the supplier shall submit to the department a copy of its water shortage contingency plan prepared pursuant to subdivision (a) of Section 10632 no later than 30 days after adoption, in accordance with protocols for submission and using electronic reporting tools developed by the department.

(c) (1) (A) Notwithstanding Section 10231.5 of the Government Code, the department shall prepare and submit to the Legislature, on or before July 1, in the years ending in seven and two, a report summarizing the status of the plans and water shortage contingency plans adopted pursuant to this part. The report prepared by the department shall identify the exemplary elements of the individual plans and water shortage contingency plans. The department shall provide a copy of the report to each urban water supplier that has submitted its plan and water shortage contingency plan to the department. The department shall also prepare reports and provide data for any legislative hearings designed to consider the effectiveness of plans and water shortage contingency plans submitted pursuant to this part.

(B) The department shall prepare and submit to the board, on or before September 30 of each year, a report summarizing the submitted water supply and demand assessment results along with appropriate reported water shortage conditions and the regional and statewide analysis of water supply conditions developed by the department. As part of the report, the department shall provide a summary and, as appropriate, urban water supplier specific information regarding various shortage response actions implemented as a result of annual supplier-specific water supply and demand assessments performed pursuant to Section 10632.1.

(C) The department shall submit the report to the Legislature for the 2015 plans by July 1, 2017, and the report to the Legislature for the 2020 plans and water shortage contingency plans by July 1, 2022.

(2) A report to be submitted pursuant to subparagraph (A) of paragraph (1) shall be submitted in compliance with Section 9795 of the Government Code.

(d) The department shall make available to the public the standard the department will use to identify exemplary water demand management measures.

(Amended by Stats. 2018, Ch. 14, Sec. 40. (SB 606) Effective January 1, 2019.)

10645. (a) Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours.

(b) Not later than 30 days after filing a copy of its water shortage contingency plan with the department, the urban
water supplier and the department shall make the plan available for public review during normal business hours.

(Amended by Stats. 2018, Ch. 14, Sec. 41. (SB 606) Effective January 1, 201 9.)

CHAPTER 4. Miscellaneous Provisions [1 0650 - 10657] ***(Chapter 4 added by :itats. 1 983, Ch. 1009, iec. 1.)***

10650 Any actions or proceedings, other than actions by the board, to attack, review, set aside, void, or annul the acts or decisions of an urban water supplier on the grounds of noncompliance with this part shall be commenced as follows:

(a) An action or proceeding alleging failure to adopt a plan or a water shortage contingency plan shall be commenced within 18 months after that adoption is required by this part.

(b) Any action or proceeding alleging that a plan or water shortage contingency plan, or action taken pursuant to either, does not comply with this part shall be commenced within 90 days after filing of the plan or water shortage contingency plan or an amendment to either pursuant to Section 10644 or the taking of that action.

(Amended by Stats. 2018, Ch. 14, Sec. 42. (SB 606) Effective January 1, 2019.)

10651 In any action or proceeding to attack, review, set aside, void, or annul a plan or a water shortage contingency plan, or an action taken pursuant to either by an urban water supplier on the grounds of noncompliance with this part, the inquiry shall extend only to whether there was a prejudicial abuse of discretion. Abuse of discretion is established if the supplier has not proceeded in a manner required by law or if the action by the water supplier is not supported by substantial evidence.

(Amended by Stats. 2018, Ch. 14, Sec. 43. (SB 606) *Effective January 1, 2019*

10652 The California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) does not apply to the preparation and adoption of plans pursuant to this part or to the implementation of actions taken pursuant to Section 10632. Nothing in this part shall be interpreted as exempting from the California Environmental Quality Act any project that would significantly affect water supplies for fish and wildlife, or any project for implementation of the plan, other than projects implementing Section 10632, or any project for expanded or additional water supplies.

(Amended by Stats. 1995, Ch. 854, Sec. 6. *Effective January 1, 1996.)*

10653 The adoption of a plan shall satisfy any requirements of state law, regulation, or order, including those of the board and the Public Utilities Commission, for the preparation of water management plans, water shortage contingency plans, or conservation plans; provided, that if the board or the Public Utilities Commission requires additional information concerning water conservation, drought response measures, or financial conditions to implement its existing authority, nothing in this part shall be deemed to limit the board or the commission in obtaining that information. The requirements of this part shall be satisfied by any urban water demand management plan that complies with analogous federal laws or regulations after the effective date of this part, and which substantially meets the requirements of this part, or by any existing urban water management plan which includes the contents of a plan required under this part.

(Amended by Stats. 2018, Ch. 14, Sec. 45. (SB 606) *Effective January 1, 2019)*

10654 An urban water supplier may recover in its rates the costs incurred in preparing its urban water management plan, its drought risk assessment, its water supply and demand assessment, and its water shortage contingency plan and implementing the reasonable water conservation measures included in either of the plans.

(Amended by Stats. 2018, Ch. 14, Sec. 44. (SB 606) *Effective January 1, 2019)*

10655 If any provision of this part or the application thereof to any person or circumstances is held invalid, that invalidity shall not affect other provisions or applications of this part which can be given effect without the invalid provision or application thereof, and to this end the provisions of this part are severable.

(Amended by Stats. 1983, Ch. 1009, Sec. 1)

10656 An urban water supplier is not eligible for a water grant or loan awarded or administered by the state unless the urban water supplier complies with this part.

(Amended by Stats. 2018, Ch. 14, Sec. 46. (SB 606) Effective January 1, 2019)

10657 The department may adopt regulations regarding the definitions of water, water use, and reporting periods, and may adopt any other regulations deemed necessary or desirable to implement this part. In developing regulations pursuant to this section, the department shall solicit broad public participation from stakeholders and other interested persons.

(Amended by Stats. 2018, Ch. 14, Sec. 47. (SB 606) Effective January 1, 2019)

Appendix B

Demonstration of Reduced Delta Reliance

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Dublin San Ramon Services District Reduced Reliance on the Delta

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LIST OF ACRONYMS AND ABBREVIATIONS

AF	Acre-Feet
AFY	Acre-Feet per Year
Delta	Sacramento-San Joaquin Delta
DSRSD	Dublin San Ramon Services District
DWR	Department of Water Resources
DWR Guidebook	2020 Urban Water Management Plans Guidebook for Urban Water Suppliers
Plan	Agricultural Water Management Plan
UWMP	Urban Water Management Plan
WSCP	Water Shortage Contingency Plan

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Dublin San Ramon Services District
Reduced Reliance on the Delta

The purpose of this document is to demonstrate compliance with the Sacramento-San Joaquin Delta Reform Act of 2009. The Sacramento-San Joaquin Delta Reform Act of 2009 is described below, followed by an analysis of Dublin San Ramon Services District's (DSRSD) reduced reliance in accordance with State protocols and expected outcomes for reduced reliance on the Delta.

1.0 SACRAMENTO-SAN JOAQUIN DELTA REFORM ACT OF 2009

Under the Sacramento-San Joaquin Delta Reform Act of 2009, State and local public agencies proposing a "covered action" in the Sacramento-San Joaquin Delta (Delta) must submit a written certification of consistency to the Delta Stewardship Council as to whether the covered action is consistent with applicable Delta Plan policies. Covered actions include a multi-year water transfer, conveyance facility, or new diversion that involves transferring water through, exporting water from, or using water in the Delta. Anyone may appeal a certification of consistency, and if the Delta Stewardship Council grants the appeal, the covered action may not be implemented until the agency proposing the covered action submits a revised certification of consistency, and either no appeal is filed, or the Delta Stewardship Council denies the subsequent appeal.

An urban water supplier that anticipates participating in or receiving water from a proposed covered action is required to provide information in their 2015 and 2020 Urban Water Management Plans (UWMPs) that can then be used in the covered action process to demonstrate consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (WR P1).

WR P1 details the requirements for a covered action to demonstrate consistency with reduced reliance on the Delta and improved regional self-reliance. WR P1 subsection (a) states that:

> *(a) Water shall not be exported from, transferred through, or used in the Delta if all of the following apply:*
>
> *(1) One or more water suppliers that would receive water as a result of the export, transfer, or use have failed to adequately contribute to reduced reliance on the Delta and improved regional self-reliance consistent with all of the requirements listed in paragraph (1) of subsection (c);*
>
> *(2) That failure has significantly caused the need for the export, transfer, or use; and*
>
> *(3) The export, transfer, or use would have a significant adverse environmental impact in the Delta.*

WR P1 subsection (c)(1) further defines what adequately contributing to reduced reliance on the Delta means in terms of (a)(1) above.

> *(c)(1) Water suppliers that have done all the following are contributing to reduced reliance on the Delta and improved regional self-reliance and are therefore consistent with this policy:*
>
> *(A) Completed a current Urban or Agricultural Water Management Plan (Plan) which has been reviewed by the California Department of Water Resources for compliance with the applicable requirements of Water Code Division 6, Parts 2.55, 2.6, and 2.8;*

(B) Identified, evaluated, and commenced implementation, consistent with the implementation schedule set forth in the Plan, of all programs and projects included in the Plan that are locally cost effective and technically feasible which reduce reliance on the Delta; and

(C) Included in the Plan, commencing in 2015, the expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance. The expected outcome for measurable reduction in Delta reliance and improvement in regional self-reliance shall be reported in the Plan as the reduction in the amount of water used, or in the percentage of water used, from the Delta watershed. For the purposes of reporting, water efficiency is considered a new source of water supply, consistent with Water Code Section 1011(a).

The analysis and documentation provided below include all of the elements described in WR P1(c)(1) that need to be included in a water supplier's UWMP to support a certification of consistency for a future covered action.

The inclusion of this document as an appendix in the 2015 and 2020 Urban Water Management Plans fulfills the requirements of WR P1 subsection (c)(1) Paragraph A.

Future projects under evaluation as described in Chapter 6 and the demand management measures described in Chapter 9 of the 2020 UWMP fulfill the requirements of WR P1 subsection (c)(1) Paragraph B.

2.0 REDUCED RELIANCE ANALYSIS

The methodology used to determine DSRSD's reduced Delta reliance and improved regional self-reliance is consistent with the approach detailed by the California Department of Water Resources (DWR) in Appendix C of their "2020 Urban Water Management Plans Guidebook for Urban Water Suppliers" (DWR Guidebook), issued in March 2021. The following analysis uses narrative justifications to account for supplies and document specific data sources. All data were obtained from the 2020 UWMP or previously adopted UWMPs and represent average or normal water year conditions. The analysis was conducted at the retail level, focusing on DSRSD's demands and available supplies (i.e., purchases from Zone 7).

Table 1 through Table 4 present the analysis of DSRSD's reduced Delta reliance using DWR's spreadsheet tool and fulfill the requirements of WR P1 subsection (c)(1) Paragraph C. Descriptions of the various inputs of the analysis are provided below:

- **Baseline (2010) and 2015-2045 Conditions** – The analysis uses a normal water year representation of 2010 as the baseline, which is consistent with the approach described in the DWR Guidebook. Data for DSRSD's 2010 baseline are taken from its 2010 UWMP, while actual conditions for 2015 and 2020 are based on data reported in DSRSD's 2015 and 2020 UWMPs, respectively. Normal year projections for 2025 through 2045 are also based on DSRSD's 2020 UWMP.
- **Service Area Water Demands with Water Use Efficiency Accounted For** – These values reflect DSRSD's actual and projected water use, including potable water demands, recycled water demands, and losses.

- **Non-Potable Water Demands** – These values consist of recycled water demands.
- **Water Supplies Contributing to Regional Self-Reliance**
  - ***Water Use Efficiency*** – This amount is calculated by DWR's spreadsheet tool based on DSRSD's baseline demand, actual demands, and expected future demands. The value shown is the reduction in per capita water demand from the baseline (2010) multiplied by the projected population for each. Because the District has successfully reduced per capita potable water demands over time, water use efficiency contributes significantly to the District's regional self-reliance.
  - ***Water Recycling*** – Recycled water contributes to regional self-reliance by reducing the demand for potable water.
  - ***Conjunctive Use Projects*** – Zone 7 pumps groundwater on behalf of DSRSD as part of DSRSD's normal water supply portfolio. By agreement, Zone 7 can pump up to 645 acre-feet per year (AFY) from the local groundwater basin (Main Basin) on behalf of DSRSD.
- **Water Supplies from the Delta Watershed**
  - ***CVP/SWP Contract Supplies*** – Some of Zone 7's water supplies are from the Delta watershed. Since DSRSD purchases treated potable water from Zone 7, a portion of DSRSD's supplies therefore originated in the Delta watershed. To estimate this portion, it was assumed the composition of Zone 7's deliveries to DSRSD in a given year (excluding the 645 AFY of groundwater Zone 7 pumps on behalf of DSRSD) would mirror that of Zone 7's overall supply portfolio for that same year. For example, in 2020 approximately 63 percent of Zone 7's supplies were from the Delta watershed. DSRSD received approximately 10,966 acre-feet (AF) of water from Zone 7 in 2020, 645 AF of which consisted of groundwater pumped on behalf of DSRSD. Therefore, it was assumed 63 percent of the remaining 10,321 AF (about 6,500 AF) were from the Delta watershed.

Table 1. Calculation of Water Use Efficiency (DWR Table C-1)

Service Area Water Use Efficiency Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	12,241	10,024	12,992	15,037	16,407	16,851	16,864	17,078
Non-Potable Water Demands	2,977	2,579	3,044	3,044	3,044	3,044	3,044	3,044
Potable Service Area Demands with Water Use Efficiency Accounted For	9,264	7,445	9,948	11,993	13,363	13,807	13,820	14,034

Total Service Area Population	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Population	65,182	81,873	92,409	100,686	104,625	107,942	109,700	111,458

Water Use Efficiency Since Baseline (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Per Capita Water Use (GPCD)	127	81	96	106	114	114	112	112
Change in Per Capita Water Use from Baseline (GPCD)		(46)	(31)	(21)	(13)	(13)	(14)	(14)
Estimated Water Use Efficiency Since Baseline		4,191	3,186	2,317	1,507	1,534	1,771	1,807

Table 2. Calculation of Service Area Water Demands Without Water Use Efficiency (DWR Table C-2)

Total Service Area Water Demands (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands with Water Use Efficiency Accounted For	12,241	10,024	12,992	15,037	16,407	16,851	16,864	17,078
Reported Water Use Efficiency or Estimated Water Use Efficiency Since Baseline	-	4,191	3,186	2,317	1,507	1,534	1,771	1,807
Service Area Water Demands without Water Use Efficiency Accounted For	12,241	14,215	16,178	17,354	17,914	18,385	18,635	18,885

Table 3. Calculation of Supplies Contributing to Regional Self-Reliance (DWR Table C-3)

Water Supplies Contributing to Regional Self-Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Use Efficiency	-	4,191	3,186	2,317	1,507	1,534	1,771	1,807
Water Recycling	2,977	2,579	3,044	3,044	3,044	3,044	3,044	3,044
Stormwater Capture and Use								
Advanced Water Technologies								
Conjunctive Use Projects	645	645	645	645	645	645	645	645
Local and Regional Water Supply and Storage Projects								
Other Programs and Projects the Contribute to Regional Self-Reliance								
Water Supplies Contributing to Regional Self-Reliance	3,622	7,415	6,875	6,006	5,196	5,223	5,460	5,496

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	12,241	14,215	16,178	17,354	17,914	18,385	18,635	18,885

Change in Regional Self Reliance (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies Contributing to Regional Self-Reliance	3,622	7,415	6,875	6,006	5,196	5,223	5,460	5,496
Change in Water Supplies Contributing to Regional Self-Reliance		3,793	3,253	2,384	1,574	1,601	1,838	1,874

Percent Change in Regional Self Reliance (As Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies Contributing to Regional Self-Reliance	29.6%	52.2%	42.5%	34.6%	29.0%	28.4%	29.3%	29.1%
Change in Percent of Water Supplies Contributing to Regional Self-Reliance		22.6%	12.9%	5.0%	-0.6%	-1.2%	-0.3%	-0.5%

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Table 4. Calculation of Reliance on Water Supplies from the Delta Watershed (DWR Table C-4)

Water Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
CVP/SWP Contract Supplies	7,327	6,110	5,847	9,173	8,904	8,935	8,868	9,012
Delta/Delta Tributary Diversions								
Transfers and Exchanges								
Other Water Supplies from the Delta Watershed								
Total Water Supplies from the Delta Watershed	7,327	6,110	5,847	9,173	8,904	8,935	8,868	9,012

Service Area Water Demands without Water Use Efficiency (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Service Area Water Demands without Water Use Efficiency Accounted For	12,241	14,215	16,178	17,354	17,914	18,385	18,635	18,885

Change in Supplies from the Delta Watershed (Acre-Feet)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Water Supplies from the Delta Watershed	7,327	6,110	5,847	9,173	8,904	8,935	8,868	9,012
Change in Water Supplies from the Delta Watershed		(1,217)	(1,480)	1,846	1,577	1,608	1,541	1,684

Percent Change in Supplies from the Delta Watershed (As a Percent of Demand w/out WUE)	Baseline (2010)	2015	2020	2025	2030	2035	2040	2045 (Optional)
Percent of Water Supplies from the Delta Watershed	59.9%	43.0%	36.1%	52.9%	49.7%	48.6%	47.6%	47.7%
Change in Percent of Water Supplies from the Delta Watershed		-16.9%	-23.7%	-7.0%	-10.2%	-11.3%	-12.3%	-12.1%

3.0 EXPECTED OUTCOMES FOR REDUCED RELIANCE ON THE DELTA

As stated in WR P1(c)(1)(C), commencing in 2015, UWMPs are required to include expected outcomes for measurable reduction in Delta reliance and improved regional self-reliance. WR P1 further states that those outcomes shall be reported in the UWMP as the reduction in the amount or percentage of water used from the Delta.

The following provides a summary of the near-term (2025) and long-term (2045) expected outcomes for DSRSD's Delta reliance and regional self-reliance based on the assumptions described in the previous section and DWR's analysis tool. The results show that DSRSD is measurably reducing reliance on the Delta and improving regional self-reliance, based on the percentage of DSRSD's water supplies from the Delta watershed.

Expected Outcomes for Regional Self-Reliance

- Near-term (2025) – Normal water year regional self-reliance is expected to increase by approximately 2,380 AFY from the 2010 baseline. Water use efficiency and water recycling are major contributors to this increase, supplemented by groundwater.
- Long-term (2045) – Normal water year regional self-reliance is expected to increase by approximately 1,870 AFY from the 2010 baseline. Water use efficiency and water recycling are major contributors to this increase, supplemented by groundwater.

Expected Outcomes for Percent of Water Supplies from the Delta Watershed

- Near-term (2025) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 7 percent relative to the 2010 baseline.
- Long-term (2045) – Normal water year reliance on supplies from the Delta watershed is expected to decrease by approximately 12 percent relative to the 2010 baseline.

4.0 NEW APPENDIX TO 2015 UWMP

The information contained in this Appendix is also included as a new Appendix P to DSRSD's 2015 UWMP, consistent with WR P1 subsection (c)(1)(C) (Cal. Code Regs. tit. 23, § 5003). As described in Chapter 10 of its 2020 UWMP, DSRSD followed the required public notification, public review and hearing, and adoption processes required by the Urban Water Management Planning Act.

Appendix P to DSRSD's 2015 UWMP, the 2020 UWMP (including this Appendix), and the Water Shortage Contingency Plan were adopted by DSRSD's Board of Directors on June 15, 2021 (see Appendix P of the 2020 UWMP).

DRAFT

Appendix C

DWR 2020 Urban Water Management Plan Tables

DRAFT

Submittal Table 2-1 Retail Only: Public Water Systems			
Public Water System Number	Public Water System Name	Number of Municipal Connections 2020	Volume of Water Supplied 2020
CA0110009	Dublin San Ramon Services District	25,521	10,330
	TOTAL	25,521	10,330
NOTES: Units of measure is AF; number of connections and volume of water supplied is for potable water system only. SOURCE: Dublin San Ramon Services District, Water Usage Report 2020, February 2021.			

Submittal Table 2-2: Plan Identification			
Select Only One	**Type of Plan**		**Name of RUWMP or Regional Alliance** *if applicable* (select from drop down list)
☑	**Individual UWMP**		
	☐	Water Supplier is also a member of a RUWMP	
	☐	Water Supplier is also a member of a Regional Alliance	
☐	**Regional Urban Water Management Plan (RUWMP)**		
NOTES:			

Submittal Table 2-3: Supplier Identification	
Type of Supplier (select one or both)	
☐	Supplier is a wholesaler
☑	Supplier is a retailer
Fiscal or Calendar Year (select one)	
☑	UWMP Tables are in calendar years
☐	UWMP Tables are in fiscal years
If using fiscal years provide month and date that the fiscal year begins (mm/dd)	
Units of measure used in UWMP	
Unit	AF
**** Units of measure (AF, CCF, MG)*** *must remain consistent throughout the UWMP as reported in Table 2-3.*	
NOTES:	

Submittal Table 2-4 Retail: Water Supplier Information Exchange
The retail Supplier has informed the following wholesale supplier(s) of projected water use in accordance with Water Code Section 10631.
Wholesale Water Supplier Name
Zone 7 Water Agency (Zone 7)
NOTES:

Submittal Table 3-1 Retail: Population - Current and Projected						
Population Served	2020[1]	2025	2030	2035[2]	2040[2]	2045*(opt)*[2]
	92,409	100,686	104,625	107,942	109,700	111,458

NOTES:

[1]Dublin 2020 population estimate is from DOF Table E-1 data. Dougherty Valley 2020 population estimate is from the DWR population tool. (See Appendix G.)

[2]Includes 50 percent of December 2020 Proposed RHNA household allocations at 2.81 persons per dwelling unit, per DOF *Table E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2020 with 2010 Census Benchmark* , distributed from 2032 to 2045.

Submittal Table 4-1 Retail: Demands for Potable and Non-Potable[1] Water - Actual			
Use Type	2020 Actual[1]		
Drop down list	Additional Description (as needed)	Level of Treatment When Delivered	Volume[2]
Single Family		Drinking Water	5,784
Multi-Family		Drinking Water	1,869
Commercial		Drinking Water	651
Institutional/Governmental		Drinking Water	492
Landscape		Drinking Water	1,011
Other	Fireline Meters	Drinking Water	1
Other	Ranch Owner	Drinking Water	2
Other	Supplemental water for recycled water demand	Drinking Water	7
Losses		Drinking Water	513
		TOTAL	10,330

NOTES:

[1]Volumes are in AF.

[2]Source: Dublin San Ramon Services District, Water Usage Report Export 2020, February 2021. American Water Works Association, Water Audit Report 2019-2020.

Submittal Table 4-2 Retail: Use for Potable and Non-Potable[1] Water - Projected						
Use Type	Additional Description (as needed)	Projected Water Use[1,2] *Report To the Extent that Records are Available*				
		2025	2030	2035	2040	2045 (opt)
Single Family		6,236	6,983	7,226	7,342	7,458
Multi-Family		2,043	2,287	2,367	2,405	2,443
Commercial		649	727	752	764	776
Institutional/Governmental		522	584	604	614	624
Landscape		1,329	1,489	1,540	1,565	1,590
Other	Construction	376	376	376	188	188
Other	Fireline meters	1	1	1	2	2
Other	Ranch owner	2	3	3	3	4
Other	Unmetered sales[3]	136	136	136	136	136
Other	Supplemental water for recycled water demand[4]	21	21	21	21	21
Losses	Potable System Water Losses[5]	678	755	780	781	793
Other	Recycled Water[6]	3,044	3,044	3,044	3,044	3,044
	TOTAL	15,037	16,407	16,851	16,864	17,078

NOTES:
1. Volumes are in AF.
2. Projected demands given by DSRSD.
3. Estimated based on the average of 2017-2020 water loss audit billed unmetered data.
4. Average of supplemental potable water from 2015 to 2020.
5. Unaccounted for water at 6 percent.
6. Includes WWTP process water and facility landscaping.

Submittal Table 4-3 Retail: Total Water Use (Potable and Non-Potable)						
	2020	2025	2030	2035	2040	2045 (opt)
Potable Water, Raw, Other Non-potable *From Tables 4-1R and 4-2 R*[1]	10,330	11,993	13,363	13,807	13,820	14,034
Recycled Water Demand *From Table 6-4*[1]	3,044	3,044	3,044	3,044	3,044	3,044
Optional Deduction of Recycled Water Put Into Long-Term Storage	0	0	0	0	0	0
TOTAL WATER USE	13,374	15,037	16,407	16,851	16,864	17,078
NOTES: [1]Volumes are in AF. Table references refer to DWR table numbers.						

Submittal Table 4-4 Retail: Last Five Years of Water Loss Audit Reporting	
Reporting Period Start Date (mm/yyyy)	Volume of Water Loss
01/2016	167
07/2017	490
07/2018	446
07/2019	513
NOTES: Volume are in AF; a copy of the DSRSD's 2020 Water Audit is provided in Appendix E.	

Submittal Table 4-5 Retail Only: Inclusion in Water Use Projections	
Are Future Water Savings Included in Projections? (Refer to Appendix K of UWMP Guidebook) *Drop down list (y/n)*	No
Are Lower Income Residential Demands Included In Projections? *Drop down list (y/n)*	Yes
NOTES:	

Submittal Table 5-1 Baselines and Targets Summary From SB X7-7 Verification Form *Retail Supplier or Regional Alliance Only*				
Baseline Period	Start Year *	End Year *	Average Baseline GPCD*	Confirmed 2020 Target*
10-15 year	1996	2005	211	169
5 Year	2003	2007	199	
NOTES: *DSRSD 2015 UWMP Table 5-1.				

Submittal Table 5-2: 2020 Compliance From SB X7-7 2020 Compliance Form *Retail Supplier or Regional Alliance Only*				
2020 GPCD			2020 Confirmed Target GPCD*	Did Supplier Achieve Targeted Reduction for 2020? Y/N
Actual 2020 GPCD*	2020 TOTAL Adjustments*	Adjusted 2020 GPCD* *(Adjusted if applicable)*		
100	0	100	169	Yes
NOTES: *From SBX7-7 2020 Compliance Form, Appendix G.				

Submittal Table 6-1 Retail: Groundwater Volume Pumped	
☑	Supplier does not pump groundwater. The supplier will not complete the table below.
NOTES: Zone 7 pumped 645 AFY on behalf of DSRSD GPQ.	

Submittal Table 6-2 Retail: Wastewater Collected Within Service Area in 2020						
☐	There is no wastewater collection system. The supplier will not complete the table below.					
	Percentage of 2020 service area covered by wastewater collection system *(optional)*					
	Percentage of 2020 service area population covered by wastewater collection system *(optional)*					
Wastewater Collection			**Recipient of Collected Wastewater**			
Name of Wastewater Collection Agency	Wastewater Volume Metered or Estimated? *Drop Down List*	Volume of Wastewater Collected from UWMP Service Area 2020[1]	Name of Wastewater Treatment Agency Receiving Collected Wastewater	Treatment Plant Name	Is WWTP Located Within UWMP Area? *Drop Down List*	Is WWTP Operation Contracted to a Third Party? *(optional)* *Drop Down List*
DSRSD (City of Dublin)[2]	Metered	9,078	DSRSD	DSRSD WWTP	No	No
DSRSD (Dougherty Valley)[3]	Estimated	1,831	CCCSD		No	No
Total Wastewater Collected from Service Area in 2020:		10,909				

NOTES:

[1]Volumes are in AF

[2]Dublin San Ramon Services District, DERWA Demand Summary 2020 Revised. April 2021.

[3]Estimated using Dougherty Valley's 2020 population and an average daily wastewater flow of 60 gallons per person per day.

Submittal Table 6-3 Retail: Wastewater Treatment and Discharge Within Service Area in 2020

☑ **No wastewater is treated or disposed of within the UWMP service area.** The supplier will not complete the table below.

Wastewater Treatment Plant Name	Discharge Location Name or Identifier	Discharge Location Description	Wastewater Discharge ID Number *(optional)* [2]	Method of Disposal ***Drop down list***	Does This Plant Treat Wastewater Generated Outside the Service Area? ***Drop down list***	Treatment Level ***Drop down list***	2020 volumes [1]				
							Wastewater Treated	Discharged Treated Wastewater	Recycled Within Service Area	Recycled Outside of Service Area	Instream Flow Permit Requirement
						Total	0	0	0	0	0

[1] **Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.

[2] If the **Wastewater Discharge ID Number** is not available to the UWMP preparer, access the SWRCB CIWQS regulated facility website at https://ciwqs.waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=RegulatedFacility

NOTES:

Submittal Table 6-4 Retail: Recycled Water Direct Beneficial Uses Within Service Area

☐ Recycled water is not used and is not planned for use within the service area of the supplier.
The supplier will not complete the table below.

Name of Supplier Producing (Treating) the Recycled Water:	DSRSD
Name of Supplier Operating the Recycled Water Distribution System:	DERWA

Beneficial Use Type *Insert additional rows if needed.*	**Potential** Beneficial Uses of Recycled Water (Describe)	Amount of **Potential** Uses of Recycled Water (Quantity) *Include volume units* [1]	General Description of 2020 Uses	Level of Treatment *Drop down list*	2020 [1]	2025 [1]	2030 [1]	2035 [1]	2040 [1]	2045 [1] (opt)
Agricultural irrigation										
Landscape irrigation (exc golf courses)				Tertiary	2,681	2,681	2,681	2,681	2,681	2,681
Golf course irrigation				Tertiary	195	195	195	195	195	195
Commercial use				Tertiary	12	12	12	12	12	12
Industrial use										
Geothermal and other energy production										
Seawater intrusion barrier										
Recreational impoundment										
Wetlands or wildlife habitat										
Groundwater recharge (IPR)										
Reservoir water augmentation (IPR)										
Direct potable reuse										
Other (Description Required)					156	156	156	156	156	156
				Total:	3,044	3,044	3,044	3,044	3,044	3,044
				2020 Internal Reuse						

NOTES: Source: Dublin San Ramon Services District, 2020 Billing Data, April 2021.

Submittal Table 6-5 Retail: 2015 UWMP Recycled Water Use Projection Compared to 2020 Actual		
☐	Recycled water was not used in 2015 nor projected for use in 2020. The supplier will not complete the table below. If recycled water was not used in 2020, and was not predicted to be in 2015, then check the box and do not complete the table.	
Beneficial Use Type	**2015 Projection for 2020[1,2]**	**2020 Actual Use[1,2]**
Insert additional rows as needed.		
Agricultural irrigation		
Landscape irrigation (exc golf courses)	3,364	2,681
Golf course irrigation	254	195
Commercial use	8	8
Industrial use		
Geothermal and other energy production		
Seawater intrusion barrier		
Recreational impoundment		
Wetlands or wildlife habitat		
Groundwater recharge (IPR)		
Reservoir water augmentation (IPR)		
Direct potable reuse		
Other (Construction)	279	3
Other (Facility Processes and Landscaping)		156
Total	3,905	3,044

NOTE:

[1]Volumes are in AF.

[2]Dublin San Ramon Services District, 2020 Billing Data, April 2021.

Submittal Table 6-6 Retail: Methods to Expand Future Recycled Water Use			
☑	Supplier does not plan to expand recycled water use in the future. Supplier will not complete the table below but will provide narrative explanation.		
6-23	Provide page location of narrative in UWMP		
Name of Action	Description	Planned Implementation Year	Expected Increase in Recycled Water Use *
Add additional rows as needed			
		Total	0
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*			
NOTES:			

Submittal Table 6-7 Retail: Expected Future Water Supply Projects or Programs						
☐	No expected future water supply projects or programs that provide a quantifiable increase to the agency's water supply. Supplier will not complete the table below.					
☑	Some or all of the supplier's future water supply projects or programs are not compatible with this table and are described in a narrative format.					
6-33 to 6-34	Provide page location of narrative in the UWMP					
Name of Future Projects or Programs	Joint Project with other suppliers?		Description (if needed)	Planned Implementation Year	Planned for Use in Year Type *Drop Down List*	Expected Increase in Water Supply to Supplier* *This may be a range*
	Drop Down List (y/n)	*If Yes, Supplier Name*				
Add additional rows as needed						
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*						
NOTES:						

Submittal Table 6-8 Retail: Water Supplies — Actual				
Water Supply	Additional Detail on Water Supply	2020		
		Actual Volume[1]	Water Quality	Total Right or Safe Yield* (optional)
Add additional rows as needed				
Purchased or Imported Water	Zone 7	10,966	Drinking Water	
Recycled Water[2]	From DSRSD RWTF	2,888	Recycled Water	
	Total	13,854		0

NOTES:

[1]Volumes in AF.

[2]Recycled water volume excludes recycled water used for processing and landscape irrigation at the DSRSD WWTP.

Submittal Table 6-9 Retail: Water Supplies — Projected											
Water Supply	Additional Detail on Water Supply	Projected Water Supply Report To the Extent Practicable									
		2025		**2030**		**2035**		**2040**		**2045** (opt)	
		Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)	Reasonably Available Volume	Total Right or Safe Yield (optional)
Purchased or Imported Water	Zone 7	11,993		13,363		13,807		13,820		14,034	
Recycled Water		3,044		3,044		3,044		3,044		3,044	
Total		15,037	0	16,407	0	16,851	0	16,864	0	17,078	0
NOTES: Volumes in AF.											

Urban Water Supplier: *Dublin San Ramon Services District*

Water Delivery Product (If delivering more than one type of product use Table O-1C)

Retail Potable Deliveries

Table O-1B: Recommended Energy Reporting - Total Utility Approach

Enter Start Date for Reporting Period	1/1/2019	**Urban Water Supplier Operational Control**		
End Date	12/31/2019			
☐ Is upstream embedded in the values reported?		**Sum of All Water Management Processes**	**Non-Consequential Hydropower**	
Water Volume Units Used	*AF*	Total Utility	Hydropower	Net Utility
Volume of Water Entering Process (volume unit) [1]		*10,152*	*0*	*10,152*
Energy Consumed (kWh) [2]		*3,843,152*	*0*	*3,843,152*
Energy Intensity (kWh/volume)		*379*	*0.0*	*379*

NOTES:

1. Dublin San Ramon Services District, Zone 8 Water Billing 2019, April 2021.
2. Dublin San Ramon Services District, Energy Data Account Usage, April 2021.

Quantity of Self-Generated Renewable Energy

0 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Data is provided by the District from flow meters in the water distribution system and electric meters at its water facilities.

Narrative:

Water management processes consuming energy include distribution/pumping, storage tank operations, and groundwater pumping and treatment.

Urban Water Supplier: *Dublin San Ramon Services District*

Table O-2: Recommended Energy Reporting - Wastewater & Recycled Water

		Urban Water Supplier Operational Control			
Enter Start Date for Reporting Period	1/1/2019	Water Management Process			
End Date	12/31/2019				
☐ Is upstream embedded in the values reported?		Collection / Conveyance	Treatment	Discharge / Distribution	Total
Volume of Water Units Used	MG				
Volume of Wastewater Entering Process (volume units selected above) [1]		*1670*	*3796*	*2291*	*7758*
Wastewater Energy Consumed (kWh) [2]		*12086*	*5010137*	*162646*	*5184870*
Wastewater Energy Intensity (kWh/volume)		*7.2*	*1320*	*71*	*668*
Volume of Recycled Water Entering Process (volume units selected above) [1]			*1505*	*1505*	*3010*
Recycled Water Energy Consumed (kWh) [2]			*451239*	*447255*	*898494*
Recycled Water Energy Intensity (kWh/volume)		*0.0*	*300*	*297*	*299*

Notes
1. Dublin San Ramon Services District, DERWA Demand Summary 2020_rvsd 2103.08.xlsx, March 2019.
2. Dublin San Ramon Services District, Energy Data Account Usage, April 2021.

Quantity of Self-Generated Renewable Energy related to recycled water and wastewater operations

9,990,771 kWh

Data Quality *(Estimate, Metered Data, Combination of Estimates and Metered Data)*

Metered Data

Data Quality Narrative:

Influent and effluent at the WWTP and RWTF are metered.

Narrative:

Collection system includes two DSRSD lift stations. DSRSD owns and operates WWTP and RWTF. Wastewater effluent not recycled is pumped out of the Tri-Valley and discharged through LAVWMA and EBDA facilities as described in Section 6.2.5.2

Submittal Table 7-1 Retail: Basis of Water Year Data (Reliability Assessment)				
Year Type	**Base Year** If not using a calendar year, type in the last year of the fiscal, water year, or range of years, for example, water year 2019-2020, use 2020	**Available Supplies if Year Type Repeats**		
		☑	Quantification of available supplies is not compatible with this table and is provided elsewhere in the UWMP. Location: Table 7-2 and 7-3	
		☐	Quantification of available supplies is provided in this table as either volume only, percent only, or both.	
Average Year				100%
Single-Dry Year				
Consecutive Dry Years 1st Year				
Consecutive Dry Years 2nd Year				
Consecutive Dry Years 3rd Year				
Consecutive Dry Years 4th Year				
Consecutive Dry Years 5th Year				
Supplier may use multiple versions of Table 7-1 if different water sources have different base years and the supplier chooses to report the base years for each water source separately. If a Supplier uses multiple versions of Table 7-1, in the "Note" section of each table, state that multiple versions of Table 7-1 are being used and identify the particular water source that is being reported in each table.				
***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*				
NOTES:				

Submittal Table 7-2 Retail: Normal Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 *(Opt)*
Supply totals *(autofill from Table 6-9)*	15,037	16,407	16,851	16,864	17,078
Demand totals *(autofill from Table 4-3)*	15,037	16,407	16,851	16,864	17,078
Difference	0	0	0	0	0
NOTES: Units of measure is AF.					

Submittal Table 7-3 Retail: Single Dry Year Supply and Demand Comparison					
	2025	2030	2035	2040	2045 (Opt)
Supplies					
Zone 7	11,993	13,363	13,807	13,820	14,034
Recycled Water	3,044	3,044	3,044	3,044	3,044
Supply totals*	15,037	16,407	16,851	16,864	17,078
Demands					
Portable Water	11,993	13,363	13,807	13,820	14,034
Recycled Water	3,044	3,044	3,044	3,044	3,044
Demand totals*	15,037	16,407	16,851	16,864	17,078
Difference	0	0	0	0	0
NOTES: Units of measure is AF.					

Submittal Table 7-4 Retail: Multiple Dry Years Supply and Demand Comparison						
		2025	2030	2035	2040	2045 (Opt)
First year	Supply totals	15,037	16,407	16,851	16,864	17,078
	Demand totals	15,037	16,407	16,851	16,864	17,078
	Difference	0	0	0	0	0
Second year	Supply totals	15,311	16,496	16,854	16,907	17,078
	Demand totals	15,311	16,496	16,854	16,907	17,078
	Difference	0	0	0	0	0
Third year	Supply totals	15,585	16,585	16,856	16,950	17,078
	Demand totals	15,585	16,585	16,856	16,950	17,078
	Difference	0	0	0	0	0
Fourth year	Supply totals	15,859	16,673	16,859	16,992	17,078
	Demand totals	15,859	16,673	16,859	16,992	17,078
	Difference	0	0	0	0	0
Fifth year	Supply totals	16,133	16,762	16,862	17,035	17,078
	Demand totals	16,133	16,762	16,862	17,035	17,078
	Difference	0	0	0	0	0
NOTES: Units of measure is AF.						

Submittal Table 7-5: Five-Year Drought Risk Assessment Tables to address Water Code Section 10635(b)	
2021	**Total**
Total Water Use	13,707
Total Supplies	13,707
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2022	**Total**
Total Water Use	14,039
Total Supplies	14,039
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2023	**Total**
Total Water Use	14,372
Total Supplies	14,372
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2024	**Total**
Total Water Use	14,704
Total Supplies	14,704
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
2025	**Total**
Total Water Use	15,037
Total Supplies	15,037
Surplus/Shortfall w/o WSCP Action	0
Planned WSCP Actions (use reduction and supply augmentation)	
WSCP - supply augmentation benefit	
WSCP - use reduction savings benefit	
Revised Surplus/(shortfall)	0
Resulting % Use Reduction from WSCP action	0%
NOTES: Units of measure is AF.	

Submittal Table 8-1 Water Shortage Contingency Plan Levels			
Shortage Level	**Percent Shortage Range**	**Shortage Response Actions** (*Narrative description*)	**Water Shortage Condition** (Narrative description)
1	Up to 10%	Voluntary Reduction; See Table 8-2.	• DSRSD has adequate supply and seeks to preserve water resources for the future; or, • Assessment shows that water supply is not able to meet normal demand and up to 10% demand reduction will be required.
2	Up to 20%	Minimal Reduction; See Table 8-2.	• Assessment leads to a reasonable conclusion that water supplies may not adequately meet normal demands in the current or upcoming years. Up to 20% demand reduction will be required.
3	Up to 30%	Moderate Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, demand reduction up to 30% is required in the current or upcoming years.
4	Up to 40%	Significant Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, demand reduction up to 40% is required in the current or upcoming years.
5	Up to 50%	Severe Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, demand reduction up to 50% is required in the current or upcoming years.
6	>50%	Critical Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, a critical demand reduction greater than 50% is required in the current or upcoming years.
NOTES:			

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only***
Add additional rows as needed				
1	Expand Public Information Campaign	Boosts the effectiveness of other methods; varies based on outreach intensity - not readily quantifiable	Continue and expand the current public notification on conservation, and escalate notification as shortage level moves up to next level	No
1	Other - Require automatic shut off hoses	Varies based on activity - not readily quantifiable.	DSRSD distributes hose shut off valves to customers on request or during events	No
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Varies based on landscape area and duration of activity - not readily quantifiable.	Monitor large user usages through AMI meter data, bi-monthly usage comparison are provided to customers in the bill	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Boosts the effectiveness of AMI system - not readily quantifiable	Continue and expand notification to customers of potential leaks obtained from AMI analytics	No
1	Implement or Modify Drought Rate Structure or Surcharge	Boosts the effectiveness of other methods - not readily quantifiable	Under normal water supply condition and in shortage Stage 1 - voluntary condition, the then-current water rate structure remains in place. The Drought Rate Structure will be applied when DSRSD Board declares a mandatory water shortage emergency at Stage 1.	Yes
1	Provide Rebates on Plumbing Fixtures and Devices	Up to 9,000 gal/year/participating household depending on the number and type of fixtures being replaced	DSRSD distributes low-flow fixtures to customers.	No
2	CII - Lodging establishment must offer opt out of linen service	250-500 gal/day/hotel	Provide conservation message stickers for bathroom mirrors	No
2	CII - Restaurants may only serve water upon request	50 gal/day/commercial connection	Provide table tents with water conservation message	No
2	CII - Commercial kitchens required to use pre-rinse spray valves	50 gal/day/restaurant		No
2	Decrease Line Flushing	Depends on extent and frequency of current flushing activities	Only perform line flushing for water quality and hydrant maintenance when it is required for health and safety needs	No
2	Landscape - Limit landscape irrigation to specific times	Depends on times that irrigation will be allowed, but can reduce water use by 20-25 gallons per day per household	Watering is allowed only between 9 pm and 6 am	Yes
2	Landscape - Limit landscape irrigation to specific days	Every third day - 22% reduction; twice a week - 33% reduction; once a week - 56% reduction	Irrigation is limited to three, non-consecutive days per week	Yes
2	Other - Prohibit use of potable water for construction and dust control	3,000 gal/acre/day for construction areas	Customers with the temporary potable water construction meter are required to replace meter with recycled water construction meter	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only***
Add additional rows as needed				
2	Other - Prohibit use of potable water for washing hard surfaces	Varies based on surface area - not readily quantifiable	Except for building exteriors and fences for the sole purpose of repainting or making repairs. Pressurized washer is required to be equipped with a quick action shutoff nozzle. Windows may be cleaned using a bucket.	No
3	Provide Rebates on Plumbing Fixtures and Devices	Up to 9,000 gal/year/participating household depending on the number and type of fixtures being replaced	DSRSD provides additional funding to Zone 7 rebate program fund for High Efficiency Clothes Washer	No
3	Provide Rebates for Landscape Irrigation Efficiency	Not quantifiable. Depends on the number of participants and fixtures replaced.	DSRSD provides additional funding to Zone 7 rebate program funds for Weather-Based Irrigation Controllers	No
3	Provide Rebates for Turf Replacement	Up to 45 gallons/year per square foot of lawn replaced	DSRSD provides additional funding to Zone 7 Water-Efficient Lawn Conversion rebate fund for turf replacement	No
3	Increase Water Waste Patrols	Boosts the effectiveness of other methods - not readily quantifiable	Utilize analytics on AMI meter system to identify water waste	Yes
3	Offer Water Use Surveys	Boosts the effectiveness of other methods - not readily quantifiable	Residential Water Survey Program; Large Landscape Audit Support Services Program	No
3	Landscape - Limit landscape irrigation to specific days	Every third day - 22% reduction; twice a week - 33% reduction; once a week - 56% reduction	Irrigation is limited to two, non-consecutive days per week	Yes
4	Pools and Spas - Require covers for pools and spas	Evapotranspiration of approximate surface area of pools	DSRSD provides rebates fund for pool cover	No
4	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	Evapotranspiration of approximate surface area of pools		No
4	Other water feature or swimming pool restriction	Evapotranspiration of approximate water surface area	Must be equipped with a recirculating pump; Allow drain and refill of pools and spas only for health or structural needs; Prohibit initial filling	No
4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gal/year/residential connection	Vehicles may be washed at a residence home using a hose equipped with a shutoff nozzle. At a dealership or other commercial facility, vehicles may be washed using buckets or a self-contained washing system that not directly connected to a potable water supply.	No
5	Water Features - Restrict water use for decorative water features, such as fountains	Evapotranspiration of approximate water surface area	Decorative water features must be equipped with a recirculating pump; Prohibit potable water use; Allow drain and refill only for health or structural needs	Yes

Submittal Table 8-2: Demand Reduction Actions				
Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only***
Add additional rows as needed				
5	Moratorium or Net Zero Demand Increase on New Connections	No additional connections.		No
5	Landscape - Prohibit certain types of landscape irrigation	Boosts the effectiveness of other methods - not readily quantifiable	Prohibit spray irrigation for new developments or replacement projects; allow drip to save trees and non-turf plants	Yes
6	Landscape - Prohibit all landscape irrigation	30% to 60% of irrigation demands		Yes
NOTES: Katz, D. et al. 2015. Evaluating the Effectiveness of a Water Conservation Campaign: Combining experimental and field methods. Journal of Environmental Management 180: 335-343.				

Submittal Table 8-3: Supply Augmentation and Other Actions			
Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
All Level	Expand Public Information Campaign	Action boost other measures; not quantifiable.	Continue and expand the current public notification on conservation, and escalate notification as shortage level moves up to next level
All Level	Other Actions (describe)	Depends on extent and frequency of current flushing activities; not quantifiable.	DSRSD performs line flushing only in critical areas of the distribution system to meet water quality requirements
5	New Recycled Water	Up to contractual amount	Pump groundwater from Fringe Basin and deliver to wastewater treatment plant to be treated for recycled water. Obtaining new recycled water will require new agreement.
5	Transfers	Up to contractual amount	City of Pleasanton Interties
5	Transfers	Up to contractual amount	City of Livermore Interties
5	Transfers	Up to contractual amount	EBMUD Interties

Submittal Table 10-1 Retail: Notification to Cities and Counties		
City Name	60 Day Notice	Notice of Public Hearing
City of Dublin	Yes	Yes
City of San Ramon	Yes	Yes
County Name *Drop Down List*	60 Day Notice	Notice of Public Hearing
Alameda County	Yes	Yes
Contra Costa County	Yes	Yes
NOTES:		

Appendix D

DWR 2020 Urban Water Management Plan Checklist

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Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Chapter 1	10615	A plan shall describe and evaluate sources of supply, reasonable and practical efficient uses, reclamation and demand management activities.	Introduction and Overview	Executive Summary
X	X	Chapter 1	10630.5	Each plan shall include a simple description of the supplier's plan including water availability, future requirements, a strategy for meeting needs, and other pertinent information. Additionally, a supplier may also choose to include a simple description at the beginning of each chapter.	Summary	Executive Summary
X	X	Section 2.2	10620(b)	Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.	Plan Preparation	Section 2.1
X	X	Section 2.6	10620(d)(2)	Coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.	Plan Preparation	Section 2.2
X	X	Section 2.6.2	10642	Provide supporting documentation that the water supplier has encouraged active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan and contingency plan.	Plan Preparation	Section 2.5.2
X		Section 2.6, Section 6.1	10631(h)	Retail suppliers will include documentation that they have provided their wholesale supplier(s) - if any - with water use projections from that source.	System Supplies	Section 2.5.1
	X	Section 2.6	10631(h)	Wholesale suppliers will include documentation that they have provided their urban water suppliers with identification and quantification of the existing and planned sources of water available from the wholesale to the urban supplier during various water year types.	System Supplies	Not Applicable (NA)
X	X	Section 3.1	10631(a)	Describe the water supplier service area.	System Description	Section 3.2
X	X	Section 3.3	10631(a)	Describe the climate of the service area of the supplier.	System Description	Section 3.4
X	X	Section 3.4	10631(a)	Provide population projections for 2025, 2030, 2035, 2040 and optionally 2045.	System Description	Section 3.5.1
X	X	Section 3.4.2	10631(a)	Describe other social, economic, and demographic factors affecting the supplier's water management planning.	System Description	Section 3.5.2
X	X	Sections 3.4 and 5.4	10631(a)	Indicate the current population of the service area.	System Description and Baselines and Targets	Sections 3.5.1
X	X	Section 3.5	10631(a)	Describe the land uses within the service area.	System Description	Section 3.6

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 4.2	10631(d)(1)	Quantify past, current, and projected water use, identifying the uses among water use sectors.	System Water Use	Section 4.2
X	X	Section 4.2.4	10631(d)(3)(C)	Retail suppliers shall provide data to show the distribution loss standards were met.	System Water Use	Section 4.3
X	X	Section 4.2.6	10631(d)(4)(A)	In projected water use, include estimates of water savings from adopted codes, plans, and other policies or laws.	System Water Use	Section 4.4
X	X	Section 4.2.6	10631(d)(4)(B)	Provide citations of codes, standards, ordinances, or plans used to make water use projections.	System Water Use	Section 4.4
X	optional	Section 4.3.2.4	10631(d)(3)(A)	Report the distribution system water loss for each of the 5 years preceding the plan update.	System Water Use	Section 4.3
X	optional	Section 4.4	10631.1(a)	Include projected water use needed for lower income housing projected in the service area of the supplier.	System Water Use	Section 4.5
X	X	Section 4.5	10635(b)	Demands under climate change considerations must be included as part of the drought risk assessment.	System Water Use	Section 4.2.3.2
X		Chapter 5	10608.20(e)	Retail suppliers shall provide baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data.	Baselines and Targets	Chapter 5 Appendix G
X		Chapter 5	10608.24(a)	Retail suppliers shall meet their water use target by December 31, 2020.	Baselines and Targets	Section 5.6
	X	Section 5.1	10608.36	Wholesale suppliers shall include an assessment of present and proposed future measures, programs, and policies to help their retail water suppliers achieve targeted water use reductions.	Baselines and Targets	NA
X		Section 5.2	10608.24(d)(2)	If the retail supplier adjusts its compliance GPCD using weather normalization, economic adjustment, or extraordinary events, it shall provide the basis for, and data supporting the adjustment.	Baselines and Targets	NA
X		Section 5.5	10608.22	Retail suppliers' per capita daily water use reduction shall be no less than 5 percent of base daily per capita water use of the 5-year baseline. This does not apply if the suppliers base GPCD is at or below 100.	Baselines and Targets	Section 5.5
X		Section 5.5 and Appendix E	10608.4	Retail suppliers shall report on their compliance in meeting their water use targets. The data shall be reported using a standardized form in the SBX7-7 2020 Compliance Form.	Baselines and Targets	Section 5.6 and Appendix G
X	X	Sections 6.1 and 6.2	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought.	System Supplies	Sections 6.1 and 7.1.3
X	X	Sections 6.1	10631(b)(1)	Provide a discussion of anticipated supply availability under a normal, single dry year, and a drought lasting five years, as well as more frequent and severe periods of drought, *including changes in supply due to climate change.*	System Supplies	Sections 6.1 and 6.2.10

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 6.1	10631(b)(2)	When multiple sources of water supply are identified, describe the management of each supply in relationship to other identified supplies.	System Supplies	Section 6.2
X	X	Section 6.1.1	10631(b)(3)	Describe measures taken to acquire and develop planned sources of water.	System Supplies	Section 6.2.8
X	X	Section 6.2.8	10631(b)	Identify and quantify the existing and planned sources of water available for 2020, 2025, 2030,2035, 2040 and optionally 2045.	System Supplies	Section 6.2.9
X	X	Section 6.2	10631(b)	Indicate whether groundwater is an existing or planned source of water available to the supplier.	System Supplies	Section 6.2.2
X	X	Section 6.2.2	10631(b)(4)(A)	Indicate whether a groundwater sustainability plan or groundwater management plan has been adopted by the water supplier or if there is any other specific authorization for groundwater management. Include a copy of the plan or authorization.	System Supplies	Section 6.2.2
X	X	Section 6.2.2	10631(b)(4)(B)	Describe the groundwater basin.	System Supplies	Section 6.2.2.1
X	X	Section 6.2.2	10631(b)(4)(B)	Indicate if the basin has been adjudicated and include a copy of the court order or decree and a description of the amount of water the supplier has the legal right to pump.	System Supplies	Section 6.2.2.1
X	X	Section 6.2.2.1	10631(b)(4)(B)	For unadjudicated basins, indicate whether or not the department has identified the basin as a high or medium priority. Describe efforts by the supplier to coordinate with sustainability or groundwater agencies to achieve sustainable groundwater conditions.	System Supplies	Section 6.2.2.1
X	X	Section 6.2.2.4	10631(b)(4)(C)	Provide a detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years	System Supplies	Section 6.2.2.3
X	X	Section 6.2.2	10631(b)(4)(D)	Provide a detailed description and analysis of the amount and location of groundwater that is projected to be pumped.	System Supplies	Section 6.2.2.3 and 6.2.2.2.2
X	X	Section 6.2.7	10631(c)	Describe the opportunities for exchanges or transfers of water on a short-term or long- term basis.	System Supplies	Section 6.2.7
X	X	Section 6.2.5	10633(b)	Describe the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project.	System Supplies (Recycled Water)	Section 6.2.5
X	X	Section 6.2.5	10633(c)	Describe the recycled water currently being used in the supplier's service area.	System Supplies (Recycled Water)	Section 6.2.5
X	X	Section 6.2.5	10633(d)	Describe and quantify the potential uses of recycled water and provide a determination of the technical and economic feasibility of those uses.	System Supplies (Recycled Water)	Section 6.2.5.4

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 6.2.5	10633(e)	Describe the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected.	System Supplies (Recycled Water)	Section 6.2.5.4
X	X	Section 6.2.5	10633(f)	Describe the actions which may be taken to encourage the use of recycled water and the projected results of these actions in terms of acre-feet of recycled water used per year.	System Supplies (Recycled Water)	Section 6.2.5.4 (Moratorium on Connections)
X	X	Section 6.2.5	10633(g)	Provide a plan for optimizing the use of recycled water in the supplier's service area.	System Supplies (Recycled Water)	Section 6.2.5
X	X	Section 6.2.6	10631(g)	Describe desalinated water project opportunities for long-term supply.	System Supplies	Section 6.2.6
X	X	Section 6.2.5	10633(a)	Describe the wastewater collection and treatment systems in the supplier's service area with quantified amount of collection and treatment and the disposal methods.	System Supplies (Recycled Water)	Section 6.2.5.2
X	X	Section 6.2.8, Section 6.3.7	10631(f)	Describe the expected future water supply projects and programs that may be undertaken by the water supplier to address water supply reliability in average, single-dry, and for a period of drought lasting 5 consecutive water years.	System Supplies	Section 6.2.8
X	X	Section 6.4 and Appendix O	10631.2(a)	The UWMP must include energy information, as stated in the code, that a supplier can readily obtain.	System Suppliers, Energy Intensity	Section 6.3
X	X	Section 7.2	10634	Provide information on the quality of existing sources of water available to the supplier and the manner in which water quality affects water management strategies and supply reliability	Water Supply Reliability Assessment	Section 7.1.1.1.1.2
X	X	Section 7.2.4	10620(f)	Describe water management tools and options to maximize resources and minimize the need to import water from other regions.	Water Supply Reliability Assessment	Section 7.2
X	X	Section 7.3	10635(a)	Service Reliability Assessment: Assess the water supply reliability during normal, dry, and a drought lasting five consecutive water years by comparing the total water supply sources available to the water supplier with the total projected water use over the next 20 years.	Water Supply Reliability Assessment	Section 7.1.3
X	X	Section 7.3	10635(b)	Provide a drought risk assessment as part of information considered in developing the demand management measures and water supply projects.	Water Supply Reliability Assessment	Section 7.3
X	X	Section 7.3	10635(b)(1)	Include a description of the data, methodology, and basis for one or more supply shortage conditions that are necessary to conduct a drought risk assessment for a drought period that lasts 5 consecutive years.	Water Supply Reliability Assessment	Section 7.2.2
X	X	Section 7.3	10635(b)(2)	Include a determination of the reliability of each source of supply under a variety of water shortage conditions.	Water Supply Reliability Assessment	Section 7.3.2
X	X	Section 7.3	10635(b)(3)	Include a comparison of the total water supply sources available to the water supplier with the total projected water use for the drought period.	Water Supply Reliability Assessment	Section 7.3.3

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 7.3	10635(b)(4)	Include considerations of the historical drought hydrology, plausible changes on projected supplies and demands under climate change conditions, anticipated regulatory changes, and other locally applicable criteria.	Water Supply Reliability Assessment	Sections 7.1.1 and 7.3.2
X	X	Chapter 8	10632(a)	Provide a water shortage contingency plan (WSCP) with specified elements below.	Water Shortage Contingency Planning	Chapter 8 and Appendix M
X	X	Chapter 8	10632(a)(1)	Provide the analysis of water supply reliability (from Chapter 7 of Guidebook) in the WSCP	Water Shortage Contingency Planning	Appendix M Section 1.0
X	X	Section 8.10	10632(a)(10)	Describe reevaluation and improvement procedures for monitoring and evaluation the water shortage contingency plan to ensure risk tolerance is adequate and appropriate water shortage mitigation strategies are implemented.	Water Shortage Contingency Planning	Appendix M Section 10.0
X	X	Section 8.2	10632(a)(2)(A)	Provide the written decision- making process and other methods that the supplier will use each year to determine its water reliability.	Water Shortage Contingency Planning	Appendix M Section 2.1
X	X	Section 8.2	10632(a)(2)(B)	Provide data and methodology to evaluate the supplier's water reliability for the current year and one dry year pursuant to factors in the code.	Water Shortage Contingency Planning	Appendix M Section 2.3
X	X	Section 8.3	10632(a)(3)(A)	Define six standard water shortage levels of 10, 20, 30, 40, 50 percent shortage and greater than 50 percent shortage. These levels shall be based on supply conditions, including percent reductions in supply, changes in groundwater levels, changes in surface elevation, or other conditions. The shortage levels shall also apply to a catastrophic interruption of supply.	Water Shortage Contingency Planning	Appendix M Section 3.0
X	X	Section 8.3	10632(a)(3)(B)	Suppliers with an existing water shortage contingency plan that uses different water shortage levels must cross reference their categories with the six standard categories.	Water Shortage Contingency Planning	NA
X	X	Section 8.4	10632(a)(4)(A)	Suppliers with water shortage contingency plans that align with the defined shortage levels must specify locally appropriate supply augmentation actions.	Water Shortage Contingency Planning	Appendix M Section 4.2
X	X	Section 8.4	10632(a)(4)(B)	Specify locally appropriate demand reduction actions to adequately respond to shortages.	Water Shortage Contingency Planning	Appendix M Section 4.1
X	X	Section 8.4	10632(a)(4)(C)	Specify locally appropriate operational changes.	Water Shortage Contingency Planning	Appendix M Section 4.3
X	X	Section 8.4	10632(a)(4)(D)	Specify additional mandatory prohibitions against specific water use practices that are in addition to state-mandated prohibitions are appropriate to local conditions.	Water Shortage Contingency Planning	Appendix M Section 4.1
X	X	Section 8.4	10632(a)(4)(E)	Estimate the extent to which the gap between supplies and demand will be reduced by implementation of the action.	Water Shortage Contingency Planning	Appendix M Section 4.1

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 8.4.6	10632.5	The plan shall include a seismic risk assessment and mitigation plan.	Water Shortage Contingency Plan	Section 8.3
X	X	Section 8.5	10632(a)(5)(A)	Suppliers must describe that they will inform customers, the public and others regarding any current or predicted water shortages.	Water Shortage Contingency Planning	Appendix M Section 5.0
X	X	Section 8.5 and 8.6	10632(a)(5)(B)10632(a)(5)(C)	Suppliers must describe that they will inform customers, the public and others regarding any shortage response actions triggered or anticipated to be triggered and other relevant communications.	Water Shortage Contingency Planning	Appendix M Section 5.0
X		Section 8.6	10632(a)(6)	Retail supplier must describe how it will ensure compliance with and enforce provisions of the WSCP.	Water Shortage Contingency Planning	Appendix M Section 6.0
X	X	Section 8.7	10632(a)(7)(A)	Describe the legal authority that empowers the supplier to enforce shortage response actions.	Water Shortage Contingency Planning	Appendix M Section 7.0
X	X	Section 8.7	10632(a)(7)(B)	Provide a statement that the supplier will declare a water shortage emergency Water Code Chapter 3.	Water Shortage Contingency Planning	Appendix M Section 7.0
X	X	Section 8.7	10632(a)(7)(C)	Provide a statement that the supplier will coordinate with any city or county within which it provides water for the possible proclamation of a local emergency.	Water Shortage Contingency Planning	Appendix M Section 7.0
X	X	Section 8.8	10632(a)(8)(A)	Describe the potential revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix M Section 8.0
X	X	Section 8.8	10632(a)(8)(B)	Provide a description of mitigation actions needed to address revenue reductions and expense increases associated with activated shortage response actions.	Water Shortage Contingency Planning	Appendix M Section 8.0
X		Section 8.8	10632(a)(8)(C)	Retail suppliers must describe the cost of compliance with Water Code Chapter 3.3: Excessive Residential Water Use During Drought	Water Shortage Contingency Planning	Appendix M Section 8.0
X		Section 8.9	10632(a)(9)	Retail suppliers must describe the monitoring and reporting requirements and procedures that ensure appropriate data is collected, tracked, and analyzed for purposes of monitoring customer compliance.	Water Shortage Contingency Planning	Appendix M Section 9.0
X		Section 8.11	10632(b)	Analyze and define water features that are artificially supplied with water, including ponds, lakes, waterfalls, and fountains, separately from swimming pools and spas.	Water Shortage Contingency Planning	Appendix M Section 11.0
X	X	Sections 8.12 and 10.4	10635(c)	Provide supporting documentation that Water Shortage Contingency Plan has been, or will be, provided to any city or county within which it provides water, no later than 30 days after the submission of the plan to DWR.	Plan Adoption, Submittal, and Implementation	Section 8.4 Appendix M Section 12.0
X	X	Section 8.14	10632(c)	Make available the Water Shortage Contingency Plan to customers and any city or county where it provides water within 30 after adopted the plan.	Water Shortage Contingency Planning	Section 8.4 Appendix M Section 12.0
	X	Sections 9.1 and9.3	10631(e)(2)	Wholesale suppliers shall describe specific demand management measures listed in code, their distribution system asset management program, and supplier assistance program.	Demand Management Measures	NA

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X		Sections 9.2 and 9.3	10631(e)(1)	Retail suppliers shall provide a description of the nature and extent of each demand management measure implemented over the past five years. The description will address specific measures listed in code.	Demand Management Measures	Sections 9.2
X		Chapter 10	10608.26(a)	Retail suppliers shall conduct a public hearing to discuss adoption, implementation, and economic impact of water use targets (recommended to discuss compliance).	Plan Adoption, Submittal, and Implementation	Section 10.3
X	X	Section 10.2.1	10621(b)	Notify, at least 60 days prior to the public hearing, any city or county within which the supplier provides water that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. Reported in Table 10-1.	Plan Adoption, Submittal, and Implementation	Section 10.2.1
X	X	Section 10.4	10621(f)	Each urban water supplier shall update and submit its 2020 plan to the department by July 1, 2021.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	X	Sections 10.2.2, 10.3, and 10.5	10642	Provide supporting documentation that the urban water supplier made the plan and contingency plan available for public inspection, published notice of the public hearing, and held a public hearing about the plan and contingency plan.	Plan Adoption, Submittal, and Implementation	Sections 10.2.2 and 10.3
X	X	Section 10.2.2	10642	The water supplier is to provide the time and place of the hearing to any city or county within which the supplier provides water.	Plan Adoption, Submittal, and Implementation	Section 10.2.2 and Appendix E
X	X	Section 10.3.2	10642	Provide supporting documentation that the plan and contingency plan has been adopted as prepared or modified.	Plan Adoption, Submittal, and Implementation	Section 10.3.2 and Appendix P
X	X	Section 10.4	10644(a)	Provide supporting documentation that the urban water supplier has submitted this UWMP to the California State Library.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	X	Section 10.4	10644(a)(1)	Provide supporting documentation that the urban water supplier has submitted this UWMP to any city or county within which the supplier provides water no later than 30 days after adoption.	Plan Adoption, Submittal, and Implementation	Section 10.4
X	X	Sections 10.4.1 and 10.4.2	10644(a)(2)	The plan, or amendments to the plan, submitted to the department shall be submitted electronically.	Plan Adoption, Submittal, and Implementation	Sections 10.4
X	X	Section 10.5	10645(a)	Provide supporting documentation that, not later than 30 days after filing a copy of its plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5
X	X	Section 10.5	10645(b)	Provide supporting documentation that, not later than 30 days after filing a copy of its water shortage contingency plan with the department, the supplier has or will make the plan available for public review during normal business hours.	Plan Adoption, Submittal, and Implementation	Section 10.5

Retail	Wholesale	2020 Guidebook Location	Water Code Section	Summary as Applies to UWMP	Subject	2020 UWMP Location (For Agency Review Use)
X	X	Section 10.6	10621(c)	If supplier is regulated by the Public Utilities Commission, include its plan and contingency plan as part of its general rate case filings.	Plan Adoption, Submittal, and Implementation	NA
X	X	Section 10.7.2	10644(b)	If revised, submit a copy of the water shortage contingency plan to DWR within 30 days of adoption.	Plan Adoption, Submittal, and Implementation	Section 10.6

Appendix E

Public Notices

DRAFT

Dublin San Ramon Services District
Water, wastewater, recycled water

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Notice of Preparation

2020 Urban Water Management Plan, Water Shortage Contingency Plan and Amendment to 2015 Urban Water Management Plan Compliance with Delta Plan Policy WR P1

Dublin San Ramon Services District (DSRSD) is preparing its 2020 Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan (WSCP). The UWMP is updated every five years and required to be submitted to the California Department of Water Resources by July 1, 2021.

UWMP is a planning document which reports and evaluates water deliveries and uses, water supply sources and conservation efforts. The WSCP provides a plan for response to various water supply shortage conditions. As an urban water supplier, DSRSD coordinates with water management agencies, relevant public agencies and other water suppliers on the preparation of the UWMP and WSCP updates. DSRSD encourages public involvement in the process.

Further, DSRSD will be adding a new appendix to the previously adopted 2015 UWMP to include elements described in the Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (Cal. Code Regs. tit. 23, § 5003).

To provide opportunities for public comment, DSRSD expects to release a draft 2020 UWMP in early May 2021 and to hold a public hearing at the first Board Meeting in June 2021. Adoption of the plan is expected in the second Board Meeting in June 2021.

Additional notices regarding the status of the 2020 UWMP will be distributed and posted on DSRSD's web site at www.dsrsd.com/news.

Direct questions or comments regarding preparation of the DSRSD 2020 UWMP to uwmp2020@dsrsd.com.

Dublin San Ramon Services District

Public Notice Distribution List for Urban Water Management Plan and Water Shortage Contingency Plan

Name	Title	Company	Address	City	State	PostalCode	Email	Emailed?	Mailed?
Mr. Albert Lopez	Planning Director	Alameda County	224 W. Winton, Room 111	Hayward	CA	94544	Albert.Lopez@acgov.org	Y	
Mr. Willie A. Hopkins, Jr.	General Services Agency Director	Alameda County	1401 Lakeside Dr. 10th Floor	Oakland	CA	94612	hopkins.willie@acgov.org	Y	Y
Mr. Zach Otting		BIA Bay Area	1300 Treat Blvd., Suite. 140	Walnut Creek	CA	94596	zotting@biabayarea.org	Y	
Mr. Bob Glover		BIA Bay Area	1300 Treat Blvd., Suite. 140	Walnut Creek	CA	94596	bglover@biabayarea.org	Y	
Mr. Kevin Pohlson		Brookfield Homes	500 LaGonda Way, Suite 100	Danville	CA	94526	Kevin.Pohlson@brookfieldhomes.com	Y	
Mr. Gonzalo Rodriguez		Brookfield Homes	500 LaGonda Way, Suite 100	Danville	CA	94526	gonzalo.rodriguez@brookfieldrp.com	Y	
Ms. Bridgit Koller	Vice President, Forward Planning	CalAtlantic/Lennar	2603 Camino Ramon, Suite 525	San Ramon	CA	94583	Bridgit.Koller@lennar.com	Y	
Coordinator, Urban Water Management Plans		California State Library, Government Publications Section	P.O. Box 942837	Sacramento	CA	94237-0001			Y
Mr. John Freeman, Jr.	District Manager	California Water Service Company, Livermore District	195 South N St.	Livermore	CA	94550	jfreeman@calwater.com	Y	
Lt. Colonel Serena D. Johnson	Garrison Commander	Camp Parks Reserve Forces Training Area	790 5th Street	Dublin	CA	94568	usarmy.parks.imcom-central.list.cpar-pao@mail.mil	Y	
Ms. Debby Milichichi		Charter Properties	4080 Grafton Street, Suite 200	Dublin	CA	94568	Debby@charter-properties.com	Y	
Mr. Doug Mann		Citizens for Balanced Growth	661 South N Street	Livermore	CA	94550	doug@citizensforbalancedgrowth.org	Y	
Mr. Jeff Baker	Community Development Director	City of Dublin	100 Civic Plaza	Dublin	CA	94568	jeff.baker@dublin.ca.gov	Y	
Ms. Helen Ling	Water Resources Division Manager	City of Livermore	101 W. Jack London Blvd.	Livermore	CA	94551	hfling@cityoflivermore.net	Y	
Mr. Scott Lanphier	Director of Public Works	City of Livermore	3500 Robertson Park Road	Livermore	CA	94550	publicworks@cityoflivermore.net	Y	
Ms. Kathleen Yurchak	Director of Operations Services	City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	kyurchak@cityofpleasantonca.gov	Y	
Ms. Rita Di Candia	Water Conservation Manager	City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	rdicandia@cityofpleasantonca.gov	Y	
Mr. Lauren Barr	Planning Services Manager	City of San Ramon	2401 Crow Canyon Road	San Ramon	CA	94583	lbarr@sanramon.ca.gov	Y	
Mr. John Kopchik	Department of Conservation and Development Director	Contra Costa County	30 Muir Road	Martinez	CA	94553	jkopchik@cd.co.contra-costa.ca.us	Y	Y
Mr. Dean Mills		D. R. Horton	6630 Owens Drive	Pleasanton	CA	94588	DKMills@drhorton.com	Y	
Ms. Gwen Huff	Coordinator, Urban Water Management Plans	DWR, Statewide Integrated Water Management	WUE Branch, P.O. Box 942836	Sacramento	CA	94236-0001	gwen.huff@WATER.CA.GOV	Y	
Mr. John Rossi	Authority Manager	DERWA	7051 Dublin Blvd.	Dublin	CA	94568	john@ralphandersen.com	Y	
Ms. Shammi Gill	Library Manager	Dublin Public Library	200 Civic Plaza	Dublin	CA	94568			Y
Ms. Jacquline Zipkin	General Manager	East Bay Dischargers Authority	2651 Grant Avenue	San Lorenzo	CA	94580	jzipkin@ebda.org	Y	
Mr. Clifford Chan	General Manager	EBMUD	375 11th Street	Oakland	CA	94607	cchan@ebmud.com	Y	
Mr. Timothy McGowan	Senior Civil Engineer of Major Facilities Planning Section	EBMUD	P.O. Box 24055	Oakland	CA	94623-1055	timothy.mcgowan@ebmud.com	Y	
Mr. James Buchanan	General Foreman	FCI Dublin	5701 8th St.	Dublin	CA	94568	j1buchanan@bop.gov	Y	
Mr. Chuck Weir		LAVWMA	7051 Dublin Blvd.	Dublin	CA	94568	weir@lavwma.com	Y	
Ms. Dena Hollowood	Library Manager	San Ramon Public Library (Dougherty Station)	17017 Bollinger Canyon Road	San Ramon	CA	94582	dena.hollowood@library.cccounty.us	Y	
Ms. Dena Hollowood	Library Manager	San Ramon Public Library (Marketplace)	100 Montgomery Street	San Ramon	CA	94583	dena.hollowood@library.cccounty.us	Y	
Mr. Dave Suico		Toll Brothers, Inc.	8259 S. Monarch Blvd.	San Ramon	CA	94583	dsuico@tollbrothersinc.com	Y	
Mr. Steve Savage		Toll Brothers, Inc.	8259 S. Monarch Blvd.	San Ramon	CA	94583	ssavage@tollbrothersinc.com	Y	
Mr. Dave Geist		Windemere BLC	6121 Bollinger Canyon Road, Suite 500	San Ramon	CA	94583	David Geist <Dave.Geist@Lennar.com>	Y	
Ms. Jill Duerig	General Manager	Zone 7 Water Agency	100 North Canyons Pkwy.	Livermore	CA	94551	jduerig@zone7water.com	Y	
Mr. Doug Chen		Discovery Builders	4061 Port Chicago Highway, #H	Concord	CA	94520	dchen@discoverybuilders.com	Y	
Ms. Elke Rank	Water Resources Planner	Zone 7 Water Agency	100 North Canyons Pkwy.	Livermore	CA	94551	erank@zone7water.com	Y	
Ms. Amparo Flores	Manager of Integrated Planning	Zone 7 Water Agency	100 North Canyons Pkwy.	Livermore	CA	94551	aflores@zone7water.com	Y	
Mr. David Bruzzone	Utilities Planning Manager	City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	dbruzzone@cityofpleasantonca.gov	Y	
Mr. Yanming Zhang	Water Resources Technical Programs Manager	City of Livermore	101 W. Jack London Blvd.	Livermore	CA	94551	yzhang@cityoflivermore.net	Y	
Mr. Marc Roberts	City Manager	City of Livermore	101 W. Jack London Blvd.	Livermore	CA	94551	citymanager@cityoflivermore.net	Y	
Mr. Max Storms	Water Resources Engineer	California Water Service Company, Livermore District	195 South N St.	Livermore	CA	94550	mstorms@calwater.com	Y	
Mr. Daniel Repp	Managing Director of Utilities and Environmental Services	City of Pleasanton	P.O. Box 520	Pleasanton	CA	94566	drepp@cityofpleasantonca.gov	Y	
Mr. Frank Vallejo	District Manager	California Water Service Company, Livermore District	195 South N St.	Livermore	CA	94550	vallejo@calwater.com	Y	
Joe Gorton	City Manager	City of San Ramon	7000 Bollinger Canyon Road	San Ramon	CA	94583	jgorton@sanramon.ca.gov	Y	
Mr. Andrew Russell	Director of Public Works	City of Dublin	100 Civic Plaza	Dublin	CA	94568	Andrew.Russell@dublin.ca.gov	Y	
Ms. Lori Sucgang	Assistant Public Works Director/City Engineer	City of Dublin	100 Civic Plaza	Dublin	CA	94568	Laurie.Sucgang@dublin.ca.gov	Y	

DUBLIN SAN RAMON SERVICES DISTRICT
Board of Directors
NOTICE OF PUBLIC HEARING

DATE: Tuesday, June 1, 2021
TIME: 6 p.m.
PLACE: Dublin San Ramon Services District
Teleconference Meeting

NOTICE OF AVAILABILITY, PUBLIC HEARING, AND ADOPTION OF THE DUBLIN SAN RAMON SERVICES DISTRICT 2020 URBAN WATER MANAGEMENT PLAN, WATER SHORTAGE CONTINGENCY PLAN AND UPDATE TO THE 2015 URBAN WATER MANAGEMENT PLAN

In compliance with the Urban Water Management Plan Act, Dublin San Ramon Services District has prepared its Draft 2020 Urban Water Management Plan (UWMP) and Draft Water Shortage Contingency Plan (WSCP). The Draft UWMP is a planning document which reports and evaluates water deliveries and uses, water supply sources and conservation efforts. The Draft WSCP provides a plan for response to various water supply shortage conditions. Furthermore, the District is adding a new appendix to the Draft 2020 UWMP and to the previously adopted 2015 UWMP to incorporate demonstration of consistency with Delta Plan Policy WR P1, Reduce Reliance on the Delta Through Improved Regional Water Self-Reliance (Cal. Code Regs. tit. 23, § 5003). The District encourages public involvement in the process.

NOTICE IS HEREBY GIVEN that the Board of Directors of Dublin San Ramon Services District, at its June 1, 2021 regular meeting, will hold a virtual Public Hearing via teleconference to provide an opportunity for public comment on the Draft 2020 UWMP, Draft WSCP, and Draft Addendum to the 2015 UWMP. The public may observe and comment by electronic means regarding any items in the Draft 2020 UWMP, Draft WSCP, and Draft Addendum to the 2015 UWMP. Draft documents are on file with the District Secretary starting May 24, 2021 and may be reviewed by calling the District Office at (925) 828-0515 during regular business hours between 8 a.m. and 5 p.m., Monday through Friday, and are also available online on the Plans and Studies page of the District website at www.dsrsd.com. Draft documents are also on file at Dublin City Hall (100 Civic Plaza, Dublin, CA) and San Ramon City Hall (7000 Bollinger Canyon Road, San Ramon, CA). The public review comment period will end on June 15, 2021. DSRSD encourages written comments to be submitted by Friday, June 11, 2021, to allow the Board of Directors the opportunity to review before adoption.

NOTICE IS FURTHER HEREBY GIVEN that the Board of Directors of Dublin San Ramon Services District, at its June 15, 2021 regular meeting via teleconference, will consider adoption, by Resolution, of the Proposed 2020 UWMP and Proposed WSCP and Proposed Addendum to the 2015 UWMP. The public may observe and comment by electronic means regarding any item in the Proposed 2020 UWMP, Proposed WSCP, and Proposed Addendum to the 2015 UWMP. Proposed documents are on file with the District Secretary starting June 11, 2021 and may be reviewed by calling the District Office at (925) 828-0515 during regular business hours between 8 a.m. and 5 p.m., Monday through Friday, and are also available online on the Plans and Studies page of the District website at www.dsrsd.com. Proposed documents are also on file at Dublin City Hall (100 Civic Plaza, Dublin, CA) and San Ramon City Hall (7000 Bollinger Canyon Road, San Ramon, CA).

By: Nicole Genzale, CMC
District Secretary

PT/VT #6576286; May 24, 2021

Appendix F

Distribution System Water Loss Audit Reports

DRAFT

AWWA Free Water Audit Software v5.0

American Water Works Association Copyright © 2014, All Rights Reserved.

This spreadsheet-based water audit tool is designed to help quantify and track water losses associated with water distribution systems and identify areas for improved efficiency and cost recovery. It provides a "top-down" summary water audit format, and is not meant to take the place of a full-scale, comprehensive water audit format.

Auditors are strongly encouraged to refer to the most current edition of AWWA M36 Manual for Water Audits for detailed guidance on the water auditing process and targetting loss reduction levels

The spreadsheet contains several separate worksheets. Sheets can be accessed using the tabs towards the bottom of the screen, or by clicking the buttons below.

Please begin by providing the following information

Name of Contact Person:	Stefanie Olson	
Email Address:	olsons@dsrsd.com	
Telephone (incl Ext.):	925 875-2245	
Name of City / Utility:	Dublin San Ramon Services District	
City/Town/Municipality:	Dublin	
State / Province:	California (CA)	
Country:	USA	
Year:	2020	Financial Year
Start Date:	07/2019	Enter MM/YYYY numeric format
End Date:	06/2020	Enter MM/YYYY numeric format
Audit Preparation Date:		
Volume Reporting Units:	Million gallons (US)	
PWSID / Other ID:	0110009	

The following guidance will help you complete the Audit

All audit data are entered on the ***Reporting Worksheet***

- Value can be entered by user
- Value calculated based on input data
- These cells contain recommended default values

Use of Option (Radio) Buttons: Pcnt: 0.25% Value:

Select the default percentage by choosing the option button on the left

To enter a value, choose this button and enter a value in the cell to the right

The following worksheets are available by clicking the buttons below or selecting the tabs along the bottom of the page

Instructions
The current sheet. Enter contact information and basic audit details (year, units etc)

Reporting Worksheet
Enter the required data on this worksheet to calculate the water balance and data grading

Comments
Enter comments to explain how values were calculated or to document data sources

Performance Indicators
Review the performance indicators to evaluate the results of the audit

Water Balance
The values entered in the Reporting Worksheet are used to populate the Water Balance

Dashboard
A graphical summary of the water balance and Non-Revenue Water components

Grading Matrix
Presents the possible grading options for each input component of the audit

Service Connection Diagram
Diagrams depicting possible customer service connection line configurations

Definitions
Use this sheet to understand the terms used in the audit process

Loss Control Planning
Use this sheet to interpret the results of the audit validity score and performance indicators

Example Audits
Reporting Worksheet and Performance Indicators examples are shown for two validated audits

Acknowledgements
Acknowledgements for the AWWA Free Water Audit Software v5.0

If you have questions or comments regarding the software please contact us via email at: wlc@awwa.org

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0

American Water Works Association.
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? Click to access definition
+ Click to add a comment

Water Audit Report for: Dublin San Ramon Services District (0110009)
Reporting Year: 2020 7/2019 - 6/2020

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

<---------- Enter grading in column 'E' and 'J' ---------->

				Pcnt:	Value:	
Volume from own sources:	n/a	0.000	MG/Yr			MG/Yr
Water imported:	7	3,480.549	MG/Yr	4	2.250	MG/Yr
Water exported:	n/a	0.000	MG/Yr			MG/Yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: 3,478.299 MG/Yr

AUTHORIZED CONSUMPTION

Click here: ? for help using option buttons below

			Pcnt:	Value:	
Billed metered:	7	3,239.150	MG/Yr			
Billed unmetered:	6	28.377	MG/Yr			
Unbilled metered:	n/a	0.000	MG/Yr			
Unbilled unmetered:	5	43.479	MG/Yr	1.25%		MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: 3,311.006 MG/Yr

Use buttons to select percentage of water supplied **OR** value

WATER LOSSES (Water Supplied - Authorized Consumption): 167.293 MG/Yr

Apparent Losses

			Pcnt:	Value:	
Unauthorized consumption:		8.696	MG/Yr	0.25%		MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	5	32.719	MG/Yr	1.00%	MG/Yr
Systematic data handling errors:	6	8.098	MG/Yr	0.25%	MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: 49.512 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 117.781 MG/Yr

WATER LOSSES: 167.293 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 210.772 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	8	334.5	miles
Number of active AND inactive service connections:	8	25,563	
Service connection density:		76	conn./mile main

Are customer meters typically located at the curbstop or property line? Yes

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure:	8	79.0	psi

COST DATA

Total annual cost of operating water system:	10	$39,693,531	$/Year	
Customer retail unit cost (applied to Apparent Losses):	9	$4.55	$/100 cubic feet (ccf)	
Variable production cost (applied to Real Losses):	7	$4,691.52	$/Million gallons	☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 70 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Water imported
2: Customer metering inaccuracies
3: Billed metered

Appendix G

SB X7-7 Compliance Form

DRAFT

SB X7-7 Table 0: Units of Measure Used in 2020 UWMP* *(select one from the drop down list)*
Acre Feet
**The unit of measure must be consistent throughout the UWMP, as reported in Submittal Table 2-3.*
NOTES:

SB X7-7 Table 2: Method for 2020 Population Estimate	
Method Used to Determine 2020 Population (may check more than one)	
☑	**1. Department of Finance** (DOF) or **American Community Survey** (ACS)
☐	**2. Persons-per-Connection Method**
☑	**3. DWR Population Tool**
☐	**4. Other** DWR recommends pre-review
NOTES:	

SB X7-7 Table 3: 2020 Service Area Population	
2020 Compliance Year Population	
2020	92,409
NOTES: 1. City of Dublin Population 65,161. State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties and the State with Annual Percent Change — January 1, 2020 and 2021* . Sacramento, California, May 2021. 2. Dougherty Valley: 7,169 housing units * 3.80 person per housing unit = 27,248 people 3. Total population: 65,161 + 27,248 = 92,409 people	

SB X7-7 Table 4: 2020 Gross Water Use							
		2020 Deductions					
Compliance Year 2020	**2020 Volume Into Distribution System** *This column will remain blank until SB X7-7 Table 4-A is completed.*	**Exported Water ***	**Change in Dist. System Storage*** (+/-)	**Indirect Recycled Water** *This column will remain blank until SB X7-7 Table 4-B is completed.*	**Water Delivered for Agricultural Use***	**Process Water** *This column will remain blank until SB X7-7 Table 4-D is completed.*	**2020 Gross Water Use**
	10,330			-		-	**10,330**
NOTES: Units in AF.							

SB X7-7 Table 4-A: 2020 Volume Entering the Distribution System(s), Meter Error Adjustment Complete one table for each source.			
Name of Source	Purchased Zone 7 supplies		
This water source is *(check one)* **:**			
☐	The supplier's own water source		
☑	A purchased or imported source		
Compliance Year 2020	Volume Entering Distribution System [1]	Meter Error Adjustment [2] *Optional* (+/-)	Corrected Volume Entering Distribution System
	10,330	-	10,330
[1] ***Units of measure (AF, MG , or CCF)*** *must remain consistent throughout the UWMP, as reported in SB X7-7 Table 0 and Submittal Table 2-3.* [2] ***Meter Error Adjustment*** *- See guidance in Methodology 1, Step 3 of Methodologies Document*			
NOTES: Units in AF.			

SB X7-7 Table 5: 2020 Gallons Per Capita Per Day (GPCD)		
2020 Gross Water *Fm SB X7-7 Table 4*	**2020 Population** *Fm SB X7-7 Table 3*	**2020 GPCD**
10,330	92,409	**100**
NOTES:		

SB X7-7 Table 9: 2020 Compliance							
Actual 2020 GPCD[1]	Optional Adjustments to 2020 GPCD Enter "0" if Adjustment Not Used			TOTAL Adjustments[1]	Adjusted 2020 GPCD [1] *(Adjusted if applicable)*	2020 Confirmed Target GPCD [1, 2]	**Did Supplier Achieve Targeted Reduction for 2020?**
	Extraordinary Events[1]	Weather Normalization[1]	Economic Adjustment[1]				
100	-	-	-	-	100	169	**YES**
[1] *All values are reported in GPCD* [2] ***2020 Confirmed Target GPCD*** *is taken from the Supplier's SB X7-7 Verification Form Table SB X7-7, 7-F.*							
NOTES:							

WUEdata - Dublin San Ramon Services District

Sign Out

Please print this page to a PDF and include as part of your UWMP submittal.

Confirmation Information

Generated By	Water Supplier Name	Confirmation #	Generated On
Elizabeth Drayer	Dublin San Ramon Services District	2499738395	3/10/2021 9:50:31 AM

Boundary Information

Census Year	Boundary Filename	Internal Boundary ID
1990	No Boundary Selected	N/A
2000	Dougherty.kml	576
2010	Dougherty.kml	576
1990	No Boundary Selected	N/A
2000	Dougherty.kml	576
2010	Dougherty.kml	576
1990	No Boundary Selected	N/A
2000	Dougherty.kml	576
2010	Dougherty.kml	576
1990	No Boundary Selected	N/A
2000	Dougherty.kml	576
2010	Dougherty.kml	576
1990	No Boundary Selected	N/A
2000	Dougherty.kml	576
2010	Dougherty.kml	576
1990	No Boundary Selected	N/A
2000	Dougherty.kml	576
2010	Dougherty.kml	576

Baseline Period Ranges

10 to 15-year baseline period

Number of years in baseline period:	10
Year beginning baseline period range:	1996
Year ending baseline period range[1]:	2005

5-year baseline period

Year beginning baseline period range:	2003
Year ending baseline period range[2]:	2007

[1] The ending year must be between December 31, 2004 and December 31, 2010.

[2] The ending year must be between December 31, 2007 and December 31, 2010.

Persons per Connection

Year	Census Block Level Total Population	Number of Connections *	Persons per Connection
1990	**0**		**3.80**
1991	-	-	3.80
1992	-	-	3.80
1993	-	-	3.80
1994	-	-	3.80
1995	-	-	3.80
1996	-	-	3.80
1997	-	-	3.80
1998	-	-	3.80
1999	-	-	3.80
2000	**119**		**3.80**
2001	-	-	3.80
2002	-	-	3.80
2003	-	-	3.80
2004	-	-	3.80
2005	-	-	3.80
2006	-	-	3.80
2007	-	-	3.80
2008	-	-	3.80
2009	-	-	3.80
2010	**22,885**	**6021**	**3.80**
2011	-	-	3.80
2012	-	-	3.80

2013	-	-	3.80
2014	-	-	3.80
2015	-	-	3.80
2020	**-**	**-**	**3.80 ****

Population Using Persons-Per-Connection

Year		Number of Connections *	Persons per Connection	Total Population
10 to 15 Year Baseline Population Calculations				
Year 1	1996		3.80	
Year 2	1997		3.80	
Year 3	1998		3.80	
Year 4	1999		3.80	
Year 5	2000		3.80	
Year 6	2001		3.80	
Year 7	2002	22	3.80	84
Year 8	2003	533	3.80	2,026
Year 9	2004	1734	3.80	6,591
Year 10	2005	2487	3.80	9,453
5 Year Baseline Population Calculations				
Year 1	2003	533	3.80	2,026
Year 2	2004	1734	3.80	6,591
Year 3	2005	2487	3.80	9,453
Year 4	2006	3364	3.80	12,786
Year 5	2007	3914	3.80	14,877
2020 Compliance Year Population Calculations				
2020		7169	3.80 **	27,248

Hide Print Confirmation

QUESTIONS / ISSUES? CONTACT THE WUEDATA HELP DESK
MWELO QUESTIONS / ISSUES? CONTACT THE MWELO HELP DESK

Appendix H

Water Supply Contract and Amendment

DRAFT

A94-34-DSR

A94-18
P.1-48

CONTRACT BETWEEN

ZONE 7 WATER AGENCY

AND

DUBLIN SAN RAMON SERVICES DISTRICT

FOR A MUNICIPAL & INDUSTRIAL WATER SUPPLY

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MUNICIPAL & INDUSTRIAL WATER SUPPLY CONTRACT

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CONTRACT BETWEEN ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT AND DUBLIN SAN RAMON SERVICES DISTRICT FOR A MUNICIPAL & INDUSTRIAL WATER SUPPLY

THIS CONTRACT, made and entered into this 23rd day of August, 1994, by and between ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, commonly known as the Zone 7 Water Agency, hereinafter referred to as "Zone 7" and the DUBLIN SAN RAMON SERVICES DISTRICT, hereinafter referred to as "Contractor."

W I T N E S S E T H:

For and in consideration of the terms and conditions herein contained, Zone 7 agrees to furnish and provide a water supply to Contractor, and Contractor agrees to purchase and accept such water supply consistent with the provisions herein.

A. INTRODUCTORY PROVISIONS

1. Definitions

When used in this contract, the following terms shall have the meanings hereinafter set forth:

a. "Board" shall mean the Board of Directors of Zone 7 of Alameda County Flood Control and Water Conservation District.

b. "Each Contractor" or "Other Contractor" shall mean any entity, public or private, contracting with Zone 7 for a Municipal & Industrial Water Supply.

c. "Extract," "Extraction" or "Extracting" shall mean obtaining groundwater, by pumping or any other means, from wells, shafts, tunnels, excavations or other sources of such groundwater, for domestic, municipal, irrigation, industrial or other use.

d. "Groundwater Pumping Quota" shall mean that quantity of water that the Contractor is entitled to extract from the Main Basin without paying a recharge fee to Zone 7.

e. "In-Lieu Treated Water" shall mean that quantity of treated water delivered from Zone 7 in exchange for an equal reduction in Contractor's extraction of its Groundwater Pumping Quota.

f. "Main Basin" shall mean that part of the Livermore-Amador Valley groundwater basin located essentially within the valley floor sections of the Castle, Bernal, Amador and Mocho (II) Subbasins as defined in Bulletin No. 118-2, Evaluation of Groundwater Resources: Livermore and Sunol Valleys, State of California, Department of Water Resources and shown in Exhibit A attached.

g. "Municipal & Industrial Water Supply" shall mean a supply of water from Zone 7 to Each Contractor regardless of the source of said water or Contractor's use of said water.

h. "Other Sources" shall mean a water source from any person, corporation or entity, whether public or private, other than from Zone 7.

i. "Recharge" or "Recharged" shall mean managed replenishment of the Main Basin including but not limited to spreading on natural or improved channels or basins or well injection with imported, locally developed, or recycled water, or through In-Lieu Treated Water. Applied irrigation water percolation shall not be considered recharge.

j. "Recycled Water" shall mean wastewater treated for reuse as permitted by the California Department of Health Services, the Regional Water Quality Control Board and other agencies that from time to time may have jurisdiction.

k. "Safe Yield" shall mean the quantity of water that can be successfully extracted from the Main Basin on an annual basis over an extended number of years without reducing groundwater storage. Such safe yield is the net quantity of groundwater added to the Main Basin by stream percolation (including percolation from stream releases required for prior water rights), rainfall percolation, applied irrigation water percolation, and net subsurface inflow.

l. "Treated Water" shall mean water that is processed as necessary to comply with drinking water requirements of the California Department of Health Services, the United States Environmental Protection Agency and other agencies that from time to time may have jurisdiction.

m. "Turnout Facilities" shall mean the facilities required to provide treated water deliveries from Zone 7's water system to the Contractor's water system. See Exhibit B for a schematic of a typical turnout facility.

n. "Zone 7 Boundary" shall mean the boundary of Zone 7 as shown on Exhibit C and as may be revised from time to time.

2. Term of Contract

This contract shall become fully effective upon execution of the duly authorized signatures of the parties hereto and shall remain in effect for a period of thirty (30) years from

the date hereof, unless terminated or extended prior to expiration of term by mutual agreement at an earlier date.

B. WATER SERVICE PROVISIONS

3. Quantity of Water

Contractor shall purchase from Zone 7 all water required by Contractor for use within Contractor's service area as defined in Section 6 except that Contractor may extract groundwater as provided in the Groundwater Extraction Provisions herein or obtain water from Other Sources under the conditions in Section 5. No quantity of water purchased from Zone 7 or extracted as part of Contractor's Groundwater Pumping Quota shall be delivered by or provided from Contractor to any area other than Contractor's service area, except for short-term emergency and/or public health purposes.

4. Quality of Water

All treated water to be delivered by Zone 7 to Contractor shall be of a quality that complies with the Requirements for Drinking Water of the California Department of Health Services and the United States Environmental Protection Agency or their successor regulatory agencies. Zone 7 will endeavor to provide treated water that is aesthetically acceptable to the Contractor's customers. Zone 7 will blend its different sources of water within its operational capabilities to provide water of approximately equal quality to Each Contractor.

5. Water from Other Sources

In order to protect Zone 7's financial interest, Contractor shall not contract for, purchase or receive, with or without compensation, either directly or indirectly, any water for use in its service area from any source other than by

extraction of its Groundwater Pumping Quota or from purchase from Zone 7, except for any one or more of the following:

(a) The water received is for fire flow or fire storage requirements or other emergency purposes;

(b) The water delivered through Zone 7's turnout facility does not comply with drinking water requirements of California Department of Health Services, United States Environmental Protection Agency, or successor regulatory agencies. The quantity of water obtained shall be limited to that necessary to meet Contractor's treated water needs as a result of Zone 7's non-compliance with said drinking water requirements;

(c) Zone 7 is unable to deliver the quantity of treated water necessary to satisfy the requirements of Contractor. Zone 7 shall specify the quantity of treated water that it cannot deliver and the time period for which it cannot satisfy the Contractor's requirements. Contractor is otherwise obligated to secure all water from Zone 7 to the extent Zone 7 can provide it;

(d) Zone 7 is able to meet Contractor's water delivery request, and Contractor has paid Zone 7 for obligated fixed costs of Zone 7 associated with the quantity of water the Contractor will obtain from Other Sources. These obligated fixed costs shall include but are not limited to water facility improvements, water contract obligations, and debt service thereto incurred by Zone 7 in supplying water that would have gone to the Contractor, and for which said costs would have been recovered through the sale of said water to Contractor. The Contractor shall obtain the prior written approval from the Board which approval shall not be unreasonably withheld;

(e) The source of water is groundwater extracted within Zone 7's boundary but outside the Main Basin provided said extraction does not cause an adverse impact on the Main Basin; or

(f) The source of water is recycled water from Contractor's or Other Contractors' treated wastewater.

6. Contractor's Service Area

As used herein, the Contractor's service area shall include all areas presently served water by Contractor. Contractor's service area shall also include any future areas to be served by the Contractor within the boundaries of Zone 7 subject to Subsection 32c. Contractor may include any future areas outside the boundaries of Zone 7 upon a finding of the Board that providing water to said area is in the best interests of Zone 7 and after written modification of this contract providing for said service area. The Contractor's present service area is designated on the map attached hereto as Exhibit D. Contractor shall promptly notify Zone 7 of changes in its service area, as may occur from time to time, by furnishing a map to Zone 7 showing any change in said service area so that Zone 7 can maintain a map indicating the most recent Zone 7 water service area. Said changes in service area shall be in accordance with the requirements of the Local Agency Formation Commission, Public Utility Commission or other agency having authority to set service areas.

Any future areas outside Zone 7 boundaries to be served by Contractor which receive water from sources other than Zone 7 or the Main Basin shall not be considered part of the Contractor's service area under the terms of this contract.

7. Turnout Facilities

a. Turnout facilities shall be constructed at the general location requested by Contractor. The exact location shall be determined by Zone 7 after consultation with Contractor. Turnout facilities shall be designed and/or constructed either by Zone 7 or by Contractor (upon the written approval of Zone 7) based on the ranges of flow set forth in Section 9. Turnout facilities shall include the necessary valves, piping, meter and recording equipment, vaults, telemetry equipment and any other appurtenances necessary to meet the standards and operational needs of Zone 7. Zone 7 shall submit its design of new turnout facilities to contractor for review and written approval.

b. Contractor shall reimburse Zone 7 for all costs incurred by Zone 7 related to the new turnout facilities including but not limited to design, engineering, design review, construction, right-of-way and acquisition thereof, inspection, and contract administration. Contractor shall also pay all costs for the installation of all associated landscaping and recognizes that Zone 7 shall not be responsible for maintenance of landscaping under the terms and conditions of this contract. Contractor further agrees to grant or cause to be granted to Zone 7 the necessary permanent right-of-way and right of ingress thereto and egress therefrom, as determined by Zone 7, for the purposes of constructing, operating and maintaining said turnout facilities.

c. Zone 7 shall install the nozzle outlet portion of all turnout facilities requested by Contractor prior to the construction of the transmission pipeline. For turnout facilities requested by Contractor subsequent to the construction of Zone 7's transmission pipeline, Contractor shall pay for the nozzle outlet portion of the

turnout facility, and all costs set forth in subsection b. above. Ownership of turnout facility, including the shut off valve downstream of the turnout facility, shall be with Zone 7, and Contractor shall have no obligation to operate, maintain, repair, replace or relocate the same.

8. Measurement of Treated Water Deliveries

At any time or times, Contractor may, upon request, inspect said turnout facilities (in the presence of a Zone 7 representative), and the measurements and records taken therefrom. Zone 7 shall test and calibrate the instrumentation at each turnout meter at least annually and furnish such results to the Contractor. When requested by the Contractor, Zone 7 shall test and calibrate any meter through which treated water is served to Contractor. The Contractor shall have the right to be represented by a qualified observer at and during any instrumentation and/or meter tests and/or calibration. Whenever testing and/or calibration of the instrumentation and/or the meter is requested by Contractor, and in the event that any such test shall disclose an error exceeding two percent (2.0%), an adjustment shall be made in charges against the Contractor covering the known or estimated period of duration of such error, but in no event exceeding six (6) months, and the expenses of such test shall be borne by Zone 7; otherwise, such expenses shall be borne by Contractor requesting such tests.

9. Ranges of Flow

a. It is recognized that the range of flow rates of water through a turnout facility may vary considerably over the contract term. A normal range of flow rates for a turnout facility is hereby established as from ten percent (10%) to one hundred percent (100%) of a maximum design flow rate. Contractor shall provide Zone 7 with

the following information for each turnout facility prior to the design of such facilities:

(1) Anticipated ultimate (future) maximum flow rate,

(2) Anticipated present design range of flow rates. (The maximum design flow rate shall not exceed ten (10) times the minimum design flow rate for this range in normal installations.)

(3) Anticipated pressure ranges for (1) and (2) above on the Contractor's side of the turnout facility.

b. Zone 7 shall design the metering and/or recording installation for the range set forth in accordance with Subsections (2) and (3) above with provisions for future modifications in accordance with a range based on Subsections (1) and (3) above.

c. Contractor shall regulate the flow demands through the turnout facility such that the range of flow rates set forth in accordance with Subsection b above will be maintained insofar as such regulation is reasonable and practicable. Zone 7 shall make modification of the metering and/or recording equipment upon request of Contractor or at such time that the actual flow rate exceeds the maximum design flow rate or is less than the minimum design flow rate; provided, however, that flow rates resulting from emergencies shall not apply to such requirement for modification. Said modification will be at the expense of the Contractor and payment thereof shall be in accordance with Section 27.

10. Delivery Schedule of Municipal & Industrial Water

Each year, the Contractor shall submit in writing to Zone 7 a preliminary water delivery schedule on a form provided by Zone 7 indicating the anticipated quantity of treated water and groundwater in excess of its Groundwater Pumping Quota required by Contractor during each month of the succeeding

five (5) calendar years and the anticipated peak day treated water demand from Zone 7 for each such year. Zone 7 shall review such schedule, and after consultation with Contractor, shall approve such schedule in a timely manner or make such revisions in the same as may, in the judgment of Zone 7, be necessary to make such deliveries. To the extent water is available to Zone 7, Zone 7 will approve in writing, a delivery schedule each year for delivery to Contractor during the next succeeding calendar year of an amount of water not less than the amount of water set forth in the approved schedule for the then-current calendar year. The amount of water set forth in the approved delivery schedule for the next succeeding calendar year shall be the basis for which Zone 7 shall contract with the State of California or other entity for delivery to Zone 7. Zone 7 shall identify the reason for any revisions or disapproval of Contractor's delivery request. Zone 7 shall only revise or disapprove Contractor's delivery request for the reasons set forth in Sections 12, 13, 14 or 15.

11. Reporting Use of Water

The Contractor shall report to Zone 7 on or before the tenth day of each month the total volume, in acre-feet, of groundwater extracted from the Main Basin and any water obtained from Other Sources (including any water recharged to the Main Basin) for the preceding month. The report shall become the basis for which water charge determinations and hydrologic inventory calculations of the Main Basin are made by Zone 7. Said report shall be made on a form or forms provided by or acceptable to Zone 7. The measurement and recordation of such flows shall be subject to the same provisions for inspection and testing of meters and instrumentation by Zone 7 as is provided to Contractor in Section 8.

12. Peak Demands

The Zone 7 system is not designed to serve all Contractor's peak demands. As water demands increase, it may be necessary to curtail peak deliveries to conform to Zone 7 system capacity as it exists from time to time. However, so long as water and line capacity are available, Zone 7 will endeavor to meet all reasonable demands for peak deliveries and will use reasonable diligence to provide a regular and uninterrupted supply of water from its turnout facility, but shall not be liable to Contractor for damages, breach of contract, or otherwise, for failure, suspension, diminution, or other variations of service occasioned by any cause beyond the control of, or without the fault or negligence of Zone 7. Such causes may include, but are not restricted to, acts of God, acts of war, or criminal acts of others, acts of Contractor or Other Contractors, water shortages, fires, floods, earthquakes, epidemics, quarantine restrictions, strikes, or failure or breakdown of transmission or other facilities.

13. Curtailment of Delivery During Maintenance Periods

Zone 7 will make all reasonable effort to provide continuous service to Contractor but may schedule to temporarily discontinue or reduce the delivery of water to Contractor for the purpose of necessary investigation, inspection, maintenance, repair or replacement of any of the facilities necessary for the delivery of treated water to Contractor. Zone 7 shall notify Contractor as far in advance as possible of any scheduled discontinuance or reduction and the estimated duration of such discontinuance or reduction. Recognizing that Contractor may rely on Zone 7 for deliveries of water with minimal interruption, particularly during the high water consumption months, Zone 7 shall use its best efforts to make any such discontinuance or reduction in the delivery of water only during the period of November through March. In the event of any discontinuance or reduction in

delivery of water, Contractor may elect to receive the amount of water that otherwise would have been delivered to it during such period under the approved water delivery schedule at other times during the year, consistent with Zone 7's delivery ability considering the then current delivery schedules of all Other Contractors.

14. Availability of Water

In any year in which a shortage occurs due to drought or other cause in the supply of water available for delivery to Each Contractor such that the supply to Zone 7 is less than the total amount included in the approved delivery schedule of Each Contractor for that year, Zone 7 shall reduce deliveries to Each Contractor in an amount that results in a reduction of total water used within Contractor's service area that is equal to the percent reduction for total water used within Zone 7's service area for that year, all as determined by Zone 7; provided, that Zone 7 may apportion on another basis if such is required to meet minimum demands for domestic supply, fire protection, or public health during the year.

The amount of water available under this contract and Zone 7's obligation to supply water shall be subject to the terms and conditions of the contract between Zone 7 and the State of California for water service via the South Bay Aqueduct and any other contracts Zone 7 may enter into for water supply; provided, further, that wherever the provisions of the contract with the State of California or other entity as to the availability of water conflict with the provisions of this contract, the terms and provisions of this contract shall prevail. Zone 7 shall give Contractor written notice as far in advance as possible of any reduction in deliveries that would be necessary because of a shortage in water supply. Neither Zone 7 nor any of its officers, agents, or employees shall be liable for any damage, direct or indirect,

arising from this contract caused by drought, regulatory constraints, operation of area of origin statutes, or any other cause beyond the control or without the negligence of Zone 7.

15. Suspension of Service

In the event that Contractor shall be delinquent in the payment for water for more than ninety (90) days after the due date (as said due date is defined in Section 28), such delinquency shall be called to the attention of the Board and the Board may, in its discretion and after giving Contractor an opportunity to be heard, order the suspension or reduction of service to Contractor.

C. GROUNDWATER EXTRACTION PROVISIONS

16. Groundwater Pumping from the Main Basin

Zone 7 acknowledges Contractor's right to extract groundwater based on Contractor's historical groundwater extractions and based on the mutually agreed upon limitations in Contractor's original water supply contract with Zone 7. Contractor acknowledges that Zone 7 manages the Main Basin and that Zone 7 recharges, stores, and extracts from the Main Basin as necessary to supply water to Each Contractor. Accordingly, Contractor shall not extract under this agreement, more than 645 acre-feet (210 million gallons), its Groundwater Pumping Quota, from the Main Basin in any calendar year except as follows:

(a) The Contractor pays Zone 7 a recharge fee for recharging the Main Basin as set forth in Section 17;

(b) The groundwater extracted is Contractor's accumulated carry-over of its Groundwater Pumping Quota from prior years as provided in Section 18; or

(c) The source of the groundwater extracted is from Other Sources obtained by Contractor pursuant to 5(c), 5(d), and 5(f) herein and the Contractor has previously recharged said groundwater into the Main Basin. Said recharged water shall not adversely impact Zone 7's use of the Main Basin, including the recharge, storage or extraction thereof.

17. Recharge Water

In any calendar year, if Contractor should extract groundwater from the Main Basin in an amount in excess of its Groundwater Pumping Quota plus any accumulated carry-over and any groundwater recharged by Contractor per 16 (c), Contractor shall pay Zone 7, in addition to other payments required by this contract, a recharge fee as set forth in the rate schedule and Sections 23 and 24 herein, for each acre-foot of water (or portion thereof) in excess of said amount. In express consideration of Contractor's agreement to pay such recharge fee, as aforesaid, Zone 7 shall recharge the Main Basin in an amount aggregating the quantity of such excess water.

Because said recharge fee would be in the nature of an assessment fee upon annual extractions in excess of the Groundwater Pumping Quota, if Zone 7 (or any other public body or agency) shall impose a valid replenishment assessment fee or other charge upon or measured by the pumping or extraction of water for use in Contractor's service area, then the provisions of this Section shall be superseded accordingly, except as to any payment attributable to a period prior to the effective date of any such assessment fee or other charge.

18. Carry-over of Groundwater Pumping Quota

If, in any calendar year, Contractor does not extract its entire Groundwater Pumping Quota from the Main Basin,

Contractor may carry-over from that calendar year the unextracted portion of Groundwater Pumping Quota for extraction from the Main Basin during subsequent calendar years. Said carry-over or accumulated carry-over shall not exceed 20 percent of the Contractor's Groundwater Pumping Quota. Said carry-over shall not include any Groundwater Pumping Quota waived under the In-Lieu Treated Water provision of Section 19.

19. In-Lieu Treated Water

During periods when sufficient water is available to Zone 7 at reasonable cost and Zone 7 desires to raise or maintain groundwater levels, Zone 7 will offer delivery of treated water at a cost that is less than treated water rates to Contractor in lieu of Contractor extracting groundwater per its Groundwater Pumping Quota. The amount of In-Lieu Treated Water that Contractor may receive shall not exceed its Groundwater Pumping Quota plus any accumulated carry-over or its operational capability to extract said Groundwater Pumping Quota and accumulated carry-over. Zone 7's offer to deliver In-Lieu Treated Water for a given calendar year will be made on or about May 1 of that year, however, said rates may be retroactive for the entire calendar year or other mutually agreed upon portion thereof. Credit or payment for In-Lieu Treated Water will be as provided for under Section 25. Contractor is not required to take or purchase any In-Lieu Treated Water.

Contractor acknowledges that any credits or payments received under Section 25 are received in-lieu of the Contractor's right to extract its Groundwater Pumping Quota, and Contractor agrees that its Groundwater Pumping Quota and any accumulated carry-over shall be reduced by an amount equivalent to the amount of In-Lieu Treated Water delivered by Zone 7 to Contractor for the year in which the delivery is made.

20. Water Delivery Shortage Emergency Extractions

During a water supply emergency, as declared by the Board, in which Zone 7 is unable to deliver the quantity of treated water as approved on the delivery schedule, the Contractor may extract water from the Main Basin in excess of the Contractor's Groundwater Pumping Quota at a reduced recharge rate. Said rate shall be the same as the In-Lieu Treated Water rate.

21. Transfer of Groundwater Pumping Quota

Temporary or permanent transfer of Contractor's Groundwater Pumping Quota outside of the Zone 7 boundary shall not be permitted. Temporary or permanent transfer of Contractor's Groundwater Pumping Quota within Zone 7's boundary shall be permitted provided that it is transferred to an Other Contractor. Said transfer of Contractor's Groundwater Pumping Quota shall be permitted upon written notification to Zone 7 from each contractor that is a party to the transfer.

22. Changes in Contractor's Groundwater Pumping Quota

The annual Safe Yield of the Main Basin, estimated as approximately 13,200 acre-feet per year in 1993, is essentially the same as the long-term average extraction by existing groundwater producers. The Board shall not increase any Other Contractor's Groundwater Pumping Quota unless such increase in Groundwater Pumping Quota is acceptable to Each Contractor with a Groundwater Pumping Quota.

Neither Contractor nor Zone 7 waives any rights to pursue a court adjudication of the safe yield of the Main Basin or any other court action on extraction of groundwater from the Main Basin that may change Contractor's Groundwater Pumping Quota. Furthermore, Zone 7 reserves its authority to levy a replenishment assessment on the extraction of any groundwater, including Contractor's Groundwater Pumping Quota

(excluding any adjudication of the safe yield), as necessary to protect the water supplies for users within Zone 7.

D. CHARGE AND PAYMENT PROVISIONS

23. Rate Schedule

Zone 7 shall charge for water in accordance with a rate schedule for water service, as such rate schedule is established or amended by the Board. The Board shall review the rate schedule and establish a rate schedule for each calendar year period in accordance with the most recent costs and revenues of Zone 7. The Board shall review the rate schedule at the September regular meeting and endeavor to establish the rate schedule at the November regular meeting prior to January 1 of the following calendar year for which the rate schedule is to be effective. The rates, including but not limited to the treated water, in-lieu treated water, meter fee, and recharge fee, to be so established, shall be based on the cost of providing service, and shall not be unreasonable, arbitrary, or discriminatory. In the event the Board fails, in conformity to the preceding schedule, to establish a new rate schedule for any calendar year the rate schedule in effect for the prior calendar year shall be continued in full force and effect until otherwise modified by the Board.

24. Recharge Fee

The recharge fee shall be charged to Contractor in accordance with the rates included in the rate schedule. Contractor shall be invoiced by Zone 7 in accordance with Section 26 at the time in which Contractor exceeds its Groundwater Pumping Quota as provided in Section 17. Section 28 herein shall apply to said charges. The recharge fee shall be based upon Zone 7's costs including but not limited to the cost to purchase or develop the water, as well as the cost to construct, maintain, and operate the facilities needed to

import, distribute, store, treat and recharge said water into the Main Basin for the benefit of Each Contractor.

25. In-Lieu Treated Water Credit

In any calendar year in which the Contractor has foregone pumping of its Groundwater Pumping Quota, plus accumulated carry-over, as set forth in Section 19, Zone 7 shall determine the amount of delivered treated water that should be charged at the In-Lieu Treated Water rate, and shall credit or make payment to the Contractor the difference between the treated water rate and the In-Lieu Treated Water rate.

26. Time for Payment

Contractor shall be invoiced on a calendar month basis for charges. Contractor shall pay promptly all charges invoiced by Zone 7, such invoices to be rendered on or about the 5th day of each month for charges incurred in the preceding month and to become due and payable within 30 days from date of invoice. In the event that Contractor in good faith contests the accuracy of any invoices submitted to it pursuant to this Section, it shall give Zone 7 notice thereof at least ten (10) days prior to the day upon which payment of the stated amount is due. To the extent that Zone 7 finds Contractor's contentions regarding the statement to be correct, it shall revise the statement accordingly and Contractor shall make payment of the revised amounts on or before the due date. To the extent that Zone 7 does not find Contractor's contentions to be correct or where time is not available for a review of such contentions prior to the due date, Contractor shall make payment of the invoiced amount on or before the due date and make the contested part of such payment under protest and seek to recover the amount thereof from Zone 7.

27. Payment for Turnout Facilities

Prior to commencing with the design of a turnout facility, Contractor shall deposit with Zone 7 an amount of money estimated by Zone 7 to cover all costs to be incurred by Zone 7 for designing said turnout facility or shall request in writing to be invoiced for such design in accordance with Section 26. The option of invoicing Contractor shall be at the sole discretion of Zone 7. Prior to constructing said turnout facility, Contractor shall deposit with Zone 7 an amount of money estimated by Zone 7 to cover all costs to be incurred by Zone 7 for completion of turnout facility or request to be invoiced for such construction in accordance with Section 26. Following completion of the construction of the turnout facility, Zone 7 shall submit to Contractor a statement for the actual costs incurred for completion of the design and construction of said turnout facility as provided in Section 7. The deposit shall be applied to the actual costs incurred by Zone 7, and the appropriate refund or invoicing to Contractor will be made. Contractor shall make payment of any such invoicing to Zone 7 within thirty (30) days of submission of said statement. Zone 7 shall refund any deposit in excess of actual cost within thirty days of Zone 7's determination of said cost. Contractor shall have the right to audit the records of Zone 7 for the purpose of verifying actual costs.

28. Delinquent Payments

In the event that Contractor is delinquent in the payment of invoiced charges for more than thirty (30) days after the due date, delinquent amounts shall accrue at the legal rate of interest commencing on the due date and continuing each month thereafter until payment of both the principal amount of such charges and the interest thereon is paid in full insofar as permitted by law. Unless otherwise determined by law, the legal rate of interest shall be the combined per annum

discount rate of the Federal Reserve Bank of San Francisco on the 25th day of the current month and five percent (5%).

E. GENERAL PROVISIONS

29. Remedies

By reason of the specialized nature of the water service rendered, and for the further reason that the extent of any damage caused to either party by the other by reason of any breach of this contract or agreement may be extremely difficult to determine, it is agreed by the parties hereto that an action for damages is an inadequate remedy for any breach, and that specific performance, without precluding any other remedy available in equity or law, will be necessary to furnish either party hereto with an adequate remedy for the breach thereof.

30. Assignment

This contract is not for the benefit of any person, corporation or other entity, other than the parties hereto, and no person, corporation or other entity except the parties hereto, shall have any rights or interest in or under this contract unless otherwise specifically provided herein. Contractor shall not assign or transfer any rights or privileges under this contract, either in whole or in part, without the prior written consent of Zone 7, which consent shall not be unreasonably withheld, or make any transfer of all or any part of its water system, or allow the use thereof, in any manner whereby any provisions of this contract will not continue to be binding on it, its assignee or transferee, or such user of the system. This contract and the rights and responsibilities provided for herein shall be binding on the successors and assigns of the parties hereto.

31. Contract Modification

This contract may be amended or modified any time only by mutual written agreement of the parties.

32. Liabilities

a. Zone 7 and/or any of its officers, agents or employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of treated water supplied to Contractor by Zone 7, after such water has passed through the turnout facility or for claims of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal or distribution of such water beyond said turnout facility. Contractor shall indemnify, save and hold harmless Zone 7 and its officers, agents, and employees from any such damages or claims of damages. Contractor shall further reimburse Zone 7 for costs of repair of Zone 7's facilities and other damages resulting from the operations of Contractor.

b. Contractor and/or any of its officers, agents, or employees shall not be liable for the control, carriage, handling, use, disposal, or distribution of water prior to such water being delivered through the turnout facility or for claims of damage of any nature whatsoever, including but not limited to property damage, personal injury or death, arising out of or connected with the control, carriage, handling, use, disposal, or distribution of such water prior to its delivery to Contractor, excepting, however, claims by Zone 7 for costs of repair to Zone 7's facilities and other damages resulting from the operations of the Contractor. Zone 7 shall indemnify, save and hold harmless the Contractor and its officers, agents, and employees from any such damages or claims of damages, except claims by Zone 7 for costs of repair of Zone 7's facilities and other damages resulting from the operations of Contractor.

c. Zone 7 needs to be protected from any obligation to supply water to projects or consumers which the contractor has supplied from sources other than what has been directly purchased from Zone 7. Accordingly, any other provision herein notwithstanding, Zone 7 shall not be obligated nor liable to provide, without exception, that quantity of water obtained by Contractor pursuant to Subsections 5a-f, to Contractor or any customer of Contractor regardless of purpose. Accordingly, Contractor shall indemnify, save and hold harmless Zone 7 from any and all obligations, liability, responsibility, costs, expenses, or fees associated in any way with any claims, demands, requests, suits, causes of action of whatever type or nature concerning the provision of any quantity of water obtained by Contractor pursuant to Subsections 5a-f herein.

d. Likewise, if pursuant to Section 3 herein, Contractor is instructed by Zone 7 to acquire water from Zone 7 which has been previously acquired from third parties pursuant to Subsections 5a-f herein, Zone 7 shall save and hold harmless Contractor from any and all obligations, liability, responsibility, costs, expenses, or fees that may arise from such third parties.

33. Renewability

At the expiration of the thirty (30) year term of this contract, said contract may be renewed upon the mutual consent of the parties hereto. If no such renewal shall take place and in the absence of any new contract, Zone 7 shall nevertheless continue delivery to Contractor in accordance with this contract, that quantity of water set forth in the approved delivery schedule for the last full calendar year before the expiration of the term of this contract. However, if a new contract is not entered into within two (2) years from the date of expiration of this contract, then the Board

may, at its option, set the terms and conditions for a Municipal & Industrial Water Supply.

34. Notices

All notices or other writings in this contract provided to be given or made or sent, or which may be given or made or sent, by one party hereto to another, shall be deemed to have been fully given or made or sent when made in writing and deposited in the United States mail, registered, certified or first class, postage prepaid, and addressed as follows:

To Zone 7: General Manager
Zone 7 Water Agency
5997 Parkside Drive
Pleasanton, CA 94588

To Contractor: General Manager
Dublin San Ramon Services District
7051 Dublin Boulevard
Dublin, CA 94568

The address to which any notice or other writing may be given or made or sent to any party may be changed upon written notice given by such party as provided above.

35. Severability

If any one or more of the terms or conditions set forth in this contract to be performed on the part of Zone 7 or Contractor, or either of them, should be contrary to any provisions of law or contrary to the policy of law to such an extent as to be unenforceable in any court of competent jurisdiction, then such terms or conditions, shall be null and void and shall be deemed severable from the remaining terms or conditions and shall not affect the validity of the remaining provisions of this contract.

36. Section Headings

Section headings in this contract are for convenience only and are not to be construed as a part of this contract or in any way limiting or amplifying the provisions hereof.

37. Waiver

None of these terms or conditions herein contained can be waived except by mutual written consent.

38. Water Conservation

In order to increase water supply by demand reduction or to comply with regulatory requirements, Zone 7 will undertake and support water conservation programs. To that end, Zone 7 will develop, implement or participate in such programs and enter into agreements with Other Contractors, and other entities to make more efficient use of water supplies through water conservation programs so long as such agreements serve a beneficial purpose to the residents of Zone 7.

39. Contracts to be Substantially Similar

Zone 7 agrees that each contract for a Municipal & Industrial Water Supply hereafter entered into by Zone 7 with any Other Contractor shall contain provisions substantially similar to those herein set forth and shall not contain any provisions of a material nature more favorable to the Other Contractor than the provisions herein applicable to Contractor. This section shall not restrict Zone 7 from considering other terms and conditions for subsequent Municipal & Industrial Water Supply contracts provided that if such other terms and conditions are not substantially similar, Zone 7 shall notify all Other Contractors and offer such other terms and conditions in accordance with Section 31 to Each Contractor. This section shall not limit Zone 7 from entering into other contracts for services not provided for under the terms and conditions of this contract.

IN WITNESS WHEREOF, the parties hereto and have executed this contract on the date and year first above written.

DUBLIN SAN RAMON SERVICES DISTRICT

BY Georgean M. Vonheeder
President, Board of Directors

ATTEST:

BY Nancy Hamble
Secretary

ZONE 7 WATER AGENCY

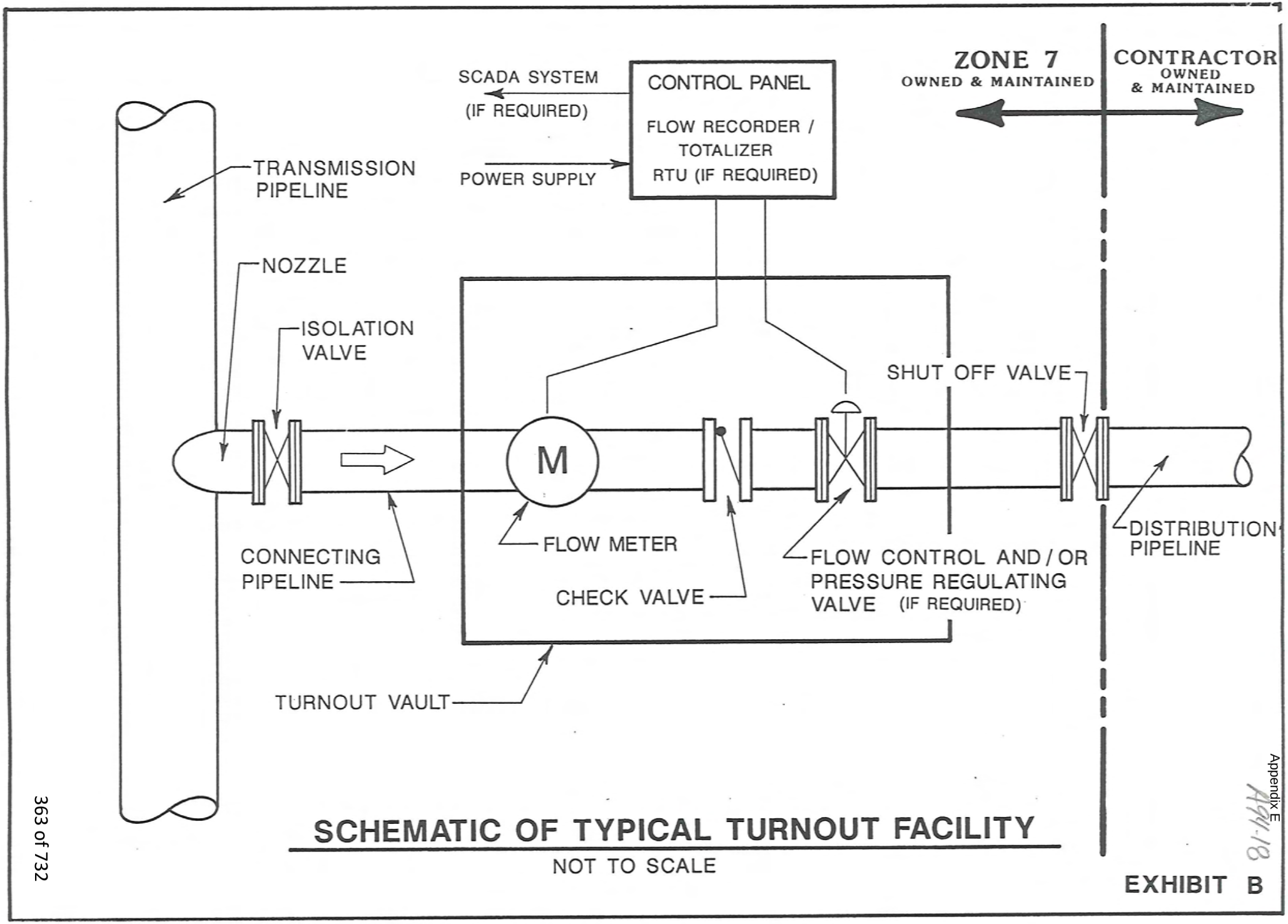
BY David W. Layton
Chairman, Board of Directors

ATTEST:

BY Jim Dixon
Secretary

APPROVED AS TO FORM:
KELVIN H. BOOTY, JR.,
COUNTY COUNSEL

BY
Deputy County Counsel



SCHEMATIC OF TYPICAL TURNOUT FACILITY

NOT TO SCALE

EXHIBIT B

Appendix E
8-19-14

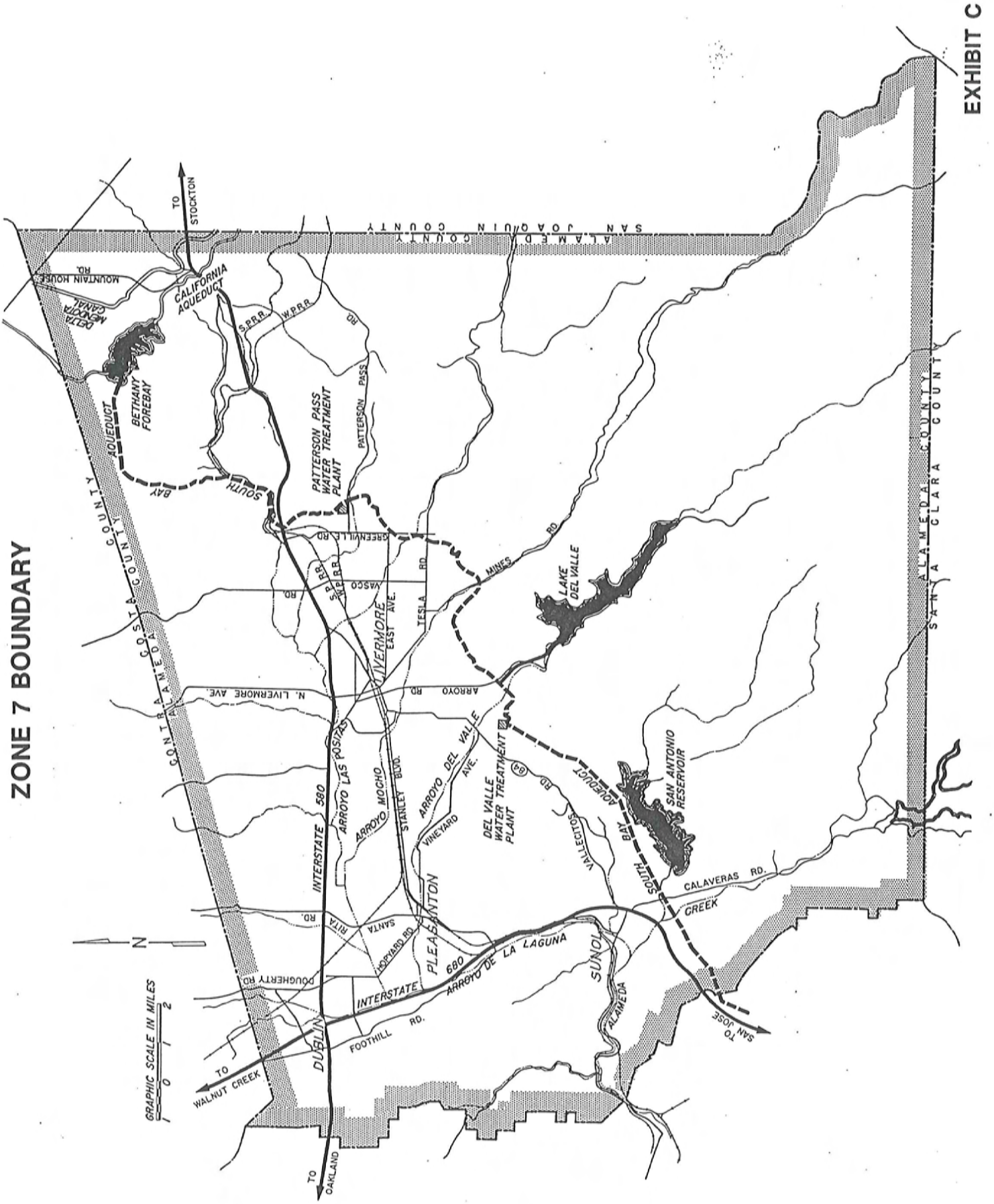

EXHIBIT C
ZONE 7 BOUNDARY
CONTRA COSTA COUNTY
ALAMEDA COUNTY
SAN JOAQUIN COUNTY
SANTA CLARA COUNTY
TO STOCKTON
CALIFORNIA AQUEDUCT
MOUNTAIN HOUSE RD.
DELTA MENDOTA CANAL
BETHANY FOREBAY
SOUTH BAY AQUEDUCT
PATTERSON PASS WATER TREATMENT PLANT
PATTERSON PASS RD.
S.P.R.R.
W.P.R.R.
GREENVILLE RD.
LIVERMORE
EAST AVE.
TESLA RD.
MINES RD.
LAKE DEL VALLE
ARROYO RD.
N. LIVERMORE AVE.
ARROYO LAS POSITAS
ARROYO MOCHO
STANLEY BLVD.
ARROYO DEL VALLE
VINEYARD AVE.
DEL VALLE WATER TREATMENT PLANT
84
AQUEDUCT
SAN ANTONIO RESERVOIR
VALLECITOS
SOUTH BAY AQUEDUCT
CALAVERAS RD.
CREEK
INTERSTATE 580
INTERSTATE 680
SANTA RITA RD.
HOPYARD RD.
PLEASANTON
ARROYO DE LA LAGUNA
SUNOL
ALAMEDA
TO SAN JOSE
DOUGHERTY RD.
FOOTHILL RD.
DUBLIN
TO WALNUT CREEK
TO OAKLAND
N
GRAPHIC SCALE IN MILES
0 1 2

EXHIBIT D

DSRSD WATER SERVICE AREA

BISHOP SUBBASIN

DUBLIN SUBBASIN

CAMP SUBBASIN

CAYETANO SUBBASIN

MAY SUBBASIN

VASCO SUBBASIN

SPRING SUBBASIN

ALTAMONT SUBBASIN

AMADOR SUBBASIN

BERNAL SUBBASIN

CASTLE SUBBASIN

MOCHO SUBBASIN

MOCHO I

MOCHO II

EXPLANATION

- GROUNDWATER BASIN BOUNDARY
- VALLEY FLOOR BOUNDARY
- SUBBASIN BOUNDARY
- SUBBASIN INTERIOR BOUNDARY
- MAIN BASIN

SOURCE: DWR No. 118-2 FIGURE 3

EXHIBIT A

REVISIONS				
NUMBER	DESCRIPTION	BY	DATE	APVD
7				
6				
5				
4				
3				
2				
1				

ZONE 7 WATER AGENCY
5997 PARKSIDE DRIVE PLEASANTON CA 94588

DRAWN	JLL
DESIGNED	
CHECKED	DWL
APPROVED	

WATER RESOURCES ENGINEERING

LIVERMORE VALLEY GROUNDWATER BASIN BOUNDARIES

SCALE	1"=6,000'
DATE	12 MAY 1994
FILE NO.	M-321
SHEET	GW
OF	SHEETS

32

AMENDMENT NO. 1 TO CONTRACT BETWEEN ZONE 7 WATER AGENCY AND DUBLIN SAN RAMON SERVICES DISTRICT FOR A MUNICIPAL & INDUSTRIAL WATER SUPPLY

This Amendment No. 1 to Contract Between Zone 7 Water Agency and Dublin San Ramon Services District for a Municipal & Industrial Water Supply (the "**Amendment**") is entered into as of 2/7/2000, 1998, (the "**Effective Date**") by and between ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, commonly known as the Zone 7 Water Agency ("**Zone 7**"), and DUBLIN SAN RAMON SERVICES DISTRICT ("**Contractor**").

RECITALS

A. Zone 7 and Contractor have entered into that certain Contract between Zone 7 of Alameda Flood Control and Water Conservation District and Dublin San Ramon Services District for a Municipal & Industrial Water Supply, dated as of August 23, 1994 (the "**Water Supply Contract**"). Pursuant to and as more fully set forth in the Water Supply Contract, Zone 7 has agreed to furnish and provide to Contractor, and Contractor agreed to purchase and accept, a water supply for municipal and industrial uses.

B. Pursuant to Section 6 of the Water Supply Contract, Contractor has requested Zone 7's approval of an expansion of Contractor's "Service Area" under the Water Supply Contract to include approximately 4,400 acres of real property located outside of the boundaries of Zone 7 as shown on **Figure 1** attached hereto (the "**Dougherty Valley Service Area**"). The County of Contra Costa has adopted plans and permits authorizing the development, within the Dougherty Valley Service Area, of a mixed-use community including up to 9784 residential dwelling units and associated commercial, civic and other uses. Contra Costa County's plans designate Contractor as the primary provider of treated water to the Dougherty Valley Service Area and the owners of property of said Area, Windemere Ranch Partners ("**Windemere**") and Shapell Industries, Inc. ("**Shapell**"), have requested Contractor to provide such service.

C. The property in the Dougherty Valley Service Area owned by Windemere has been annexed to Contractor and is within Contractor's sphere of influence; the property in the Dougherty Valley Service Area owned by Shapell is within Contractor's sphere of influence.

D. On September 13, 1994, Contractor and the Berrenda Mesa Water District ("BMWD") entered into an agreement for Contractor to purchase BMWD rights for 7,000 acre-feet of firm water entitlement from State Water Project for use in the Dougherty Valley Service Area with an option to purchase an additional 5,000 acre-feet.

E. Instead of using the aforementioned agreement between Contractor and BMWD for the water supply for Dougherty Valley Service Area, Zone 7 is concurrently herewith entering into an agreement with BMWD ("the Water Purchase Agreement") to purchase 7,000 acre feet annually of firm water entitlement from the State Water Project (**the "Water Entitlement"**) to

provide water for the Dougherty Valley Service Area. Concurrently with this agreement, Contractor and BMWD are terminating their Water Purchase Agreement, dated September 13, 1994, with the exception of the provision of that agreement providing Contractor with an option to purchase 5,000 acre-feet of water from BMWD.

F. Zone 7 concurrently herewith is entering into an agreement with the Semitropic Water Storage District ("**Semitropic**") pursuant to which Semitropic will agree to store water for Zone 7 so that Zone 7 may supplement the water available from the Water Entitlement to maintain the reliability of the service to the Dougherty Valley Service Area and enhance Zone 7's ability to serve its existing customers and future customers within Zone 7.

G. Zone 7 and Contractor desire to amend the Water Supply Contract to expand Contractor's service area and to establish certain terms and conditions pursuant to which Zone 7 will furnish and provide water to Contractor for delivery to the Dougherty Valley Service Area.

AMENDMENT NO. 1 TO THE WATER SUPPLY CONTRACT

NOW, THEREFORE, Zone 7 and Contractor hereby mutually agree to amend the Water Supply Contract as follows:

1. Contractor's Service Area. The Dougherty Valley Service Area, as delineated in Figure 1, is hereby added to the Contractor's Service Area as defined in and pursuant to Section 6 of the Water Supply Contract.

2. Special Provisions for Water Supplied to Contractor for Use in the Dougherty Valley Service Area. Those certain terms and conditions described more fully in **Appendix 1**, attached hereto, are hereby appended to and incorporated into the Water Supply Contract and shall govern the provision of services to the Dougherty Valley Service Area.

3. Ratification of Water Supply Contract. Except as modified by this Amendment, the Water Supply Contract and all provisions contained therein shall remain unchanged.

4. Counterparts. This Amendment may be executed in one or more counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one and the same document.

5. Effective Date. This amendment shall not become effective until the close of escrow pursuant to the Water Service Escrow Agreement entered into concurrently herewith.

6. Interpretation. To the extent any provisions of this Amendment and/or **Appendix 1** are inconsistent with any provisions of the Water Supply Contract, the provisions of this Amendment and/or **Appendix 1** shall control with respect to the Dougherty Valley Service Area. Otherwise, the terms of the Water Supply Contract, as amended by this Amendment, shall remain in full force and effect.

IN WITNESS WHEREOF, this Amendment has been executed as of the day and year first above written.

ZONE 7:

ZONE 7 OF ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

By: _____
Its: President, Board of Directors

ATTEST:

By: _____
Its: Secretary

APPROVED AS TO FORM:

DOUGLAS HICKLING
COUNTY COUNSEL

By: _____
Deputy County Counsel

Contractor:

DUBLIN SAN RAMON SERVICES DISTRICT

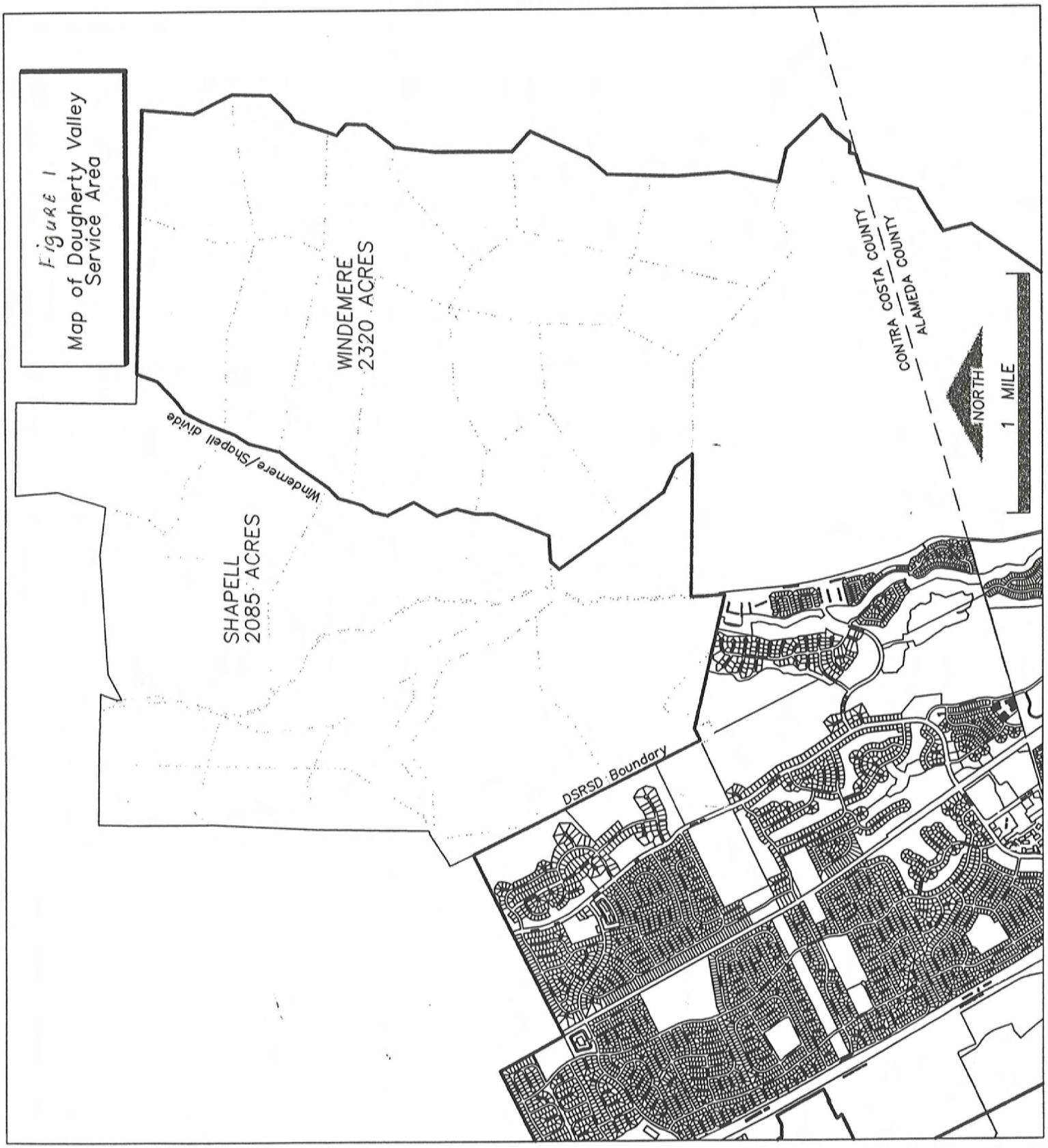
By: _____
Its: President, Board of Directors

ATTEST:

By: _____
Its: Secretary

APPROVED AS TO FORM:

By: _____
DSRSD Special Counsel


Figure 1
Map of Dougherty Valley
Service Area
WINDEMERE
2320 ACRES
SHAPELL
2085 ACRES
Windemere/Shapell divide
CONTRA COSTA COUNTY
ALAMEDA COUNTY
DSRSD Boundary
NORTH
1 MILE

APPENDIX I

SPECIAL PROVISIONS FOR WATER SUPPLIED TO CONTRACTOR FOR USE IN THE DOUGHERTY VALLEY SERVICE AREA

A. DEFINITIONS

"Adjustment Index" for the year in which the adjustment is being made shall mean a fraction, the numerator of which is the Construction Costs Index, 20-City Average, published by the Engineering News Record (the "Construction Costs Index") of the calendar year immediately preceding the calendar year when the adjustment is being made, and the denominator of which shall be 5,858.3 (20-City Average as of December 1997). If publication of the Construction Cost Index ceases or if the basis for the index is substantially modified, Zone 7 and Contractor shall mutually agree on an alternative index.

"Amendment" shall mean this Amendment No. 1 to the Water Supply Contract.

"Annual Water Supply Report" shall mean that certain annual report required to be delivered by Contractor to Zone 7 pursuant to Section C of this Appendix.

"Dougherty Valley Service Area" shall mean, as delineated in Figure 1 of the Amendment, that geographic area added to Contractor's Service Area under the Water Supply Contract pursuant to this Amendment

"Dougherty Valley Service Area Allotment" equals the Water Entitlement multiplied by a factor based on the Department of Water Resources' latest estimate of long-term State Water Project annual yield, as determined and used by Zone 7 for water supply planning purposes. This factor is currently 75%. The factor will be the same for water conveyed to DSRSD for delivery to the Dougherty Valley Service Area as it will be for State Water Project water being delivered within Zone 7's boundaries. Zone 7 and Contractor recognize that the long-term State Water Project yield is based on hydrological records and applicable regulatory requirements that are subject to change over time. Zone 7 will meet and confer with Contractor prior to changing the yield estimate. The current Dougherty Valley Service Area Allotment is: 7,000 acre feet (the Water Entitlement, defined below) x .75 (the current factor for the long-term State Water Project yield) = 5,250 acre feet per year.

"DWR" shall mean State of California Department of Water Resources.

"DWR/Zone 7 Agreement" shall mean the Contract between the State of California Department of Water Resources and Alameda County Flood Control and Water

Conservation District for a Water Supply for Zone No. 7, dated November 21, 1961, as amended.

"DWR/Zone 7 Amendment No. 19" shall mean the amendment to the DWR/Zone 7 Agreement whereby DWR agrees to convey the Water Entitlement to Zone 7.

"New Connection" shall mean any new metered water service within the Dougherty Valley Service Area that will furnish water from a water supply system that is connected to the Zone 7 water supply system or to the Livermore-Amador Valley Main Groundwater Basin (as defined in the Water Supply Contract), including but not limited to water services that are part of any new development to be constructed.

"Semitropic" shall mean the following public entities: Semitropic Water Storage District, Semitropic Improvement District, Buttonwillow Improvement District and the Pond-Poso Improvement District of the Semitropic Water Storage District, collectively.

"Semitropic Agreement" shall mean the agreement between Zone 7 and Semitropic, entered concurrently herewith, whereby Semitropic agrees to provide groundwater storage space for Zone 7's use.

"Tax Override Charges" shall mean those certain State Water Project expenses that Zone 7 pays for through an ad valorem tax levied on property owners within Zone 7 (denoted as "Flood Zone 7 State Water" on the property tax bill) as authorized under Section 36 of the California Water Code, Appendix 55 ("the District Act") and other applicable state laws. Zone 7 currently determines the Tax Override Charges based on the following State Water Project charges as invoiced by DWR: 1) Water System Revenue Bond Surcharge; 2) Capital Cost Component -- Transportation Charge; 3) Minimum Operating Maintenance, Power and Replacement Component -- Transportation Charge; and 4) Off-Aqueduct Power Facilities. Zone 7 may include other DWR charges as Tax Override Charges in accordance with applicable law, as long as such other charges are prospective in nature and charged as Tax Override Charges on property owners within Zone 7.

"Water Connection Charge Program" shall mean Zone 7's Water Connection Charge Program, as updated from time to time.

"Water Entitlement" shall mean that certain 7,000 acre feet of firm water entitlements that Zone 7 has agreed to purchase concurrently herewith from the Berrenda Mesa Water District ("BMWD") as set forth in the Water Purchase Agreement.

"Water Purchase Agreement" shall mean that certain agreement between Zone 7 and BMWD pursuant to which Zone 7 has agreed concurrently herewith to purchase, and BMWD agreed to sell, the Water Entitlement.

B. DELIVERY

1. Water Supply. Subject to, and as set forth in, the terms and conditions of this Amendment, Zone 7 shall provide Contractor with a supply of treated water for the Dougherty Valley Service Area.

2. Preliminary Water Delivery Schedule. Section 10 of the Water Supply Contract requires Contractor, on an annual basis, to submit to Zone 7 a preliminary water delivery schedule indicating the quantity of water anticipated by Contractor to be required for Contractor's service area during each month of the succeeding five (5) calendar years. Each such preliminary water delivery schedule shall hereafter include a separate itemization of water anticipated by Contractor to be required for the Dougherty Valley Service Area during such five-year period and be accompanied by the **"Annual Water Supply Report"** described in Section C below.

3. Review and Approval by Zone 7. Zone 7 shall review the Preliminary Water Delivery Schedule in accordance with Section 10 of the Water Supply Contract. Zone 7 may only revise or disapprove contractor's delivery request for the Dougherty Valley Service Area for the reasons set forth in Sections 12 (Peak Demands), 13 (Curtailment of Delivery During Maintenance Periods), 14 (Availability of Water), or 15 (Suspension of Service) of the Water Supply Contract, or as described in Section B4, B5 and D1 below.

4. Limitations on Deliveries. Notwithstanding any other provision of this Amendment, Zone 7 shall have no obligation under this Amendment, in any year, to deliver water to the Dougherty Valley Service Area in excess of the Dougherty Valley Service Area Allotment.

5. Shortfalls. If a delivery schedule submitted to Zone 7 for the Dougherty Valley Service Area pursuant to paragraph B.2 above exceeds the Dougherty Valley Service Area Allotment for any year covered by the preliminary water delivery schedule, Zone 7 shall immediately deliver notice to Contractor of the shortfall, and Contractor, shall either (i) use its best efforts to secure additional water supplies adequate to eliminate such projected shortfall prior to its occurrence, or (ii) submit a revised delivery schedule that does not result in a shortfall. Zone 7 is under no obligation pursuant to this Amendment to seek additional water supplies for the Dougherty Valley Service Area if Contractor's request exceeds the Dougherty Valley Service Area Allotment in any year. Zone 7 shall use its best efforts to facilitate the transfer and use of any additional water supplies obtained through the efforts of the Contractor.

C. REPORTS

1. Annual Water Supply Report. Contractor shall measure and report to Zone 7 annually on treated water usage within the Dougherty Valley Service Area. Contractor's annual report to Zone 7 (the "Annual Water Supply Report") shall include a description of, among other things, (i) water deliveries by month for the past year; (ii) number and size of current service connections; and (iii) number and size of New Connections established over the preceding

year. The measurement and recordation of such water deliveries shall be subject to the same provisions for inspection and testing of meters and instrumentation by Zone 7 as is provided to Contractor in Section 8 of the Water Supply Contract. The Annual Water Supply Report shall be prepared and submitted by Contractor in a form acceptable to Zone 7 and due by March 1 of the following year.

2. Monthly Water Delivery Report. Section 11 of the Water Supply Contract requires Contractor to report to Zone 7 on or before the tenth day of each month the total volume, in acre-feet, of groundwater extracted from the Main Basin and any water obtained from "Other Sources" (as defined in the Water Supply Contract) for the preceding month. This report shall be expanded to include water supplied by Contractor to the Dougherty Valley Service Area from all sources during such preceding month, based on all metered flows to the Dougherty Valley Service Area (the **"Monthly Water Delivery Report"**).

D. PAYMENTS

1. Treated Water Rate. Contractor shall pay Zone 7 for water delivered by Zone 7 to Contractor for the Dougherty Valley Service Area in accordance with the provisions of Section D of the Water Supply Contract. If any payments required under the provisions of Section D of this Appendix are not received by the due date, Contractor shall be subject to suspension of service and the accrual of interest as provided in the Water Supply Contract under Sections 15 and 28 respectively. Zone 7 shall not be obligated to provide water for any demands resulting from New Connections for which Contractor has not made Water Connection Payments or Facility Use Payments pursuant to Sections D.2 and D.3, below.

2. Water Connection Payments. Contractor shall make payments to Zone 7 to compensate Zone 7 for the Dougherty Valley Service Area's share of Zone 7's Capital Expansion Program. For each New Connection in the Dougherty Valley Service Area, Contractor shall pay Zone 7 an amount, established by the Zone 7 Board by resolution, to Zone 7's Capital Expansion Program. The amount due for each New Connection will equal the connection charges within the Zone 7 boundaries less the sums included in the Zone 7 connection charge for obtaining additional water entitlements and additional storage, as Contractor has already provided the Water Entitlement and storage for the Dougherty Valley Service Area. Payments to Zone 7 shall be due within 30 days from the date upon which the building permit for the property receiving the New Connection was issued or 30 days from the date that the New Connection is made, whichever is earlier.

3. Facility Use Payments. Contractor agrees to compensate Zone 7 for use of Zone 7's existing facilities in providing water to the Dougherty Valley Service Area. Contractor shall make payments to Zone 7, hereinafter referred to as Facility Use Payments, as Contractor permits New Connections in the Dougherty Valley Service Area. The Facility Use Payments shall be $1,850 per New Connection of the basic connection size, 5/8" meter. The amount of said Facility Use Payments are based on the pro rata share of the current value of Zone

7's capital assets. The Facility Use Payments for New Connections of other sizes shall be adjusted by the "fee factor" contained in the Zone 7 Water Connection Charge Ordinance, Section III.

Zone 7 shall adjust the Facility Use Payments at the times specified in this section by multiplying $1,850 by the Adjustment Index. The first adjustment to the Facility Use Payments shall go into effect no earlier than five years following issuance of the first building permit for development in the Dougherty Valley Service Area. Subsequent adjustments shall occur at five (5) year intervals thereafter. Payments to Zone 7 under this section shall be collected in the same manner and be due at the same time as payments due under Section D.2 (above).

4. Capital Expansion Water Facilities. Zone 7 shall keep Contractor apprised of Zone 7's progress in developing and constructing any capital water facilities that are necessary to provide service to Contractor for ultimate use in the Dougherty Valley Service Area. If Contractor determines, and Zone 7 concurs, that capital facilities required by Zone 7 to provide water to Contractor pursuant to this Amendment will not be available in time for Zone 7 to make requested deliveries under this Amendment, Contractor may elect to design and construct such capital facilities, and Zone 7 will reduce future connection payments pursuant to Paragraph D.2 (above) by the costs incurred by Contractor.

5. Surcharge for Water Service for Dougherty Valley Service Area. Contractor shall pay Zone 7 a surcharge for water service for the Dougherty Valley Service Area to compensate Zone 7 for additional State Water Project charges incurred by Zone 7 as a result of providing water to the Dougherty Valley Service Area. The surcharge shall equal the Dougherty Valley Service Area's proportionate share of the total Tax Override Charges, calculated as follows: (6,080 (the estimated amount of water entitlement necessary to supply the Dougherty Valley Service Area with 4,560 acre-feet of water per year given a State Water Project long-term yield of 75%)/Zone 7's total State Water Project entitlement) multiplied by the total Tax Override Charges.

$$\left(\frac{4{,}560}{\text{Zone 7's Total State Water Project entitlement (in acre-feet)}} \times \left(\frac{1}{\text{factor used to determine SWP long-term yield}}\right)\right) \times \left(\text{Total Tax Override Charges}\right) = \text{Annual surcharge per this paragraph}$$

Zone 7 receives a statement of charges from DWR on or about July 1st of the preceding calendar year for which the charges are payable. Zone 7 shall invoice the Contractor on or

about September 1st preceding the November 1st for which the surcharge shall be due. DWR may make subsequent adjustments to its statement of charges. Accordingly, Zone 7 will make revisions to said invoice by issuing an additional invoice or refund as appropriate.

If, at some future date, the Dougherty Valley Service Area is annexed to Zone 7 and Zone 7 levies the Tax Override Charges directly on Contractor's customers in the Dougherty Valley Service Area, the aforementioned surcharge shall automatically terminate and be of no further force and effect.

6. Other Charges. Zone 7 and Contractor acknowledge and agree that from time to time there may arise a need for the imposition of additional payments to ensure that the Dougherty Valley Service Area bears all costs associated with the provision of treated water thereto under this Amendment. However, Zone 7 shall not impose upon Contractor any payments or charges not imposed upon Zone 7's Other Contractors for any purposes other than to recover costs associated with delivering water to the Dougherty Valley Service Area pursuant to this Amendment.

E. ALTERNATIVE DELIVERY METHODS

If a court of competent jurisdiction determines, in a judgment that cannot be appealed, that Zone 7 cannot participate in water delivery to the Dougherty Valley Service Area pursuant to the terms of this Amendment, Zone 7 and Contractor agree to use their best efforts to negotiate a contract, pursuant to which Zone 7 can convey water to Contractor for service to the Dougherty Valley Service Area. To limit the possibility of any interruption of service to the Dougherty Valley Service Area, either Zone 7 or Contractor may request such negotiations to commence prior to the conclusion of any such litigation. Zone 7 and Contractor agree to negotiate the contract in accordance with the principles listed below:

1. Insofar as possible, the contract shall contain all of the same terms and condition as this Amendment, except that Zone 7 would transfer to Contractor (i) ownership the 6,080 acre-feet of water entitlement, (ii) the Zone 7's rights and obligations pursuant to the Semitropic Water Storage District contract, (iii) water in storage in Semitropic, (iv) Zone 7's interest in any security instrument relating to the provision of water to the Dougherty Valley Service Area and (v) any remaining funds paid to Zone 7 by Contractor for the purpose of Zone 7 making payments to Semitropic.

2. Upon such transfer, Contractor would become solely responsible for all costs and other obligations associated with the entitlements, storage rights and service to the Dougherty Valley Service Area.

3. The parties agree to cooperate in good faith to obtain all administrative and regulatory approvals necessary for the transfer, and Contractor would pay all costs incurred by both parties in executing such a transfer.

4. Contractor would contract with Zone 7 to provide the services of water wheeling, treatment, seasonal storage and distribution through the Zone 7 system at a mutually agreeable price.

5. Contractor would not increase its use of the Main Groundwater Basin in excess of 1,400 AF of seasonal storage without the prior approval of Zone 7.

6. Contractor, upon consulting with Zone 7, would have the authority to determine the size of Semitropic Storage required for service to the Dougherty Valley Service Area.

7. Zone 7 would administer the DWR State Water Project contracts on behalf of DSRSD, as well as operations and conveyance of Semitropic Storage and the Water Entitlements.

8. Contractor will neither seek to materially alter its contractual relationship with Zone 7 nor terminate its Water Supply Contract with Zone 7 for the purposes of becoming an independent water purveyor for 30 years or until the specific termination date

contained in the existing Water Supply Contract between Zone 7 and DSRSD, whichever is longer.

Appendix I

DSRSD-EBMUD Recycled Water Authority Resolution 19-3

DRAFT

DERWA
RESOLUTION NO. 19-3

RESOLUTION OF THE BOARD OF DIRECTORS OF THE DSRSD•EBMUD RECYCLED WATER AUTHORITY (DERWA) REQUESTING THAT ITS MEMBER AGENCIES TAKE ACTION TO REDUCE RECYCLED WATER DEMANDS AND DIRECTING THAT THE AUTHORITY MANAGER IMPLEMENT DEMAND MANAGEMENT AND ALLOCATION ADJUSTMENTS PURSUANT TO ARTICLE IV OF THE AGREEMENT FOR THE SALE OF RECYCLED WATER BY THE DSRSD-EBMUD RECYCLED WATER AUTHORITY TO THE DUBLIN SAN RAMON SERVICES DISTRICT AND THE EAST BAY MUNICIPAL UTILITY DISTRICT

WHEREAS, the DSRSD•EBMUD Recycled Water Authority (DERWA), is a joint Powers Authority in Alameda and Contra Costa Counties, formed in 1995 by agreement of the Dublin San Ramon Services District and the East Bay Municipal Utility District for the implementation and construction of the San Ramon Valley Recycled Water Program for the purpose of maximizing the use of recycled water in ways that offset potable irrigation water demand for DERWA's Member Agencies, while recovering costs; and

WHEREAS, the DERWA members and the City of Pleasanton have caused to be constructed Phase 2 modifications to the Recycled Water Treatment Facilities (RWTF) to ultimately provide 16.2 mgd of treatment capacity; and

WHEREAS, the DERWA Board of Directors has received presentations from the Authority Manager on July 23, 2018, November 26, 2018, and February 4, 2019 providing details on peak summer demand recycled water production shortages projected for the 2019 recycled water irrigation season and subsequent years in the absence of the development of supplemental supplies; and

WHEREAS, reduced wastewater flows due to improved water use efficiency and conservation by customers have decreased recycled water supply available for the DERWA program; and

WHEREAS, the City of Pleasanton's increased use of wastewater for its Recycled Water Program has reduced the amount of wastewater available for DERWA's use; and

WHEREAS, the DERWA Board of Directors approved a supplemental supply agreement with the Central Contra Costa Sanitary District (Central San) at its February 4, 2019 Board Meeting to provide additional short-term recycled water supplies; and

WHEREAS, even with the supplemental supply agreement with Central San, based on current projected recycled water demands for the 2019 irrigation season, recycled water demands are expected to exceed the available recycled water supply on peak irrigation days in the summer; and

WHEREAS, based on projected recycled water demands for years beyond the 2019 irrigation season, recycled water demands are expected to exceed the planned available recycled water supply on peak irrigation days in the summer months during subsequent years; and

WHEREAS, EBMUD has made significant investment and has expended grant funding for the Phase 2 Expansion of its recycled water distribution system which will convert existing potable water use to recycled water use; and

WHEREAS, Article IV of the Agreement for the Sale of Recycled Water by the DSRSD-EBMUD Recycled Water Authority to the Dublin San Ramon Services District and the East Bay Municipal Utility District (Sales Agreement) provides that the Member Agencies shall implement demand management for their respective connected customers and the Authority Manager shall take actions to curtail delivery of recycled water to the Member Agencies; and

WHEREAS, Article IV of the Sales Agreement further provides for the allocation of available future recycled water supplies among the Member Agencies when recycled water demands are projected to exceed the recycled water supplies during periods beyond the current contract year; and

WHEREAS, the DERWA Board of Directors desires that the Authority Manager take appropriate steps as outlined in Article IV of the Sales Agreement to assist Member Agencies in the curtailment of their use of recycled water supply for the 2019 irrigation season and to take further actions to allocate amongst the Member Agencies, and the City of Pleasanton as applicable, the recycled water supply projected to be available in subsequent contract years; and

WHEREAS, given the projected current and future shortfall in recycled water supply and the complexity of implementing demand management on a real-time peak day basis, the most prudent and practical method of demand management is for the Member Agencies to implement a connection moratorium on new connections and implement other additional demand management practices to curtail the use of recycled water; and

WHEREAS, the DERWA Board of Directors desires that DERWA continue to research and appropriately develop the supplemental supplies necessary to increase the availability of recycled water for the current and future irrigation seasons.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the DSRSD•EBMUD Recycled Water Authority, a Joint Powers Authority, does hereby find, request, and direct as follows:

1. The DERWA Board of Directors finds that currently available DERWA recycled water supplies are insufficient to meet the projected recycled water demand of the Member Agencies and the City of Pleasanton on peak irrigations days in the summer during the current year; and
2. The DERWA Board of Directors further finds that recycled water supplies are anticipated to be insufficient to meet the projected demands for recycled water on peak irrigation days in future years; and

3. The DERWA Board of Directors requests that the Member Agencies implement a connection moratorium on new connections except for those EBMUD Phase 2 connections that are already in progress as listed in Exhibit A, and further requests that Member Agencies also implement other demand management practices to curtail use of recycled water; and

4. The DERWA Board of Directors directs the DERWA Authority Manager, consistent with the authority found in Article IV of the Sales Agreement, to take all appropriate steps to assist Member Agencies to curtail their use of recycled water supply for the 2019 irrigation season; and

5. The DERWA Board of Directors directs the DERWA Authority Manager, consistent with the authority found in Article IV of the Sales Agreement, to take further actions to apportion amongst the Member Agencies, and the City of Pleasanton as applicable, the recycled water supply projected to be available in subsequent years should recycled water supplies remain insufficient to meet projected demands.

ADOPTED by the Board of Directors of the DSRSD•EBMUD Recycled Water Authority, a Public Agency located in the Counties of Alameda and Contra Costa, California, at its Regular Meeting held on the 25th day of March 2019 and passed by the following vote:

AYES: 4 - Directors Frank Mellon, Ed Duarte, Georgean Vonheeder-Leopold John A. Coleman
NOES: 0
ABSENT 0

John A. Coleman, DERWA Chair

ATTEST:

Nicole M. Genzale, Authority Secretary

EXHIBIT A

EBMUD SAN RAMON VALLEY RECYCLED WATER PROJECT
PHASE 2 CUSTOMER SITE RETROFITS/CONNECTIONS IN PROGRESS

CUSTOMER SITES	SERVICE ADDRESS
San Ramon Valley Conference Center	3301 Crow Canyon Road
Bishop Ranch BR 6	2420 Camino Ramon
Sunset Development Co. Service Center	2453 Camino Ramon
Town of Danville Streetscape	2151 El Capitan Drive
City of San Ramon Streetscapes	3500/3585 Crow Canyon Road
Bishop Ranch Veterinary Center	2000 Bishop Drive
Caltrans Hwy 680 Landscapes	2100/2110 Bishop Drive
Canyon Lakes Golf Course	7300 Bollinger Canyon Road
Crow Canyon Country Club Golf Course	881 Silver Lake Drive

Appendix J

DSRSD 2021 Alternative Water Supply Study Executive Summary

DRAFT

Dublin San Ramon Services District
Water, wastewater, recycled water

2021 Alternative Water Supply Study: A Framework for a Resilient and Sustainable Water Future

Executive Summary

Prepared for
Dublin San Ramon Services District
May 2021

Brown AND Caldwell

Executive Summary

The Dublin San Ramon Services District (DSRSD) provides potable water and recycled water to approximately 91,000 people in the City of Dublin and Dougherty Valley portion of San Ramon. DSRSD produces and distributes recycled water for irrigation uses and purchases potable water from Zone 7 Water Agency (Zone 7). DSRSD also has a groundwater pumping quota (GPQ) from the local groundwater basin, pumped on its behalf by Zone 7, the local groundwater basin manager.

Zone 7 is a State Water Project (SWP) contractor that wholesales treated water to four retail water agencies: DSRSD, City of Livermore, City of Pleasanton, and California Water Service Livermore District. As shown in Figure ES-1, the majority of Zone 7's water supply, and therefore DSRSD's water supply, is imported through the Sacramento-San Joaquin Delta (Delta) via the SWP. Zone 7 also receives local runoff from the Arroyo Valle watershed. In wet and normal years, a portion of Zone 7's surface water supply is stored in the local and non-local groundwater banks and surface water reservoirs. In dry years, Zone 7 withdraws the previously stored water to augment reduced SWP deliveries.

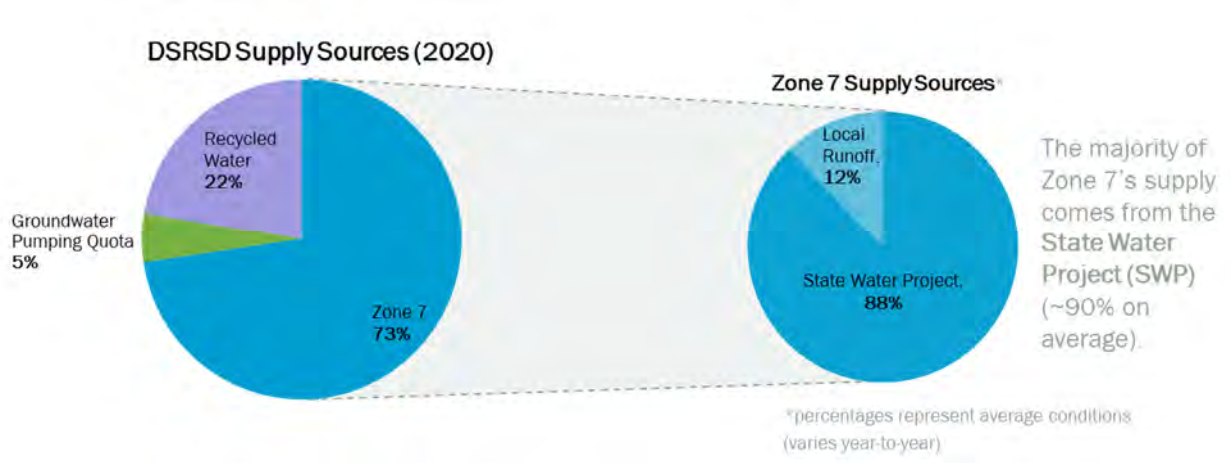


Figure ES-1. DSRSD and Zone 7 water supply sources

Note: Figure represents average conditions; Zone 7's supplies vary year-to-year based on hydrological, regulatory, and operational conditions.

In September 2015, DSRSD completed a Long-Term Alternative Water Supply Study (2015 Study) to identify conceptual alternatives for improving long-term water supply reliability. The 2015 Study was driven by the unprecedented 2012-16 drought and DSRSD's desire to reduce dependence on imported Delta water supply. In 2014, DWR announced an initial SWP allocation of zero percent, which was increased to 5 percent later in the year. The very low 2014 SWP allocation and limitations on the timing and conditions for pumping water from the Delta exposed vulnerabilities with Zone 7's heavy reliance on the SWP for bringing water supplies into the Tri-Valley.

The 2015 Study included a high-level assessment of regional and local supply alternatives that DSRSD could explore collaboratively with other neighboring water and wastewater agencies to diversify water supplies and reduce reliance on Zone 7 and imported water supplies. The results of the 2015 Study informed and provided the framework for DSRSD's Water Supply, Storage, Conveyance, Quality and Conservation Policy (2015 Water Policy), which was adopted by DSRSD's Board of Directors in October 2015.

Since development of the 2015 Study and 2015 Water Policy, conditions have changed substantially, including lower water demand projections; lower wastewater flows (and therefore less flow available for reuse); advancement of local and regional efforts (e.g., the Bay Area Regional Reliability [BARR] partnership); and new regulations (e.g., pending long-term water use efficiency standards and direct potable reuse [DPR] regulations). Therefore, DSRSD has prepared the *2021 Alternative Water Supply Study* (2021 AWSS)*: A Framework for a Resilient and Sustainable Water Future* to accomplish the following goals and objectives:

- Update the 2015 Study with new and refined information, including input from potential regional partners.
- Update the 2015 Water Policy.
- Inform DSRSD's 2020 Urban Water Management Plan (UWMP) update.
- Support DSRSD's strategic plan goal to develop and implement an integrated recycled and potable water program.
- Provide a framework for a resilient and sustainable water future that outlines near-term and long-term strategies, accounting for future uncertainties and decision points, and informs and guides DSRSD advocacy and collaborative efforts.

Future Water Needs

DSRSD's total water demand (potable and recycled) is projected to be nearly 16,000 acre-feet per year (AFY) in 2045, representing an increase of about 3,000 AFY from 2020 (Figure ES-2). Recycled water could potentially offset about 30 percent of this increase (900 AFY) if wastewater is available. However, currently all wastewater treated at DSRSD's wastewater treatment plant (WWTP) is recycled in the summer months, which has prompted the DSRSD-EBMUD Recycled Water Authority (DERWA)[1] to implement a moratorium on new recycled water connections within EBMUD and DSRSD water service areas. Augmenting the recycled water supply—either through seasonal storage or a supplemental supply source (e.g., wastewater from a neighboring agency or local groundwater)—would enable expansion of the recycled water program and offset the need for additional potable water.

[1] DERWA is a Joint Powers Authority formed in 1995 by DSRSD and East Bay Municipal Utility District (EBMUD) for the purposes of producing and distributing recycled water through the San Ramon Valley Recycled Water Program. In 2014, DERWA executed agreements to extend recycled water service to the City of Pleasanton.

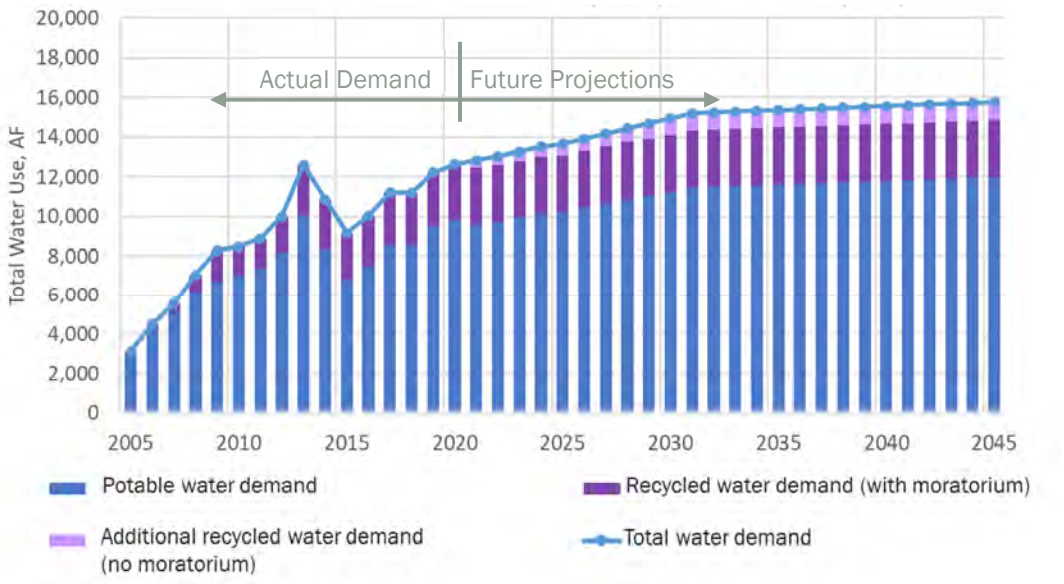


Figure ES-2. DSRSD's historical and projected future water demands

To mitigate risks associated with significant reliance on imported water supply, Zone 7 is continuing to develop local sources of water and diversify its water supply portfolio. In April 2019, Zone 7 completed its 2019 Water Supply Evaluation Update (2019 WSE Update) that documents Zone 7's current water supplies based on new information and experience gained since the 2012-16 drought. The 2019 WSE Update projects shortages of up to 50 to 70 percent by 2040 in dry years under the "no new water supply projects" scenario. These shortages would translate to significant cutbacks for DSRSD, which makes up about 25 percent of Zone 7's direct demand.

The long-term reliability of the SWP, and more generally, the water conveyance capability of the Delta, is also challenged by the instability of aging levees in the Delta (including their vulnerability to seismic events, climate change, and land subsidence), regulatory uncertainty, water quality issues including saltwater intrusion, and the declining health of the Delta ecosystem. These issues directly affect the Tri-Valley's long-term water supply reliability since a majority of Zone 7's water supply is and will continue to be tied to the Delta and SWP system.

Zone 7, in collaboration with other local and regional partner agencies, is exploring a range of new water supply, storage, and conveyance projects, to increase the long-term reliability and resilience of the Tri-Valley's water supplies.

Alternatives

DSRSD identified potential supply, storage, and conveyance options through three steps:

1. Revisited alternatives from the 2015 Study (and either screened them out or carried them forward)
2. Incorporated Zone 7's efforts
3. Explored additional projects that were not previously considered

The alternatives selected for evaluation in the 2021 AWSS are summarized in Figure ES-3. The alternatives include eight options for potable supply, storage, and conveyance—many of which are already being explored by Zone 7—and five options for non-potable supply and storage.

Currently being explored by Zone 7

		Supply	Storage	Conveyance
Potable Supply, Storage, and Conveyance				
P-1. DPR via Treated Water Augmentation (TWA)	The most direct form of reuse, with purified water introduced directly to the drinking water distribution system. This is the only type of potable reuse that DSRSD could pursue independently. Regulations are anticipated in 2023.	✓		
P-2. Tri-Valley Potable Reuse	Includes all regional potable reuse options (direct and indirect) being explored by Zone 7. Would utilize wastewater from DSRSD and/or Livermore's WWTP.	✓		
P-3. Regional Desalination	Bay Area Regional Desalination Project that would utilize Contra Costa Water District's (CCWD) existing intake/water right at Mallard Slough Pump Station to treat brackish water.	✓		
P-4. Water Transfers and Exchanges	Includes short-term transfers (as an interim solution while other projects are being developed) and possible long-term transfers.	✓		
P-5. Intertie	New intertie between Zone 7 and EBMUD, or possibly the San Francisco Public Utilities Commission (SFPUC). Would provide an alternate means to convey water to the Tri-Valley during emergency conditions.			✓
P-6. Delta Conveyance	Would help preserve SWP supply by protecting against earthquakes, sea level rise, and other Delta disruptions. Would also increase capacity for transfers.	✓		✓
P-7. Sites Reservoir	New off-stream storage project northwest of Sacramento that would also provide new supply.	✓	✓	
P-8. Los Vaqueros Reservoir Expansion and Transfer-Bethany Pipeline	Expansion of CCWD's existing Los Vaqueros Reservoir and new pipeline that would connect the reservoir to the South Bay Aqueduct and Zone 7's system. Zone 7 is exploring the project for storage and conveyance, though there is also potential for new supply.		✓	✓
Non-Potable Supply and Storage				
NP-1. Recycled Water Storage in Chain of Lakes	Storage of tertiary treated recycled water in Lakes F or G, once Zone 7 acquires the lakes from the gravel mining companies (which may not be for decades).		✓	
NP-2. Fringe Basin Groundwater	Use of Fringe Basin groundwater (which has limited potable supply potential) to supplement the recycled water supply.	✓		
NP-3. Groundwater from Hopyard 7 Well	Use of Zone 7's Hopyard 7 well in the Main Basin, which is unsuitable for drinking water due to elevated levels of arsenic, to supplement the recycled water supply (through blending at DSRSD's WWTP).	✓		
NP-4. Reverse Osmosis (RO) Reject from Zone 7's Groundwater Demineralization Facility	Intercepting the brine stream from Zone 7's groundwater demineralization facility and either treating or diluting it to add to the recycled water system.	✓		
NP-5. Wastewater from Neighboring Agency	Potential long-term agreement for wastewater from Central Contra Costa Sanitary District (CCCSD) or the City of Livermore. Both agencies are reserving wastewater for other future recycled water projects, so long-term availability is uncertain.	✓		

P = potable; NP = non-potable

Figure ES-3. Summary of 2021 AWSS potable and non-potable water alternatives

Evaluation

Alternatives were evaluated through a multi-step process, as summarized below.

1	As a first step, individual alternatives were evaluated based on their benefits and costs. Benefits and costs were informed by discussions with potential partner agencies.	Two alternatives were screened out at this stage due to low benefit-to-cost ratio: **NP-1** (Recycled Water Storage in Chain of Lakes) and **NP-4** (RO Reject from Zone 7's Groundwater Demineralization Facility)
2	The remaining alternatives were combined into four portfolios, each built around a different overall goal. Each portfolio offers different amounts of supply, storage, and conveyance based on the portfolio's goal. The intent was not to select a single portfolio, but rather to see how combinations of different alternatives perform together. Zone 7's 2020 UWMP sample portfolio was included as a reference point.	Reference Portfolio: Zone 7's 2020 UWMP Sample Portfolio **P-2.** Tri-Valley Potable Reuse **and/or** **P-3.** Regional Desalination, **P-4.** Transfers *(interim)*, **P-5.** Intertie, **P-6.** Delta Conveyance, **P-7.** Sites Reservoir, **P-8.** Los Vaqueros and Transfer-Bethany Portfolio 1: Maximize DSRSD Control **P-1.** DPR via TWA, **NP-2.** Fringe Basin Groundwater Portfolio 2: Maximize Resilience **P-2.** Tri-Valley Potable Reuse **or** **P-3.** Regional Desalination, **P-4.** Transfers *(interim)*, **P-6.** Delta Conveyance, **P-7.** Sites Reservoir, **P-8.** Los Vaqueros and Transfer-Bethany, **NP-2.** Fringe Basin Groundwater **or** **NP-3.** Hopyard 7 Portfolio 3: Align with DSRSD's 2015 Water Policy (as possible) **P-2.** Tri-Valley Potable Reuse, **P-3.** Regional Desalination, **P-5.** Intertie, **P-6.** Delta Conveyance, **P-7.** Sites Reservoir, **P-8.** Los Vaqueros and Transfer-Bethany, **NP-5.** Wastewater from Neighboring Agency Portfolio 4: Minimize Cost **P-6.** Delta Conveyance, **P-7.** Sites Reservoir, **NP-3.** Hopyard 7
3	The portfolios were tested against different uncertainties to determine relative risk.	**Portfolios 2 and 3** include many of the same elements as Zone 7's 2020 UWMP sample portfolio, with the addition of recycled water alternatives. These two portfolios are most diverse and perform best under uncertainties (e.g., climate change, public acceptance, and regulatory changes), while remaining within a similar cost range. **P-1** (DPR via TWA) is only included in Portfolio 1, as this portfolio seeks to maximize projects that would be directly under DSRSD's control. **P-4** (Water Transfers and Exchanges) was considered to augment SWP supply in the near-term while other projects are being developed.
4	Feasible implementation timelines for alternatives in the preferred portfolios informed near-term recommendations and the long-term strategy.	As shown in Figure ES-4, some regional projects are well underway and on track to be implemented within the next 5 to 10 years (e.g., Los Vaqueros Reservoir Expansion and Transfer-Bethany Pipeline). Other projects are less certain, with start and/or end dates dependent on various factors. Most non-potable projects could be implemented in less than five years if conditions allow for the project to move forward.

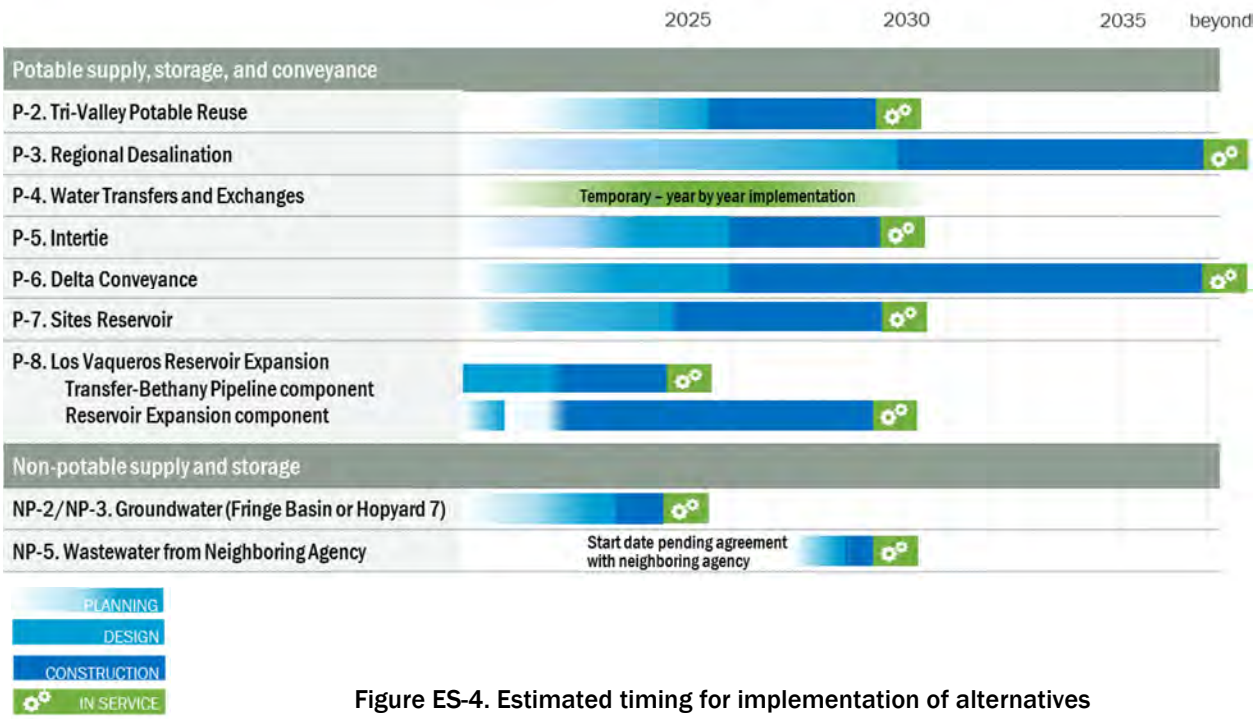


Figure ES-4. Estimated timing for implementation of alternatives

Timing is approximate and dependent on if/when projects move forward.

Based on the evaluation, the combination of alternatives in Portfolios 2 and 3 (shown to the right) offer multiple benefits and are most resilient to uncertainties. For many of these projects, additional studies are needed to further define the benefits and costs. Additionally, Zone 7 plans to update its WSE later in 2021. The update will include a more robust technical analysis of how various alternatives would complement existing water supplies and infrastructure and increase water resilience for the Tri-Valley.

In the near-term, it is recommended that DSRSD continue to support Zone 7's efforts, seek supplemental non-potable supply to expand the recycled water program, and explore potential near-term pilot projects to gather information and inform longer-term decisions.

Alternatives from preferred portfolios (Portfolios 2 and 3):

P-2. Tri-Valley Potable Reuse

P-3. Regional Desalination

P-4. Intertie

P-6 and P-7. Delta Conveyance and Sites Reservoir *(best when combined)*

P-8. Los Vaqueros Reservoir Expansion and Transfer-Bethany Pipeline

NP-2/NP-3. Groundwater from Fringe Basin or Hopyard 7

NP-5. Wastewater from Neighboring Agency *(requires willing partner)*

P = potable; NP = non-potable

Key near-term recommendations:

- **Support Zone 7's efforts to pursue additional supply, storage, and conveyance.**
- **Explore near-term pilots to gather information and inform longer-term decisions.**
- **Seek supplemental non-potable supplies to expand the recycled water program.**

Recommendations

Recommended near-term actions are described below. These early steps would complement and support Zone 7's ongoing water supply efforts and inform several upcoming milestones, including Zone 7's decisions regarding continued participation in the Los Vaqueros Reservoir Expansion (2021), Sites Reservoir (2021), and Delta Conveyance (2022) projects and DSRSD's water supply contract renewal with Zone 7 (2024).

As shown in the recommended framework (Figure ES-5), DSRSD's long-term strategy will depend on outcomes of these near-term actions and other external triggers. It is recommended that DSRSD review the framework in 2023 to incorporate new information (e.g., from Zone 7's upcoming 2021 WSE Update) and lessons learned from early efforts.

Near-term actions for DSRSD

Support Zone 7's efforts	
Advocate for Zone 7's continued participation in the Los Vaqueros Reservoir Expansion Project (including Transfer-Bethany Pipeline).	Given that this project has already completed environmental review and components can be online in the next 5 to 10 years, it offers near-term reliability and provides more certainty than projects that are still in the early planning stages. Additionally, the Transfer-Bethany Pipeline provides an alternate conveyance method to move water into the Tri-Valley.
Support Sites Reservoir with Delta Conveyance.	Sites Reservoir, a new off-stream storage project located northwest of Sacramento, would provide storage and new supply for the Tri-Valley. Because the reservoir is located north of the Delta, bundling this project with Delta Conveyance (which would help protect against sea level rise, earthquakes, and other Delta disruptions) would enable more reliable access to the supply.
Explore possible near-term pilots	
Potable reuse pilot with Alameda County Water District (ACWD), Union Sanitary District (USD), Zone 7, and the City of Livermore.	This concept would include construction of an advanced water purification pilot facility at DSRSD's WWTP. Purified water would be conveyed to ACWD via Alameda Creek, and ACWD would intercept the flow and divert it to Quarry Lakes for groundwater recharge. This pilot would provide a regional demonstration project, collect data to inform future regional potable reuse projects, and make use of wastewater effluent currently discharged to San Francisco Bay. Longer-term, this project could also include a transfer/exchange, by which ACWD would provide one of its water sources to DSRSD or Livermore (via Zone 7) in exchange for purified water.
Pilot Transfer with Zone 7 and EBMUD.	This pilot transfer would utilize DSRSD's existing interties with EBMUD. Although EBMUD's distribution system has limited capacity and is not designed for long-term, every year wheeling arrangements, a short-term pilot could demonstrate viability of this concept to support future dry-year or emergency transfers and inform possible future projects (e.g., a potential EBMUD-Zone 7 emergency intertie).
Seek supplemental non-potable supply	
Work with Zone 7 to collect more data on the Fringe Basin and Hopyard 7 well.	The Fringe Basin has limited potable supply potential due to high total dissolved solids but could possibly be used to supplement the recycled water supply. Similarly, Zone 7's Hopyard 7 well in the Main Basin is not used for drinking water due to elevated levels of arsenic, though may be suitable for non-potable uses. Further investigations are needed to determine the feasible quantity and quality of groundwater that could be introduced to the recycled water system.

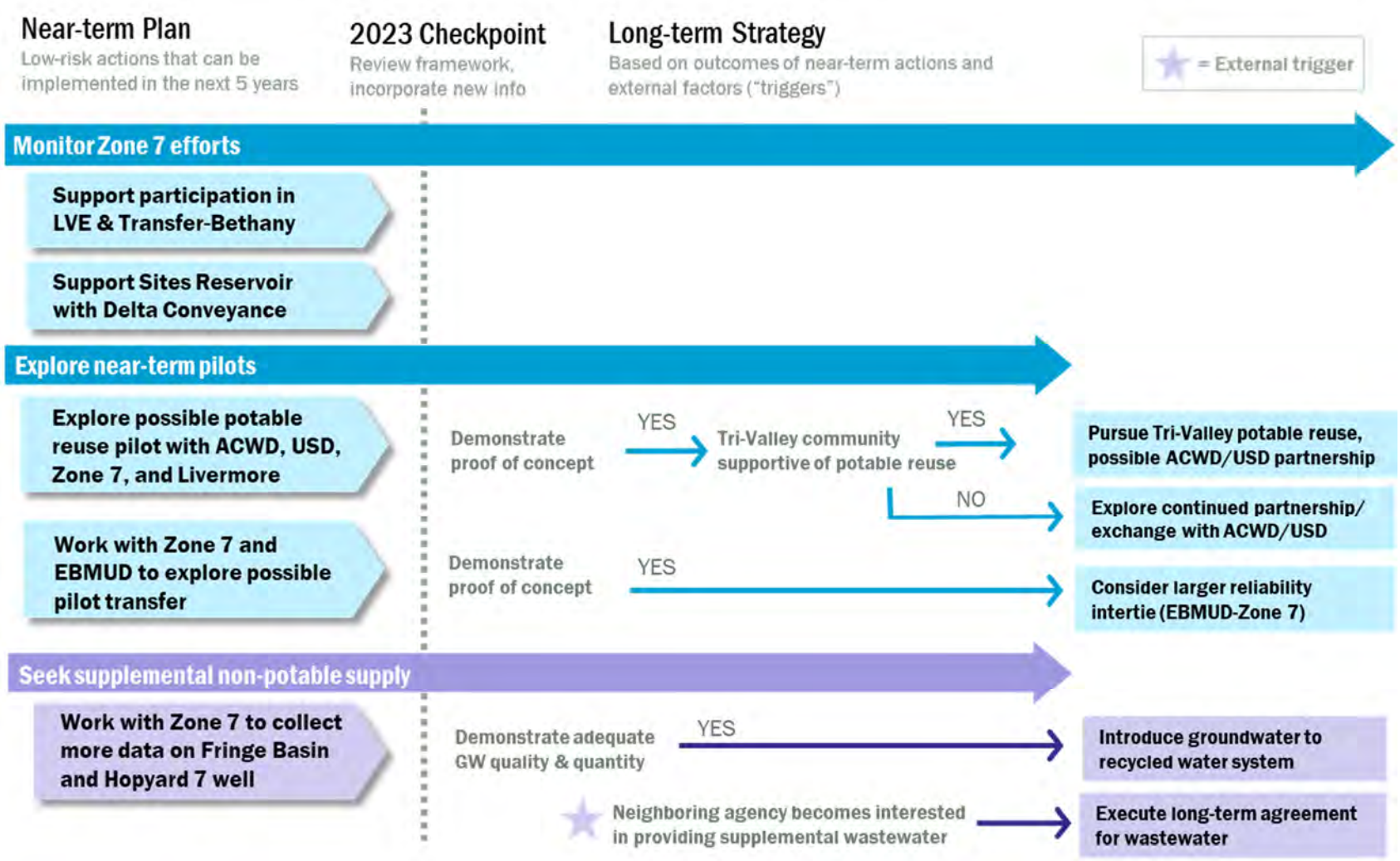


Figure ES-5. Recommended framework

Conclusions

Conditions have changed substantially since 2015. With conservation as a way of life in California, water demand projections are lower, and less wastewater is available for reuse. However, there is still potential for DSRSD to expand its recycled water program if additional supply can be added to the recycled water system. An integrated approach is needed to manage potable and recycled water supplies and make best use of available effluent.

Additionally, diverse portfolios improve resilience, enable flexibility, and reduce risk. A combination of supply, storage, and conveyance is needed to ensure reliability, and it is recommended that DSRSD continue to pursue an "all of the above" approach towards developing potential water projects. Near-term efforts (e.g., pilot projects, groundwater studies, and Los Vaqueros Reservoir Expansion) can enable progress while longer term projects are being developed. Partnerships are key to success, as collaborative projects offer new opportunities, multiple benefits, and improved regional reliability.

The recommended framework outlines near-term and long-term strategies for a resilient and sustainable water future, accounting for key uncertainties and decision points. It is recommended that DSRSD review and update the framework in 2023 to incorporate new information.

The results of the 2021 AWSS and recommended framework were presented to DSRSD's Board of Directors on April 6, 2021 and informed DSRSD's updated Water Resiliency Policy. The new policy was adopted by DSRSD's Board of Directors on April 20, 2021, replacing the 2015 Water Policy. Key principles in the adopted Water Resiliency Policy include:

- Emphasizing the need for collaborative partnerships for building water resiliency.
- Advocating for an "all of the above approach" to pursuing a diverse portfolio of water supply, storage, and conveyance projects.
- Prioritizing local and sustainable water sources and projects that contribute to regional self-reliance, while moving away from the more prescriptive goals in the 2015 Water Policy that were based on information that has evolved or substantially changed.
- Ensuring Zone 7 water shortage allocations recognize retailer water use efficiency and investments in new water supplies.
- Advancing the development of near-term projects that could be eligible for grant funding.

The 2021 AWSS and Water Resiliency Policy will guide DSRSD efforts to work collaboratively with other partner agencies on developing water projects to address the Tri-Valley's current and future water needs. DSRSD plans to review the 2021 AWSS and Water Resiliency Policy in 2023. As part of that review, DSRSD will evaluate progress made towards building a resilient and sustainable water future for its customers and update the framework to incorporate new information.

Appendix K

DSRSD Water Resiliency Policy

DRAFT

Dublin San Ramon Services District
Water, wastewater, recycled water

Policy

Policy No.: P300-21-1	**Type of Policy:** Operations
Policy Title: Water Resiliency	
Policy Description: Provides guidance for building a resilient and sustainable water supply future for District customers	
Approval Date: 4/20/2021	**Last Review Date:** 2021
Approval Resolution No.: 22-21	**Next Review Date:** 2023
Rescinded Resolution No.: 89-15	**Rescinded Resolution Date:** 10/20/2015

It is the policy of the Board of Directors of Dublin San Ramon Services District to:

1. Reliably meet existing and projected water demands within the District's water service area by supplying water to meet 100% of customer water demands 90% of the time and at least 85% of customer water demands 99% of the time.

2. Collaborate with local and regional partners to build a resilient and sustainable water supply through implementation of a diverse portfolio of water supply, conveyance, and storage projects that provides flexibility to manage our water system against future uncertainties.

3. Advocate for the continued exploration and development of a broad array of projects that have the potential to improve water resiliency for the Tri-Valley, such as Bay Area Regional Desalination, Delta Conveyance, Interties, Los Vaqueros Reservoir and Transfer Bethany Pipeline, Potable Reuse, Sites Reservoir, Water Transfers, and Expanded Recycled Water Programs.

4. Prioritize the use of locally available and sustainable water supply sources and projects that contribute to regional self-reliance.

5. Advance the development of near-term water resiliency projects through local partnerships and seek grant funding to facilitate project implementation and reduce costs to District customers.

6. Support efforts by other agencies to pursue grant funding for statewide and regional projects that improve water resiliency for District customers.

7. Ensure that during droughts and other water supply shortage conditions, Zone 7 Water Agency allocates water between the treated water retailers in an equitable manner that recognizes water use efficiency and investments in new water supplies that reduce potable water demands.

8. Meet the State's long-term water use and water loss efficiency standards by promoting reasonable and efficient use of water supplies through conservation programs and water optimization tools and technologies.

9. Maximize treated wastewater effluent as a valuable water resource and minimize environmental pollution to the San Francisco Bay by recycling 100% of the flows that enter the Regional Wastewater Treatment Plant, apart from treatment residual (brine).

10. Advocate for programs to protect and enhance the quality of drinking water delivered to District customers.

Appendix L

Zone 7 Water Supply Policy (Resolution No. 13-4230)

DRAFT

ZONE 7
ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

BOARD OF DIRECTORS

RESOLUTION NO 13-4230

INTRODUCED BY DIRECTOR QUIGLEY
SECONDED BY DIRECTOR STEVENS

Water Supply Reliability Policy

WHEREAS, the Zone 7 Board of Directors desires to maintain a highly reliable Municipal and Industrial (M&I) water supply system so that existing and future M&I water demands can be met during varying hydrologic conditions; and

WHEREAS, the Board has an obligation to communicate to its M&I customers and municipalities within its service area the ability of Zone 7's water supply system to meet projected water demands; and

WHEREAS, the Board on August 18, 2004 adopted Resolution No. 04-2662 setting forth its Reliability Policy for Municipal & Industrial Water Supplies; and

WHEREAS, the Board desires to revise the Reliability Policy to reflect recent data, analysis, and studies.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby rescinds Resolution No. 04-2662 adopting the August 18, 2004 Reliability Policy for Municipal & Industrial Water Supplies; and

BE IT FURTHER RESOLVED that the Board hereby adopts the following level of service goals to guide the management of Zone 7's M&I water supplies as well as its Capital Improvement Program (CIP):

Goal 1.Zone 7 will meet its treated water customers' water supply needs, in accordance with Zone 7's most current Contracts for M&I Water Supply, including existing and projected demands as specified in Zone 7's most recent Urban Water Management Plan (UWMP), during normal, average, and drought conditions, as follows:

- At least 85% of M&I water demands 99% of the time
- 100% of M&I water demands 90% of the time

Goal 2:Provide sufficient treated water production capacity and infrastructure to meet at least 80% of the maximum month M&I contractual demands should any one of Zone 7's major supply, production, or transmission facilities experience an extended unplanned outage of at least one week.

BE IT FURTHER RESOLVED that to ensure that this Board policy is carried out effectively, the Zone 7 General Manager will provide a water supply status report to the Board every five years with the Zone 7 Urban Water Management Plan that specifies how these goals will be, or are being, achieved.

If the General Manager finds that the goals cannot be met during the first five years of the Urban Water Management Plan, then the Board will hold a public hearing within two months of the General Manager's finding to consider remedial actions that will bring Zone 7 into substantial compliance with the stated level of service goals. Remedial actions may include, but are not limited to, voluntary conservation or mandatory rationing to reduce water demands, acquisition of additional water supplies, and/or a moratorium on new water connections. After reviewing staff analyses and information gathered at the public hearing, the Board shall, as expeditiously as is feasible, take any additional actions that are necessary to meet the level of service goals during the following five-year period; and

BE IT FURTHER RESOLVED that the Zone 7 General Manager shall prepare an Annual Review of the Sustainable Water Supply Report which includes the following information:

(1) An estimate of the current annual average water demand for M&I water as well as a five-year projection based on the same information used to prepare the UWMP and CIP;
(2) A Summary of available water supplies to Zone 7 at the beginning of the calendar year;
(3) A comparison of current water demand with the available water supplies; and
(4) A discussion of water conservation requirements and other long-term supply programs needed to meet Zone 7 M&I water demands for single-dry and multiple-dry year conditions, as specified in the Zone 7's UWMP.

A summary of this review will be provided to M&I customers.

Definitions

Level of Service for Annual Water Supply Needs—the level of service is the percent of existing or projected water demand that Zone 7's water supply system can meet during two key conditions: (1) during various hydrologic conditions and (2) during unplanned outages of major facilities. *Capital Improvement Program (CIP)*—the CIP is Zone7's formal program for developing surface and ground water supplies, along with associated infrastructure, including import water conveyance facilities, surface water treatment plants, groundwater wells, and M&I water transmission system to meet projected water demands.

Normal conditions—conditions that most closely represent median runoff or allocation from all normally contracted or available water supplies from the historic record.

Average conditions—conditions that most closely represent the average runoff or allocation from all normally contracted or legally available water supplies from the historic record.

Drought conditions—conditions that most closely represent reduced runoff or allocation level from the historic record from all normally contracted or legally available water supplies, including both single-dry and multiple-dry year conditions.

Single-dry year condition—a condition that most closely represents the lowest yield over a one-year period from the historic record from all normally contracted or legally available supplies.

Multiple-dry year condition—a condition that most closely represents three or more consecutive dry years from the historic record that represent the lowest yields from all normally contracted or legally available supplies.

Available water supplies—consist solely of (1) water supplies that Zone 7 has contracted for (e.g., listed under Schedule A of the State Water Contract, dry-year water options, special contracts with other water districts, etc.) and (2) water actually stored in surface and subsurface reservoirs.

Maximum Month—the largest monthly average water use.

ADOPTED BY THE FOLLOWING VOTE:

AYES: DIRECTORS FIGUERS, GRECI, MACHAEVICH, PALMER, QUIGLEY, RAMIREZ HOLMES STEVENS

NOES: NONE

ABSENT: NONE

ABSTAIN: NONE

I certify that the foregoing is a correct copy of a Resolution adopted by the Board of Directors of Zone 7 of the Alameda County Flood Control and Water Conservation District on October 17, 2012.

By _____
President, Board of Directors

Appendix M

Water Shortage Contingency Plan

DRAFT

Dublin San Ramon Services District Water Shortage Contingency Plan

DRAFT

JOINTLY PREPARED BY

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AFY	Acre-Feet per Year
AMI	Advanced Metering Infrastructure
AWSDA	Annual Water Supply and Demand Assessment
Board	Board of Directors
Cal Water	California Water Service-Livermore District
CWC	California Water Code
DSRSD	Dublin San Ramon Services District
DWR	Department of Water Resources
GPQ	Groundwater Pumping Quota
Legislature	California State Legislature
Livermore	City of Livermore
M&I	Municipal and Industrial
PIO	Public Information Officer
Pleasanton	City of Pleasanton
SB	Senate Bill
UWMP	Urban Water Management Plan
WARN	Water/Wastewater Agency Response Network
Water ERP	Water Emergency Response Plan
WSCP	Water Shortage Contingency Plan
Zone 7	Zone 7 Water Agency

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Dublin San Ramon Services District
Water Shortage Contingency Plan

Water shortages occur whenever the available water supply cannot meet the normally expected customer water use. Water shortages can be due to several reasons, such as climate change, drought, and catastrophic events. Drought, regulatory action constraints, and natural and manmade disasters may occur at any time. In 2018, the California State Legislature (Legislature) enacted two policy bills, (Senate Bill (SB) 606 (Hertzberg) and Assembly Bill (AB) 1668 (Friedman)) (2018 Water Conservation Legislation), to establish a new foundation drought planning to adapt to climate change and the resulting longer and more intense droughts in California. The 2018 Water Conservation Legislation set new requirements for water shortage contingency planning.

This Water Shortage Contingency Plan (WSCP) describes the Dublin San Ramon Services District's (DSRSD) strategic plan to prepare and respond to water shortage conditions resulting from a drought, regulatory action, emergency, or other types of events. The WSCP also includes defined actions to reduce demand over six shortage condition levels, from 10 percent to more than 50 percent demand reductions. This WSCP provides a guide for DSRSD to prevent catastrophic service disruptions and has been updated to be consistent with the 2018 Water Conservation Legislation requirements. As part of this WSCP, DSRSD's legal authorities, communication protocols, compliance and enforcement, and monitoring and reporting are described. District Code Chapter 4.10 supports DSRSD's WSCP.

DSRSD intends for this WSCP to be dynamic so that it may assess response action effectiveness and adapt to emergencies and catastrophic events. Refinement procedures to this WSCP are provided to allow DSRSD to modify this WSCP outside of the Urban Water Management Plan (UWMP) process.

1.0 WATER SUPPLY RELIABILITY ANALYSIS

Chapters 6 and 7 of DSRSD's 2020 UWMP present DSRSD's water supply sources and reliability, respectively. Zone 7 Water Agency (Zone 7) is DSRSD's exclusive water wholesaler, so DSRSD's water supply reliability is fundamentally linked with Zone 7's water supply reliability. Findings show DSRSD can reliably meet its projected demands through 2045 in normal and dry hydrologic conditions, including single dry years and five consecutive dry years.

Statewide water supply conditions, changes in groundwater levels, and actions by other agencies may impact Zone 7's available water supply, therefore affecting DSRSD. For Zone 7, a water shortage condition occurs when the available supply of potable water cannot meet its retailers' normal water demands for human consumption, sanitation, fire protection, and other beneficial uses. Besides DSRSD, Zone 7's retailers include the California Water Service-Livermore District (Cal Water), the City of Livermore (Livermore), and the City of Pleasanton (Pleasanton).

The analysis associated with this WSCP was developed in the context of Zone 7's water supply sources and reliability. In some cases, DSRSD and Zone 7 may be able to foresee a water shortage condition, but the water shortage may also be caused by an unforeseen sudden or emergency event. In general, Zone 7's, and thereby DSRSD's, water supply conditions may be affected by the following:

- SWP supply allocations and storage levels
- Delta vulnerability to seismic events, changing environmental and regulatory requirements, and climate change
- Salts, nutrients, or contaminants in the Main Basin groundwater supply

2.0 ANNUAL WATER SUPPLY AND DEMAND ASSESSMENT PROCEDURES

Beginning July 1, 2022, California Water Code (CWC) §10632.1 requires water suppliers to submit an Annual Water Supply and Demand Assessment (AWSDA) and an Annual Water Shortage Assessment Report to the Department of Water Resources (DWR). This section provides the procedures for DSRSD to conduct its AWSDA, which will inform DSRSD's Annual Water Shortage Assessment Report and assist DSRSD with planning for potential water supply shortages. The objective of the AWSDA is to forecast near-term supply conditions so that DSRSD can prepare logistically and financially for any anticipated water supply constraints, as well as enact appropriate shortage response actions in a timely manner.

DSRSD's AWSDA will be developed from Zone 7's "Annual Review of the Sustainable Water Supply Report" (Annual Sustainability Report), which covers near-term planning of water supplies over the upcoming five years and includes the following:

- An estimate of the current annual demand for municipal and industrial (M&I) water, as well as a five-year projection (including water losses and water conservation) based on projections from Zone 7's retailers
- A description and quantification of available water supplies to Zone 7 at the beginning of the calendar year and projected water supplies over the next five years
- A comparison of current and projected water demand with the available water supplies to determine if a water shortage condition is anticipated
- A review of water supply programs (to maintain long-term service reliability) and existing infrastructure and capabilities
- A discussion of water conservation requirements and other long-term supply programs needed to meet Zone 7 M&I water demands for single-dry and multiple-dry year conditions, as specified in Zone 7's UWMP

This section provides the decision-making process, key data inputs, and methodology necessary for DSRSD to produce its AWSDA. This includes steps DSRSD may take to declare a water shortage emergency and associated water shortage stage (see Section 0) and implement water shortage response actions (see Section 0).

2.1 Decision-Making Process

DSRSD will use the decision-making process described below to produce its AWSDA. DSRSD may adjust and improve this process as needed.

DSRSD's Engineering Department Planning Unit is responsible for preparing DSRSD's AWSDA and Annual Water Shortage Assessment Report and submitting them to DWR by July 1st of each year (starting in 2022). Typically, by April of each year, staff will finalize the assessment based on Zone 7's Annual Sustainability Report, and present the AWSDA and Annual Water Shortage Assessment Report to the Engineering Services Manager, or designee, for review and approval. If the AWSDA finds that the available water supply will be sufficient to meet expected demands for the current year and one subsequent dry year, no further action will be required.

DSRSD's AWSDA development process, is described in Table 1. Due to variations in climate and hydrologic conditions, DSRSD's assessment schedule may vary. DSRSD intends to implement shortage response actions to effectively address anticipated water shortage conditions in a timely manner while complying with the State's reporting requirements.

Table 1. Schedule of Annual Sustainability Report Activities

Schedule	Activities	Responsible Party
January	Plan for water demands for the current year and one subsequent dry year. Provide demand projections to Zone 7.	Planning Staff
Late March to Mid-April	Zone 7 finalizes its Annual Sustainability Report and determines if a water shortage condition is expected.	Zone 7
Late-March to mid-April	Complete AWSDA based on Zone 7's Annual Sustainability Report, which is typically presented to their Board by the beginning of April.	Planning Staff
Late April-May	Based on determinations of the AWSDA, prepare the Annual Water Shortage Assessment Report with recommendations on water shortage condition determination and response actions. Submit to Engineering Services Manager, or designee, for review.	Planning Staff
Late April-May	Review AWSDA and Annual Water Shortage Assessment Report and provide comments as needed.	Engineering Services Manager
Early June	Finalize and approve AWSDA and Annual Water Shortage Assessment Report.	Planning Staff and Engineering Services Manager
Late June	Submit finalized AWSDA and Annual Water Shortage Assessment Report to DWR by July 1.	Planning Staff

Should the AWSDA find that available supply will not meet expected demands, the General Manager, or designee, will coordinate with the region's water service providers and Alameda County and Contra Costa County for the possible proclamation of a local emergency. Staff will present the finalized assessment and recommendations on water shortage condition determination and actions to DSRSD Board of Directors (Board). Recommended actions may include a declaration of a water shortage emergency, a water shortage stage, and water shortage actions.

Based on the findings of the AWSDA, DSRSD Board will determine if a water shortage condition exists and, if needed, adopt a resolution or ordinance declaring a water shortage emergency and an associated water shortage stage and authorizing water shortage actions. Staff will then prepare DSRSD's Annual Water Shortage Assessment Report, incorporating DSRSD Board determinations and approved actions. The sequence of decision-making activities is provided in Table 2. The schedule of the activities may be adjusted as appropriate to allow DSRSD sufficient time to implement shortage response actions in a timely manner.

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Table 2. Schedule of Decision-Making Activities if Water Shortage Condition Exists		
Schedule	Activities	Responsible Party
Late April-May	Prepare recommendations on water shortage condition determination and action based on AWSDA findings. Prepare resolution or ordinance approving determinations and actions.	Planning Staff
Late April-May	Coordinate with the region's water service providers, Alameda County, and Contra Costa County for the possible proclamation of a local emergency.	General Manager or Designee
Late April-May	Present finalized determinations and recommendations, along with resolutions approving determinations and actions.	Engineering Services Manager or Designee
May	Receive presentation of finalized determinations and recommendations. Make a determination of the degree of emergency and act on resolutions that declare a water shortage emergency condition. Authorize water shortage response actions for implementation.	DSRSD Board
May	If a water shortage emergency condition is declared, implement the WSCP and the water shortage response actions as approved by DSRSD Board.	General Manager or Designee
May	Finalize AWSDA and incorporate Board decision in Annual Water Shortage Assessment Report.	Planning Staff
June	Submit final AWSDA and Annual Water Shortage Assessment Report to DWR by July 1.	Planning Staff

2.2 Key Data Inputs

The State requires that the AWSDA evaluate supplies and demands for, at a minimum, the current year and one subsequent dry year. The planned water supply and demand for the current year and a subsequent dry year will be used to evaluate DSRSD's water supply reliability.

Planned water supplies will be used as input to the AWSDA for the current year and the following one dry year. In planning for water supplies, the following factors are considered, as applicable and appropriate:

1. Zone 7 water supply availability
2. Hydrological conditions
3. Regulatory conditions
4. Contractual constraints
5. Water quality conditions
6. Infrastructure capacity constraints or changes
7. Capital improvement project implementation

Planned water supply sources and quantities will be described and be reasonably consistent with the supply projections in Chapter 6 (Water Supply Characterization) of DSRSD's most recent UWMP. Should supply sources and projections differ significantly between the AWSDA and the UWMP, an explanation for the difference will be provided.

Planned unconstrained water demands will be used as input to the AWSDA for the current year and the following one dry year. Unconstrained water demands are customer demands where no water conservation measures are in effect. In planning for water demands, the following factors are considered, as applicable and appropriate:

1. Weather conditions
2. Water year type
3. Population changes (e.g., due to development projects)
4. Anticipated new demands (e.g., changes to land use)
5. Pending policy changes that may impact demands
6. Infrastructure operations

Planned water demand types and quantities will be described and should be reasonably consistent with the demand projections in Chapter 4 (Water Use Characterization) of DSRSD's most recent UWMP. Should the demand projections deviate significantly between the AWSDA and the UWMP, an explanation for the difference will be provided.

2.3 Assessment Methodology

In preparing the AWSDA, DSRSD will use the following assessment methodology and criteria to evaluate the agency's water supply reliability for the current year and following one dry year.

DSRSD uses a spreadsheet to plan for current year and future year supply and demands. Planned supply and demand inputs described in Section 2.2 will be entered in the spreadsheet in annual increments. As needed, the increments may be revised to monthly or seasonal periods to more closely evaluate specific conditions and needs.

Supply and demand will be compared to determine DSRSD's water supply reliability in the current year and the following one dry year. DSRSD's water supply will be deemed reliable if it can meet planned water demands in both the current year and the following dry year. If water supply cannot meet planned water demands in the current year or the following dry year, the extent of the water shortage condition will be determined, and DSRSD will prepare response actions in accordance with this WSCP.

Findings from the AWSDA will be presented to DSRSD Board for consideration, along with recommendations for action.

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3.0 SIX STANDARD WATER SHORTAGE LEVELS

To provide a consistent regional and statewide approach for conveying the relative severity of water supply shortage conditions, the 2018 Water Conservation Legislation mandates that water suppliers plan for six standard water shortage levels that correspond to progressive reductions of up to 10, 20, 30, 40, 50 percent, and greater than 50 percent from the normal reliability condition. Each shortage condition should correspond to additional actions water suppliers would implement to meet the severity of the impending shortages.

For each of the State's standard shortage levels (also called "stages"), Table 3 summarizes the water shortage range (i.e., percent shortage from normal supplies) and a brief narrative description of the corresponding water shortage condition. These water shortage stages apply to both foreseeable and unforeseeable water supply shortage conditions. DSRSD's 2015 UWMP included four stages that addressed up to 50 percent water demand reduction. Table 3 presents DSRSD's reorganized stages, which align with the State's standard stages.

As described in Section 2.0, DSRSD will conduct an AWSDA to determine its water supply condition for the current year and the following one dry year. Preparing the AWSDA helps DSRSD ascertain the need to declare a water shortage emergency and water shortage stage. In other cases, DSRSD may need to declare a water shortage emergency due to unforeseen water supply interruptions. When DSRSD anticipates or identifies that water supplies may not be adequate to meet the normal water demands to serve its customers, DSRSD Board may determine that a water shortage exists and consider a resolution to declare a water shortage emergency and associated stage. The shortage stage provides direction on shortage response actions.

Table 3. Water Shortage Contingency Plan Levels (DWR Table 8-1)

Shortage Level	Percent Shortage Range	Shortage Response Actions (*Narrative description*)	Water Shortage Condition (Narrative description)
1	Up to 10%	Voluntary Reduction; See Table 8-2.	• DSRSD has adequate supply and seeks to preserve water resources for the future; or, • Assessment shows that water supply is not able to meet normal demand and up to 10% demand reduction will be required.
2	Up to 20%	Minimal Reduction; See Table 8-2.	• Assessment leads to a reasonable conclusion that water supplies may not adequately meet normal demands in the current or upcoming years. Up to 20% demand reduction will be required.
3	Up to 30%	Moderate Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, demand reduction up to 30% is required in the current or upcoming years.
4	Up to 40%	Significant Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, demand reduction up to 40% is required in the current or upcoming years.
5	Up to 50%	Severe Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, demand reduction up to 50% is required in the current or upcoming years.
6	>50%	Critical Reduction; See Table 8-2.	• Previous water conservation target has not been met; or, • Under definable events, a critical demand reduction greater than 50% is required in the current or upcoming years.

4.0 SHORTAGE RESPONSE ACTIONS AND EFFECTIVENESS

CWC §10632 (a)(4) requires shortage response actions that align with the defined shortage levels. DSRSD's shortage response actions consist of a combination of demand reduction, supply augmentation, and operational changes. The specific suite of response actions implemented depends on the event that precipitates a water shortage stage, the time of the year the event occurs, the water supply sources available, and the condition of DSRSD's water system infrastructure. In general, DSRSD plans to use a balanced and dynamic approach, adapting its response actions to close the gap between water supplies and water demand and meet the water use goals associated with the declared water shortage stage.

The shortage response actions discussed below may be considered as tools that allow DSRSD to respond to water shortage conditions. During the previous drought, DSRSD implemented shortage response actions in concert with each other. DSRSD monitored system-wide water use as described in Section 9, and continuously monitored and adjusted its suite of response actions to reasonably equate demands with available supply.

Because DSRSD has implemented shortage response actions in concert with each other and made continuous adjustments, the extent to which implementation of each action reduces the gap between water supplies and water demand is difficult to quantify and thus only estimated. Certain response actions, such as public outreach and enforcement, support the effectiveness of other response actions and do not have a quantifiable effect on their own.

4.1 Demand Reduction

During water shortage conditions, DSRSD plans to reduce demand by implementing the actions shown in Table 4. The District may request voluntary conservation when minimal water use reductions are needed such as in the lower water shortage levels. Demand reduction actions are organized by the triggering water shortage level (i.e., stage), and each action includes an estimate of how much its implementation will reduce the shortage gap. For each demand reduction action, Table 4 also indicates if DSRSD uses compliance actions such as penalties, charges, or other enforcement. Demand reduction actions are only listed in Table 4 in the stage when they are first implemented. DSRSD will continue to use these actions in higher stages unless otherwise noted.

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Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only***
1	Expand Public Information Campaign	Boosts the effectiveness of other methods; varies based on outreach intensity - not readily quantifiable	Continue and expand the current public notification on conservation, and escalate notification as shortage level moves up to next level	No
1	Other - Require automatic shut off hoses	Varies based on activity - not readily quantifiable.	DSRSD distributes hose shut off valves to customers on request or during events	No
1	Landscape - Restrict or prohibit runoff from landscape irrigation	Varies based on landscape area and duration of activity - not readily quantifiable.	Monitor large user usages through AMI meter data, bi-monthly usage comparison are provided to customers in the bill	No
1	Other - Customers must repair leaks, breaks, and malfunctions in a timely manner	Boosts the effectiveness of AMI system - not readily quantifiable	Continue and expand notification to customers of potential leaks obtained from AMI analytics	No
1	Implement or Modify Drought Rate Structure or Surcharge	Boosts the effectiveness of other methods - not readily quantifiable	Under normal water supply condition and in shortage Stage 1 - voluntary condition, the then-current water rate structure remains in place. The Drought Rate Structure will be applied when DSRSD Board declares a mandatory water shortage emergency at Stage 1.	Yes
1	Provide Rebates on Plumbing Fixtures and Devices	Up to 9,000 gal/year/participating household depending on the number and type of fixtures being replaced	DSRSD distributes low-flow fixtures to customers.	No
2	CII - Lodging establishment must offer opt out of linen service	250-500 gal/day/hotel	Provide conservation message stickers for bathroom mirrors	No
2	CII - Restaurants may only serve water upon request	50 gal/day/commercial connection	Provide table tents with water conservation message	No
2	CII - Commercial kitchens required to use pre-rinse spray valves	50 gal/day/restaurant		No
2	Decrease Line Flushing	Depends on extent and frequency of current flushing activities	Only perform line flushing for water quality and hydrant maintenance when it is required for health and safety needs	No
2	Landscape - Limit landscape irrigation to specific times	Depends on times that irrigation will be allowed, but can reduce water use by 20-25 gallons per day per household	Watering is allowed only between 9 pm and 6 am	Yes
2	Landscape - Limit landscape irrigation to specific days	Every third day - 22% reduction; twice a week - 33% reduction; once a week - 56% reduction	Irrigation is limited to three, non-consecutive days per week	Yes

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Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only***
2	Other - Prohibit use of potable water for construction and dust control	3,000 gal/acre/day for construction areas	Customers with the temporary potable water construction meter are required to replace meter with recycled water construction meter	Yes
2	Other - Prohibit use of potable water for washing hard surfaces	Varies based on surface area - not readily quantifiable	Except for building exteriors and fences for the sole purpose of repainting or making repairs. Pressurized washer is required to be equipped with a quick action shutoff nozzle. Windows may be cleaned using a bucket.	No
3	Provide Rebates on Plumbing Fixtures and Devices	Up to 9,000 gal/year/participating household depending on the number and type of fixtures being replaced	DSRSD provides additional funding to Zone 7 rebate program fund for High Efficiency Clothes Washer	No
3	Provide Rebates for Landscape Irrigation Efficiency	Not quantifiable. Depends on the number of participants and fixtures replaced.	DSRSD provides additional funding to Zone 7 rebate program funds for Weather-Based Irrigation Controllers	No
3	Provide Rebates for Turf Replacement	Up to 45 gallons/year per square foot of lawn replaced	DSRSD provides additional funding to Zone 7 Water-Efficient Lawn Conversion rebate fund for turf replacement	No
3	Increase Water Waste Patrols	Boosts the effectiveness of other methods - not readily quantifiable	Utilize analytics on AMI meter system to identify water waste	Yes
3	Offer Water Use Surveys	Boosts the effectiveness of other methods - not readily quantifiable	Residential Water Survey Program; Large Landscape Audit Support Services Program	No
3	Landscape - Limit landscape irrigation to specific days	Every third day - 22% reduction; twice a week - 33% reduction; once a week - 56% reduction	Irrigation is limited to two, non-consecutive days per week	Yes
4	Pools and Spas - Require covers for pools and spas	Evapotranspiration of approximate surface area of pools	DSRSD provides rebates fund for pool cover	No
4	Pools - Allow filling of swimming pools only when an appropriate cover is in place.	Evapotranspiration of approximate surface area of pools		No
4	Other water feature or swimming pool restriction	Evapotranspiration of approximate water surface area	Must be equipped with a recirculating pump; Allow drain and refill of pools and spas only for health or structural needs; Prohibit initial filling	No

Table 4. Water Shortage Contingency Plan Demand Reduction Actions (DWR Table 8-2)

Shortage Level	Demand Reduction Actions	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*	Penalty, Charge, or Other Enforcement? ***For Retail Suppliers Only***
4	Other - Prohibit vehicle washing except at facilities using recycled or recirculating water	100-200 gal/year/residential connection	Vehicles may be washed at a residence home using a hose equipped with a shutoff nozzle. At a dealership or other commercial facility, vehicles may be washed using buckets or a self-contained washing system that not directly connected to a potable water supply.	No
5	Water Features - Restrict water use for decorative water features, such as fountains	Evapotranspiration of approximate water surface area	Decorative water features must be equipped with a recirculating pump; Prohibit potable water use; Allow drain and refill only for health or structural needs	Yes
5	Moratorium or Net Zero Demand Increase on New Connections	No additional connections.		No
5	Landscape - Prohibit certain types of landscape irrigation	Boosts the effectiveness of other methods - not readily quantifiable	Prohibit spray irrigation for new developments or replacement projects; allow drip to save trees and non-turf plants	Yes
6	Landscape - Prohibit all landscape irrigation	30% to 60% of irrigation demands		Yes
NOTES: Katz, D. et al. 2015. Evaluating the Effectiveness of a Water Conservation Campaign: Combining experimental and field methods. Journal of Environmental Management 180: 335-343.				

The District may adopt mandatory prohibitions in addition to State prohibitions as needed should it find that its water shortage response actions are not closing the gap between anticipated supply and demands. Prohibitions may include further restrictions on days and hours of landscape irrigation and washing of vehicles or hard surfaces listed in Table 4.

DSRSD will monitor water production, demands, its customers water usage as necessary, and changing conditions to determine the intensity of its public outreach, the extent of its enforcement actions, and the need to adjust its water shortage stage declaration as discussed in Section 9.0.

4.2 Supply Augmentation and Other Actions

Chapter 6 of DSRSD's 2020 UWMP describes DSRSD's normal supply portfolio, which includes purchased treated water from Zone 7 and local groundwater pumped by Zone 7 on behalf of DSRSD. Per its water supply contract with Zone 7, DSRSD has a groundwater pumping quota (GPQ) of 645 acre-feet per year (AFY).

Furthermore, DSRSD has emergency interties with Livermore, Pleasanton, and EBMUD. During short-term water shortage events, DSRSD may opt to activate those interties to augment its supplies.

Table 5 lists the supply augmentation actions and other actions that DSRSD may take during higher water shortage levels.

Table 5. Supply Augmentation and Other Actions (DWR Table 8-3)

Shortage Level	Supply Augmentation Methods and Other Actions by Water Supplier	How much is this going to reduce the shortage gap? *Include units used (volume type or percentage)*	Additional Explanation or Reference *(optional)*
All Level	Expand Public Information Campaign	Action boost other measures; not quantifiable.	Continue and expand the current public notification on conservation, and escalate notification as shortage level moves up to next level
All Level	Other Actions (describe)	Depends on extent and frequency of current flushing activities; not quantifiable.	DSRSD performs line flushing only in critical areas of the distribution system to meet water quality requirements
5	New Recycled Water	Up to contractural amount	Pump groundwater from Fringe Basin and deliver to wastewater treatment plant to be treated for recycled water. Obtaining new recycled water will require new agreement.
5	Transfers	Up to contractual amount	City of Pleasanton Interties
5	Transfers	Up to contractual amount	City of Livermore Interties
5	Transfers	Up to contractual amount	EBMUD Interties

4.3 Operational Changes

DSRSD can make several operational changes to address water shortages. Operational changes may include the following:

- Limit its line flushing only in critical areas of the distribution system to address water quality issues
- Require users to use recycled water in lieu of potable water for short-term non-potable water use, such as construction use

4.4 Emergency Response Plan

As stated in Section 3, DSRSD's water shortage stages (Table 3) apply to both foreseeable and unforeseeable water supply shortage conditions. The latter includes catastrophic water shortage conditions, which are addressed in DSRSD's Water Emergency Response Plan (Water ERP). Currently being revised in 2021, the Water ERP outlines preparation, response, and recovery procedures associated with unforeseeable incidents such as water supply contamination, earthquake, infrastructure failure, and other events.

Per DSRSD Policy No. P300-20-31, under emergency conditions in which immediate actions must be taken to protect lives and property, respond to emergencies, and to restore essential services for public health and safety, DSRSD's designated Emergency Manager (General Manager or designee) may proclaim a State of Emergency and activate the DSRSD ERP. The ERP includes action plans that are to be used in response to such events and incidents.

DSRSD will also follow the lead of Zone 7, or the State of California, during a major catastrophe or drought period. When Zone 7 announces a curtailment in water deliveries, DSRSD will assess the impact on its water supplies and determine its water shortage level. DSRSD will monitor the situation closely, both from a supply and demand perspective, and carefully select the appropriate shortage response actions to close

the gap between anticipated supplies and demand. DSRSD will move from one stage to the next if the situation worsens and reduce restrictions when it subsides. To provide supplies during an emergency, DSRSD has two interties with EBMUD, one intertie with Livermore, and two interties with Pleasanton. DSRSD maintains backup power generators to provide power to critical facilities in the event of area-wide electrical power failure.

DSRSD has mutual aid agreements with Central Contra Costa Sanitary District, County of Alameda, East Bay Municipal Utility District, City of Livermore, City of Pleasanton, and Zone 7. After exhausting its own resources, DSRSD can call on these neighboring agencies for aid. DSRSD also participates in the Water/Wastewater Agency Response Network (WARN), a statewide public utility mutual assistance organization.

5.0 COMMUNICATION PROTOCOLS

In the event of a water shortage, DSRSD must inform its customers, the general public and interested parties, and local, regional, and state entities. Communication protocols for foreseeable and unforeseeable events are provided in this section. In any event, timely and effective communication must occur for appropriate response to the event. Key DSRSD staff are provided cell phones and email accounts to communicate internally and externally.

5.1 Communication for Foreseeable Events

Water shortage may be foreseeable when DSRSD reviews Zone 7's Annual Sustainability Report and prepares its AWSDA, as described in Section 2.0. When DSRSD determines the potential of a water shortage event, DSRSD Board may proclaim a water shortage emergency. For imminent events, DSRSD General Manager may proclaim a water shortage emergency.

If a water shortage emergency is anticipated, DSRSD staff will coordinate interdepartmentally, with the region's water service providers, and with Alameda County and Contra Costa County, for the possible proclamation of a local emergency.

In a duly noticed meeting, DSRSD Board will receive presentation of the current or predicted shortage as determined by the AWSDA. DSRSD Board will determine if a water shortage emergency condition exists and the degree of the emergency, while considering the shortage response actions triggered or anticipated to be triggered by the shortage level. As necessary, DSRSD Board will act on the water shortage emergency declaration, associated water shortage stage, and shortage response actions.

If DSRSD Board proclaims a water shortage emergency, the Public Information Officer (PIO) and DSRSD staff will coordinate to communicate with its customers and the public to inform them about the declared water shortage emergency, water shortage level, and authorized water use restrictions. DSRSD may use bill stuffers or newsletters, social media (such as FaceBook, Twitter, NextDoor, Instagram), its website, and press releases.

If needed, DSRSD staff will communicate with the appropriate State agencies regarding the water shortage emergency.

5.2 Communication for Unforeseeable Events

A water shortage may occur during unforeseeable events such as earthquakes, fires, infrastructure failures, civil unrest, and other catastrophic events. DSRSD's ERP provides specific communication protocols and procedures to convey water shortage response actions during these events. DSRSD may trigger any of these communication protocols at any water shortage stage, depending on the event.

In general, communications and notifications should proceed along the chain of command. Notification decisions will be made under the direction of the Emergency Manager, with external communications managed by the PIO. The Water ERP provides a list of relevant contacts to notify at the local, regional, and state level.

The PIO is the official spokesperson for DSRSD and is responsible for establishing an information center and providing information for news media. In addition, the PIO maintains a list of contacts to disseminate information to the public, typically via social media, its website, radio, television, or newspapers.

6.0 COMPLIANCE AND ENFORCEMENT

Section 10632(a)(6) of the California Water Code requires a water supplier to penalize or charge for excessive water use, where applicable. District Code Title 1, Chapter 1.30, which provides general penalties, remedies for violations, penalties of increasing severity, and imposition of costs. DSRSD's schedule of penalty fees are available on its website at www.dsrsd.com/your-account/rates-fees/miscellaneous-fees, under Administrative Fees. Violations may be punishable as misdemeanors or infractions, depending on the severity of the violation. The DSRSD General Manager is authorized to apply penalties as he or she deems appropriate, including flow restriction, submetering, and discontinuance of water service, until the violation is corrected. DSRSD may also seek damage and/or remedies, including fees or fines and the amount of costs incurred by DSRSD to investigate and correct the violation.

When mandatory water use reduction is declared at any of the above stages, DSRSD Board may adopt a progressive schedule of penalties and fines to be levied against customers and users for successive violations of mandatory water use restrictions established in Stages 2 and greater. Additionally, DSRSD may authorize the addition of drought rate surcharges to encourage compliance.

DSRSD's may use its Advanced Metering Infrastructure (AMI) system to identify customers who are not in compliance with water use restrictions. AMI water meters record customer water consumption, including volume and time of use. Using this system, DSRSD can periodically query AMI records and identify customers who may be violating restrictions—for example, customers who are irrigating outside of allowed day and time, customers who may have unrepaired leaks, and customers who are using excessive water. Water use may be compared to a previous period's water use to determine the extent of violation. DSRSD may also receive reports of violations from the general public, which may be field investigated or researched through AMI records.

DSRSD issues notice of violations letters to users who are out of compliance. The notices require compliance within 30 days of letter issuance. If violations continue, DSRSD may take progressive steps in obtaining compliance, including the issuance of fines and penalties as adopted by the DSRSD Board, or as allowed by DSRSD Code.

District Code Section 1.80.050 provides appeal procedures. Within 10 days of issuance of a notice of violation, the user, also known as the appellant, may appeal a determination of violation to the General Manager by filing a written notice of appeal and specifying the grounds of the appeal. The General Manager, or designee, will respond with a written notice of the time and date the appeal will be considered. The General Manager, or designee, will act on the appeal after reviewing records of determination and provide notice to the appellant.

The appellant may appeal the General Manager's decision, by filing a notice of appeal and specifying the grounds of the appeal with DSRSD Secretary withing 10 days of issuance of the notice of determination from the General Manager, or designee. DSRSD Secretary will provide a written notice to the appellant of the time and date of the Board meeting at which the appeal will be considered. The Board will act on the appeal after reviewing records of determination and provide notice to the appellant.

7.0 LEGAL AUTHORITIES

The rules and regulations of DSRSD are codified under the authority of Article 2 of Chapter 1 of Division 1 of Title 5 of the of California Government Code. DSRSD Code is available on its website: www.dsrsd.com/about-us/district-code.

District Code Section 4.10.030(C) defines the regulations for water use during any type of water shortage. This provision authorizes DSRSD General Manager to prescribe and enforce rules governing water allocation and use of water. It also provides DSRSD General Manager with guidelines for allocating water supply during shortages. At the time of preparation of this WSCP, DSRSD is updating the provisions of this section to incorporate changes in presented herein.

District Code Chapter 1.30, provides general penalties, remedies for violations, penalties of increasing severity, and imposition of costs.

When a water shortage is determined, DSRSD will coordinate with Zone 7, the region's other water service providers, Dublin, San Ramon, Alameda County and Contra Costa County for the possible proclamation of a local emergency in accordance with California Government Code, California Emergency Services Act (Article 2, Section 8558).

District Code Section 4.10.030(C)(2) authorizes the General Manager to declare a water emergency under imminent water shortage. As soon as practical, the General Manager will notify the Board. In a duly noticed meeting, DSRSD Board will determine whether a water shortage emergency condition exists and, if so, the degree of the emergency and what regulations and restrictions should be enforced in response to the shortage. DSRSD Board shall declare a water shortage emergency in accordance with CWC Chapter 3 Division 1.

Water Code Section Division 1, Section 350

> *…The governing body of a distributor of a public water supply…shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.*

The water shortage emergency declaration triggers communication protocols described in Section 5.0 and compliance and enforcement actions described in Section 6.0.

8.0 FINANCIAL CONSEQUENCES OF WSCP

This section describes the financial impacts of implementing the WSCP and mitigation actions needed to address these impacts. During periods of water shortage and reduced customer consumption, revenue is expected to decrease due to decreased demand for water. Some expenditures are also expected to decrease due to the decreased demand for water; however, implementing water conservation measures is anticipated to increase expenditures (e.g., for customer service activities and additional funding for rebate programs). To compensate for lost revenue and possible increase in expenditures, DSRSD may need to use water shortage surcharges and financial reserves to maintain fiscal health. These two components are discussed below.

8.1 Drought Rate Structures and Surcharges

Current water rates are available on DSRSD's website: https://www.dsrsd.com/your-account/rates-fees/water-rates. The drought rate surcharges are added to the water rates in place at the time a shortage stage is declared. While drought rate surcharges vary by water shortage stage, declaration of a stage does not automatically activate the surcharge. DSRSD Board will determine when a surcharge is necessary.

At the time of preparation of this WSCP, DSRSD is reviewing its drought surcharges for alignment with updated water shortage stages.

8.2 Use of Financial Reserves

Under an emergency proclamation by the General Manager in accordance to DSRSD Board Emergency Response Plan Policy, the Purchasing Agent and designees may let contracts for any amount without giving notice for bids for repair or replacement of a public facility, take any directly related and immediate action required by that emergency and procure the necessary equipment, services, and supplies for those purposes in accordance with the provisions of 22050 of the California Public Contract Code.

Any emergency action taken by the Purchasing Agent or designees will be reviewed by DSRSD Board at its next regular scheduled meeting but in no event later than 14 days after the action.

9.0 MONITORING AND REPORTING

DSRSD's water system is fully metered and monitored with a supervisory control and data acquisition (SCADA) system. All connections to DSRSD's water system are metered under the AMI system. More than 67 percent of DSRSD's water customers subscribe to AquaHawk, where they can monitor their real-time use and adjust accordingly. Aquahawk sends notifications through text or email to registered customers when high consumption alerts are triggered and sends notices through mail to non-registered customers. DSRSD continuously works with its customers to address abnormal water use patterns, which usually indicates leaks or broken valves.

Water use data from customer meters will be critical for monitoring customer compliance. AMI data can be used to track the effectiveness of DSRSD's response actions. DSRSD can use meters to compare current water demands with demand reduction goals. This real-time information will allow DSRSD to quickly

adjust public outreach, enforcement, and other water shortage response actions as needed to meet available supplies. For example, DSRSD may intensify its public outreach or more vigorously enforce compliance to water use prohibitions if a shortage stage's water demand reduction goals are not met.

DSRSD can use both SCADA systemwide metering and AMI metering data together to meet State reporting requirements in the future.

10.0 WSCP REFINEMENT PROCEDURES

This WSCP is an adaptive management plan. It is subject to refinements as needed to ensure that DSRSD's shortage response actions and mitigation strategies are effective and produce the desired results. Based on monitoring described in Section 6.0 and the need for compliance and enforcement actions described in Section 6.0, DSRSD may adjust its response actions and modify its WSCP. DSRSD will also seek input from staff and the public regarding the effectiveness of its WSCP and ideas for improvements

When a revised WSCP is proposed, the revised WSCP will undergo the process described in Section 12.0 for adoption by DSRSD Board and distribution to Alameda County, Contra Costa County, Zone 7, and the general public.

11.0 SPECIAL WATER FEATURE DISTINCTION

DSRSD distinguishes special water features, such as decorative fountains and ponds, from pools and spas. Special water features are regulated separately.

12.0 PLAN ADOPTION, SUBMITTAL, AND AVAILABILITY

This WSCP is adopted concurrently with DSRSD's 2020 UWMP, by separate resolution. Prior to adoption, a duly noticed public hearing was conducted. A copy of this WSCP will be submitted to DWR within 30 days of adoption.

No later than 30 days after adoption, copies of this WSCP will be available at the Office of DSRSD Secretary, the Dublin Library in Dublin, and the Dougherty Station Library in San Ramon. A copy will also be provided to Alameda County, Contra Costa County and Zone 7. An electronic copy of this WSCP will also be available for public review and download on DSRSD's website.

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Appendix N

DSRSD Water Waste Prevention Ordinances

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ORDINANCE NO. 338

AN URGENCY ORDINANCE OF DUBLIN SAN RAMON SERVICES DISTRICT ADOPTING WATER USE LIMITATIONS DURING THE COMMUNITY DROUGHT EMERGENCY AND REPEAL OF ORDINANCE NO. 336

WHEREAS, the State of California has and continues to experience record dry conditions; and

WHEREAS, on November 13, 2015, California Governor Edmund G. Brown issued Executive Order B-36-15 calling for an extension of urban water use restrictions until October 31, 2016; and

WHEREAS, on February 2, 2016, the State Water Resources Control Board (SWRCB) adopted Resolution 2016-0007 extending emergency regulations mandating statewide urban water conservation; and

WHEREAS, on March 1, 2016, the District Board of Directors declared that a State of a Community Drought Emergency has existed since February 18, 2014 and continues to prevail in the community served by the District by reason of the fact that, due to the ongoing severe drought, the State's available water supply cannot meet the ordinary demands and requirements of the water consumers in the District's service area without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and/or fire protection.

NOW, THEREFORE, BE IT ORDAINED by the Board of Directors of Dublin San Ramon Services District as follows:

SECTION 1. PURPOSE AND AUTHORITY. The purpose of this Ordinance is to conserve the water supply of the District for the greatest public benefit with particular regard to public health and safety, fire protection, and domestic (indoor) use, and to curtail system wide water use in the District by twelve percent (12%) compared to the same period in calendar year 2013 as ordered by the State Water Resources Control Board on February 2, 2016. These Water Use Limitations are intended to comply with State regulatory requirements, and to reduce water use as fairly and equitably as possible, thereby conserving sufficient water to preserve the District's ability to meet human health and safety needs. This Ordinance is adopted pursuant to the District's authority under Sections 350 et seq.

and 71640 et seq. of the California Water Code, which derive in part from Section 2 of Article X of the California Constitution.

SECTION 2. EFFECT OF ORDINANCE.

(a) This Ordinance shall take effect immediately, shall supersede and control over any other ordinance or regulation of the District in conflict herewith, and shall remain in effect until the Community Drought Emergency has ended.

(b) The Water Use Limitations specified herein shall apply throughout the District's water service area.

SECTION 3. WATER USE PROHIBITIONS.

During the Community Drought Emergency the following uses of potable water are prohibited:

(1) Any and all waste and/or unreasonable use of potable water as determined by the District, including without limitation the following:

(a) Residential customers who use potable water at the rate of more than 4,480 gallons per week;

(b) Commercial customers who use potable water for indoor uses at a rate of more than 95% of calendar year 2013 usage (as reasonably adjusted for increased occupancy or business) in a comparable period, except where said indoor potable water use is used to maintain health and safety standards and/or used to comply with State of California or federal regulations;

(c) Commercial customers who use potable water for irrigation that is more than 67% of their calendar year 2013 usage in a comparable period.

(2) Any and all use of potable water in violation of DSRSD District Code Section 4.10.030 (G), including but not limited to:

(a) Waste through leakage of defective or inoperable plumbing, piping or other water-use equipment;

(b) Gutter flooding;

(c) Single pass cooling systems in new construction;

(d) Non-recycling decorative water fountains;

(e) Any and all use of potable water for non-potable purposes, including landscape irrigation, where and when the District is ready, willing and able to furnish recycled water from its recycled water distribution system, and recycled water is permitted to be applied to that use

(3) Any and all use of potable water for soil compaction and dust control purposes.

(4) Any and all use of potable water for street sweeping, gutter flooding, sewer or storm drain cleaning and maintenance, or other similar uses.

(5) Watering and landscape irrigation during measurable rainfall, or within 48 hours after measurable rainfall.

(6) Using potable water to irrigate ornamental turf grass on public street medians.

(7) Using potable water for hosing down or pressure washing driveways, sidewalks, walkways, patios, parking lots, tennis courts, or other impervious surfaces.

(8) Using potable water for cleaning the exteriors of buildings or homes including fences that surround those buildings and homes, except to the extent that said cleaning is necessary to prepare the surfaces for painting, staining, rehabilitation, or repair.

(9) Allowing the escape of potable water from pipe breaks or leaks after the customer has been notified of the probable existence of the break or leak by the District, or after the customer had or should have had reasonable knowledge of a pipe break or leak.

(10) Using potable water in any decorative fountain and/or other decorative water feature that is visible from areas accessible by the public, except to the extent that said water feature intentionally provides habitat for aquatic species.

SECTION 4. PERMITTED USES OF POTABLE WATER.

During the Community Drought Emergency the following uses of potable water are permitted:

(1) Outdoor lawn and landscaping watering and irrigation using a sprinkler system (or drip, bubblers, micro-sprayers or similarly high efficiency systems) is allowed up to three (3) days per week, but not on successive days, and only between the hours of 6:00 PM and 9:00 AM, and only if the use does not result in runoff to adjacent property, non-irrigated areas, or paved surfaces, and does not cause ponding, flooding, or marshy conditions, subject to the following restrictions and conditional requirements:

(a) Watering and irrigation with potable water using oscillating or rotating devices connected to a hose is allowed, but only while under the continual direct observation of a customer.

(b) Watering and irrigation systems with potable water using buried piping and sprinklers that are not controlled by a functioning automatic timing device, but only while under the continual direct observation of a customer.

(c) Watering and irrigation systems with potable water using buried irrigation piping and sprinklers that are controlled by a functioning automatic timing device.

(d) Watering and irrigation with potable water of landscapes outside of newly constructed homes or buildings is allowed, but only if the water is delivered in a manner consistent

with regulations or other requirements established by the California Building Standards Commission and the Department of Housing and Community Development of the State of California.

(e) Potable water may be used for watering and irrigation at any time for the express purpose of adjusting and/or repairing an irrigation system, as long as the system is continually and directly supervised by the owner or the owner's representative while the water is turned on.

(2) The following methods of outdoor lawn and landscaping watering are allowed as long as the use does not result in runoff to adjacent property, non-irrigated areas, or paved surfaces, and as long as the use does not cause ponding, flooding, or marshy condition, subject to the following restrictions and conditional requirements:

(a) Hand watering with potable water using a bucket, watering can or similar container is allowed at any time.

(b) Hand watering or irrigation with potable water using a hose equipped with a shut-off nozzle is allowed but only between the hours of 6:00 PM and 9:00 AM.

(3) Watering nursery stock and plants that are available for immediate sale at commercial establishments is allowed at any time s.

(4) Residential and commercial vehicle washing, including autos, trucks, boats, trailers, recreational vehicles, etc., is allowed at any time as long as the work is done either (a) using a hose equipped with an automatic shut-off nozzle that causes it to cease dispensing water immediately when not in use, or (b) using buckets or a self-contained washing system without any direct connection to a potable water supply, or (c) at a commercial car wash facility that recirculates water.

(5) Cleaning windows using potable water is allowed as long as a bucket or similar container is used, without any direct connection to a potable water supply such as a hose.

(6) Filling new or existing swimming pools and spas with potable water is allowed, but only if the filling is not being done as a substitute for performing chemical addition and/or normal cleaning and maintenance.

(7) The use of potable water as replacement water for existing water themed publicly owned "play areas" to recharge the play area with water due to leaks, splash-out, and evaporative losses is allowed.

(8) The use of potable water for decorative water features that, as of the effective date of this Ordinance, are in existence and which intentionally provide habitat for aquatic species.

(9) Serving water in eating and drinking establishments is allowed, but only in response to an unsolicited request by the customer, including but not limited to restaurants, hotels, cafes, cafeterias, bars or other public places where food and drink are served.

(10) The use of water in the bathrooms and/or lavatories of business, commercial, and institutional customers is allowed, but only if water conservation messages are posted in appropriate and effective locations in the bathrooms and/or lavatories.

(11) Hotels, motels, and similar short term lodging facilities must prominently display notice in each guestroom, using clear and easily understood language, that the guest of said lodging facilities has the option to choose whether or not to have towels and linens laundered on a daily basis.

(12) Indoor residential use that does not exceed health and safety needs shall generally be considered to be reasonable and appropriate. The State of California has determined (*Central Valley Project and State Water Project - Drought Operations Plan and*

Operational Forecast (April 1, 2014 through November 15, 2014)) that health and safety uses are approximately 55 gallons per person per day.

(13) Notwithstanding anything in this Ordinance to the contrary, potable water may be used to actively irrigate or otherwise provide water to environmental mitigation projects in existence as of the effective date of this Ordinance and have been duly approved by regulatory authorities provided the project has active and valid permits.

(14) Notwithstanding anything in this Ordinance to the contrary, potable water may be used where necessary to address an immediate health and safety need or to comply with a term or condition in a permit issued by a State or Federal agency.

SECTION 5. APPLICATION PROCEDURE FOR EXEMPTIONS FROM WATER USE LIMITATIONS.

The exclusive procedure for consideration of written applications from customers for exemptions from these Water Use Limitations described herein will be as follows:

(a) A customer may submit a written application for an exemption from a Water Use Limitation to the District's Drought Coordinator. The application must be on the District's form and must include the customer name, account number(s), a description of the limitation from which the customer is seeking an exemption, the reason(s) why the exemption is requested, the justification for the exemption, and the specific actions the customer proposes to take to achieve a functionally equivalent level of water curtailment. If a Notice of Violation has been issued to the customer, the customer must first resolve the violation including the payment of any and all penalties and/or costs before the Drought Coordinator will consider an application for an exemption from a Water Use Limitation;

(b) The District Drought Coordinator will consider each application for a waiver of a Water Use Limitation based on the information provided by the customer in the application. The Drought Coordinator may grant an exemption of a particular Water Use Limitation if the application is deemed reasonable. An exemption shall not be granted if, in the opinion of the Drought Coordinator, doing so would endanger the public health and safety;

(c) A customer may appeal the Drought Coordinator's denial of an application for an exemption from a Water Use Limitation within ten (10) calendar days by submitting a written appeal to the Board of Directors on the District's form and specify the reasons why the customer disagrees with the Drought Coordinator's denial;

(d) If a previous application for an exemption of a Water Use Limitation has been denied, a new application for exemption of the same Water Use Limitation is not permitted and will not be considered.

SECTION 6. ADMINISTRATIVE IMPLEMENTATION. The General Manager is authorized and directed to establish appropriate administrative procedures consistent with the provisions of this ordinance and to take reasonable and appropriate action to fully implement the provisions of this ordinance.

SECTION 7. EXEMPTION FROM CEQA. The District Board of Directors finds that the actions taken in this Ordinance are exempt from provisions of the California Environmental Quality Act of 1970 (CEQA) because they are immediate actions necessary to prevent or mitigate an emergency, as described in subdivision (b)(4) of Public Resources Code section 21080 and in section 15269(c) of the Guidelines promulgated under said Act and codified in Title 14 of the Code of California Regulations (CEQA Guidelines), and to assume the maintenance, restoration, or enhancement of a natural resource, as described in section 15307, of the CEQA Guidelines.

SECTION 8. SEVERABILITY. If any provision of this Ordinance is held to be invalid or unenforceable, that holding will not affect the remainder of the Ordinance, which shall remain in full force and effect.

SECTION 9. REPEAL OF ORDINANCE NO. 336. Ordinance No. 336 adopted on May 19, 2015, is hereby repealed in its entirety upon the effective date of this Ordinance.

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 15th day of March 2016, by the following vote:

AYES: 5 - Directors Edward R. Duarte, Madelyne A. Misheloff, Georgean M. Vonheeder-Leopold, Richard M. Halket, D.L. (Pat) Howard

NOES: 0

ABSENT: 0

D.L. (Pat) Howard, President

ATTEST:

Nicole Genzale, District Secretary

H:\Board\2016\03-15-16\Urgency Ordinance - Limitations\9A Mandatory Restrictions\Proposed Version Water Use Limitations ORD_rvv.docx

ORDINANCE NO. 323

AN ORDINANCE REPEALING ORDINANCE NOS. 242 AND 244, ESTABLISHING A WATER CONSERVATION PROGRAM AND A PROGRAM FOR MANAGEMENT OF THE WATER SUPPLIES OF THE DISTRICT DURING ANY WATER SHORTAGE CONDITION DECLARED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT AND ESTABLISHING REGULATIONS AND RESTRICTIONS ON THE DELIVERY AND CONSUMPTION OF WATER AND PENALTIES FOR ORDINANCE VIOLATIONS DURING A DECLARED WATER SHORTAGE CONDITION

BE IT ORDAINED by the Board of Directors of the Dublin San Ramon Services District ("Board"), a public agency located in the counties of Alameda and Contra Costa, California, as follows:

SECTION 1: FINDINGS AND DETERMINATIONS.

a) Pursuant to the Agreement dated August 23, 1994, as amended, by and between Zone 7 of the Alameda County Flood Control and Water Conservation District ("Zone 7") and the Dublin San Ramon Services District ("District"), District currently acquires from Zone 7 most potable water required for District purposes and for resale and distribution to the customers and users of District's water system.

b) Zone 7 obtains the majority of the water delivered to District from the State Water Project (SWP), owned and operated by the California Department of Water Resources (DWR), which delivers water to Zone 7 by way of the Banks Pumping Plant located in and pumping from the Delta formed by the Sacramento and San Joaquin Rivers ("Delta"), the South Bay Aqueduct, and related facilities.

c) Progressive water conservation practices by District water customers and users are important to ensure that water is put to reasonable and beneficial use and to minimize the impact that DWR's diversion of water from the Delta has on the environment.

d) California periodically experiences consecutive years of below normal precipitation, which can result in reduced deliveries of SWP water by DWR to Zone 7.

e) Environmental issues also can affect the ability of DWR to deliver the amount of SWP water to which Zone 7 is contractually entitled.

f) During any extended period of reduced deliveries of SWP water from DWR, and depending upon the availability of other supplies of water, Zone 7 may not be able to deliver adequate supplies of potable water to District to meet the ordinary demands and requirements of District's water customers and users without

reducing the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation, fire protection, and other beneficial uses.

g) During such events the District may be unable to obtain additional potable water supplies from other sources, as allowed under the terms of the District Agreement with Zone 7, sufficient to make up the shortage in potable water supply from Zone 7 to meet the ordinary demands and requirements of District's water customers and users.

h) At any time, a natural or man-made event may adversely affect some or all of the DWR, Zone 7, or District water system in such a way that District may not be able to deliver adequate potable water to meet the ordinary demands and requirements of District's water customers and users without reducing the water supply of the District to the extent that there would be insufficient water for human consumption, sanitation, fire protection, and other beneficial uses.

i) The Board hereby finds, determines and declares that the rules, regulations and restrictions set forth in this Ordinance concerning the delivery of water and water consumption by District's water customers and users during any period in which the Board has declared a Water Shortage Condition to exist are intended to conserve the water supply of District for the greatest public benefit, with particular regard to municipal and domestic use, sanitation, fire protection, and protection of the environment.

j) The Board hereby finds, determines and declares that the water conservation provisions of this Ordinance are appropriate and in accordance with best water management practices, and said provisions are hereby adopted and shall be enforced during any Water Shortage Condition declared by the Board pursuant to the provisions of Article X, Section 2 of the California Constitution, California Water Code sections 375 - 378, the authority granted to this Board by the Community Services District Law (California Government Code sec. 61000 *et seq.*), and the common law.

k) The Board hereby finds, determines and declares that those specific uses of water supplied by the District that are expressly prohibited or restricted by the provisions of this Ordinance are non-essential, and if allowed to occur during a declared Water Shortage Condition would constitute a waste and an unreasonable use of water.

l) The actions taken in considering, adopting, implementing, and enforcing this Ordinance are exempt from the provisions of the California Environmental Quality Act (Public Resources Code sec. 21000 *et seq.*) pursuant to Title 14, California Code of Regulations, Section 15269, as specific actions necessary to prevent or mitigate an emergency.

m) On June 2, 2009, following notice duly given and published, a public hearing was held by this Board at which all District water customers and users had an opportunity to be heard on this Ordinance, to protest against the adoption of this Ordinance, and to present their respective needs to the Board, and the Board has heard and given due consideration to all comments and protests received prior to and during said hearing.

SECTION 2: WATER CONSERVATION PROGRAM. The District shall establish, by separate resolution, and maintain a "Water Conservation Program" for use and implementation at all times, including but not limited to, during any declared Water Shortage Condition. Said Water Conservation Program shall be adopted and periodically reviewed and updated by action of the Board, and shall include best management and conservation practices for Normal Supply conditions, public education and information elements, and other components deemed necessary and appropriate. Said Water Conservation Program shall also include conservation practices, water use restrictions, enforcement measures, and penalty provisions that may be imposed during any Water Shortage Condition declared by the Board.

SECTION 3: NORMAL SUPPLY. Normal Supply conditions are hereby defined as those years in which District water supplies are adequate or more than adequate to meet the ordinary demands and requirements of District's water customers and users for that year and for a reasonable planning time horizon. Based upon the findings and determinations set forth in Section 1 of this Ordinance, the Board hereby declares that best water management and conservation practices identified in the Water Conservation Program shall be encouraged and should be implemented by District's water customers and users during Normal Supply conditions.

SECTION 4: WATER SHORTAGE CONDITION. A Water Shortage Condition is hereby defined as a year or years in which the supply of potable water available to District for distribution and sale to water customers and users may not be adequate to meet ordinary water demands without reducing the supply to the extent that there would be insufficient water for human consumption, sanitation, fire protection, and other beneficial uses. Notification to the Board of a possible water supply shortage may be made by, but is not restricted to, DWR, Zone 7, or District's General Manager. After determining that a water supply shortage exists, the Board shall consider a resolution to declare a Water Shortage Condition, after notice is duly given and a public hearing held at which all District water customers and users have an opportunity to be heard on the question, to protest against the adoption of the resolution, and to present their respective needs to the Board.

Conditions: Any declaration of a Water Shortage Condition shall include a determination and declaration of the Stage of the Water Shortage Condition (as such Stages are defined in this Ordinance), the anticipated duration of the Water Shortage Condition, the target water use reduction, the conservation practices and water use restrictions contained in the Water Conservation Program that shall be implemented,

if any, and the enforcement actions and penalties, if any, being imposed as provided for in this Ordinance.

Water Supply Shortage Rates: The Board, by separate resolution adopted after the appropriate notice is duly given, may from time to time establish water rates for each Stage of the Water Shortage Condition to be applicable for the duration of the Stage, and to go into effect on the date said Stage is declared by the Board or on any subsequent date established by the Board.

Fines: The Board, by separate resolution adopted after the appropriate notice is given, may from time to time establish a progressive schedule of fines to be levied against District water customers and users for successive violations of water use restrictions established in Stage 3 and Stage 4 as set forth in this Ordinance. Written notice of any fine that is to be levied by the District on a specific District water customer or user shall be given at the time the violation is identified by District. The fine shall be assessed on the District's next regular water bill.

SECTION 5: STAGES OF WATER SHORTAGE CONDITION. During any Water Shortage Condition declared by the Board pursuant to this Ordinance, water use restrictions, rates, enforcement actions and penalties shall be implemented in Stages, as follows, pursuant to actions taken by District's Board by separate resolution after the appropriate notice is given:

Stage 1 – Minimal Reduction: Stage 1 may be declared by District's Board when there are identifiable events that lead to a reasonable probability that in the next few years, District potable water supplies will not be adequate to meet the ordinary demands and requirements of the District's water customers and users. Stage 1 is voluntary and best water management and conservation practices included in the Water Conservation Program shall be encouraged by District and should be implemented by District's water customers and users.

Stage 2 – Moderate Reduction: Stage 2 may be declared by District's Board when there are identifiable events that lead to a reasonable conclusion that in the current or upcoming year, District potable water supplies may not be adequate for the ordinary demands and requirements of District water customers and users. If the Board declares Stage 2, additional voluntary best water management and conservation practices included in the Water Conservation Program shall be encouraged by District. The Board may declare Stage 2 to be mandatory and if so shall identify water use restrictions included in the Water Conservation Program that are required to be adhered to by the District water customers and users.

During the duration of Stage 2 and if Stage 2 is initially declared to be voluntary, the Board may, by separate resolution adopted after the appropriate notice is duly given, declare that Stage 2 is being made mandatory. Said declaration can only be made if verifiable water use data clearly establish that the target water use reduction by District water customers and users is not being achieved. Said declaration shall

identify those additional water use restrictions included within the Water Conservation Program that are required to be implemented and met by District water customers and users.

Stage 3 – Severe Reduction: Stage 3 may be declared by District's Board when there are identifiable events that lead to a reasonable conclusion that in the current year water supplies will not be adequate to meet the ordinary demands and requirements of District water customers and users. Stage 3 shall be mandatory. The Board shall identify the specific additional water use restrictions included in the Water Conservation Program that are required to be implemented and met by District water customers and users. Fines that may be levied by District for successive violations of water use restrictions during Stage 3 shall be included within the resolution by which the Board declares Stage 3.

Stage 4 – Critical Reduction: Stage 4 may be declared by District's Board, after Stage 3 has been in effect, and if verifiable water use data conclusively establish that District water customers and users are not achieving the target water use reduction previously adopted by the Board; or if new identifiable events occur that require increasing the target water use reduction; or if the Board determines that there are multiple District water customers and users who are repeatedly violating the Stage 3 water use restrictions. Under Stage 4, the District may establish a specific water use allocation for any or all District water customers and users. If a water allocation is established for a District water customer or user, upon clear evidence of violation or violations of such an allocation the District may levy fines; install a flow restrictor or restrictors in the water service line; lock out the water service if a health and safety requirement is not being met or if violation of such a requirement appears to be imminent; or enter non-residential private premises to install sub-meters for monitoring compliance with the provisions of this Ordinance and/or the Water Conservation Program.

SECTION 6: WATER EMERGENCY. A Water Emergency results from an event that causes a disruption in the water supply to all or a group of District water customers and users. The General Manager is hereby authorized to declare a Water Emergency and, if so declared, shall initiate implementation of the appropriate provisions of the District's Emergency Response Plan. As soon as possible after such a declaration, the General Manager shall make a full report on the Water Emergency to the Board. During a Water Emergency, the General Manager and his/her designees may take all steps necessary to protect and preserve District's water system, and to protect the health and safety of District water customers and users, including but not limited to locking out non-essential water services, obtaining and making available temporary water supplies, and temporarily relocating District water customers and users.

SECTION 7: TAMPERING AND INTERFERENCE. It shall be unlawful and a violation of this Ordinance for any person to tamper with, alter, destroy, or otherwise render inoperative any flow restricting device, service valve, meter, hydrant, or any other water system facility, equipment or device installed, operated or maintained by District.

It shall be unlawful and a violation of this Ordinance for any person to interfere with, harass, intimidate, or otherwise obstruct any employee, officer or agent of District in lawfully carrying out any duty under, or performing any act pursuant to this Ordinance.

SECTION 8: COST RECOVERY. The actual cost, as determined by the General Manager, for installation of flow restricting devices, for effecting lockout and reestablishment of service and for installation of sub-meters shall be recoverable from the specific water customer or user of the District water system or person found by General Manager to be in violation of the provisions of this ordinance. Prior to taking any of the actions authorized by this Section, the water customer or user shall be given reasonable notice by the District of the schedule for and the nature of the action(s) that may be taken, and of the District's authority to recover the actual cost of the action(s).

SECTION 9: IMPLEMENTATION. The General Manager shall be responsible for implementing and carrying out the Water Conservation Program and the Stage requirements and restrictions established and imposed from time to time by the Board. The General Manager shall provide reports to the Board on the Water Conservation Program at least annually or at such shorter intervals as he or she deems to be appropriate.

SECTION 10: REPEALING OF ORDINANCE NOS. 242 AND 244. Ordinance No. 242, which was adopted by the Board on June 4, 1991, is hereby repealed and shall be of no further force and effect upon the adoption of this Ordinance. Ordinance No. 244, which was adopted by the Board on November 5, 1991, is hereby repealed and shall be of no further force and effect upon the adoption of this Ordinance.

SECTION 11: SECTION, SUBSECTION HEADINGS. All sections and subsections headings contained in this Ordinance shall be deemed and shall be interpreted as part of the operative provisions of this Ordinance.

SECTION 12: SURVIVABILITY. Should any portion or portions of this Ordinance be finally determined by a court of competent jurisdiction to be unconstitutional, unlawful, or unenforceable for any reason, all other portions hereof shall remain in full force and effect until repealed or superseded by action of the Board.

SECTION 13: EFFECTIVE DATE. Pursuant to Water Code section 376, this ordinance shall be effective immediately upon its adoption, provided that, within ten (10) days after its adoption, this ordinance shall be published in full once in the official newspaper of the District.

Adopted by Board of Directors of Dublin San Ramon Services District at its regular meeting held on the 2nd day of June, 2009, passed by the following vote:

AYES: 3 - Directors Jeffrey G. Hansen, D.L. (Pat) Howard, Daniel J. Scannell

NOES: 0

ABSENT: 2 - Directors Thomas W. Ford, Richard M. Halket

Daniel J. Scannell, President

ATTEST:

Nancy G. Hatfield, District Secretary

Appendix O

Water Conservation Outreach Materials

DRAFT

BEST WAYS TO SAVE OUTDOORS











Thank you for your commitment to water conservation.
On average, Californians use 30-60% of their water outdoors.
Here are some ways to permanently reduce outdoor watering.

Install Drip Irrigation

Saves 15 gallons each time you water

Add a Smart Controller

Saves 24+ gallons per day

Adjust Sprinkler Heads and Fix Leaks

Adjusting heads saves 12-15 gallons each time you water
A leak as small as the tip of a pen can waste about 6,300 gallons of water/month!

Use Mulch

Saves 20-30 gallons per 1,000 sq ft each time

Plant Drought Resistant Trees and Plants

Saves 30-60 gallons per 1,000 sq ft each time

Convert Your Lawn and Get a Rebate

Save money and water for reimagining your landscape
www.zone7water.com/conservation-rebates/rebate-programs
www.saveourwaterrebates.com

Water Conservation. **IT'S FOR LIFE.**
Get more ideas at www.TriValleyWaterWise.com
and www.SaveOurWater.com.

Dublin San Ramon Services District
Water, wastewater, recycled water
www.dsrsd.com

Save Our Water
saveourwater.com

Fixing Leaks

Fixing Leaks Saves Water and Money

Leaks waste a lot of water, even in households that otherwise use water very efficiently.

According to EPA WaterSense, leaks waste more than 10,000 gallons of water annually in the average household--enough to do more than 270 loads of laundry. Across the U.S. we lose more than one trillion gallons water every year to household leaks, enough to supply 11 million homes.

So don't ignore a "running" toilet, dripping faucet or squishy spot on the lawn. Fix those leaks and start saving money as well as water.

Click on a topic below for helpful how-to tips and videos.



Please fix leaks immediately to avoid wasting water. This 60-second video shows you how: Check, Twist, and Replace!

Expand/Contract Questions and Answers

Toilets

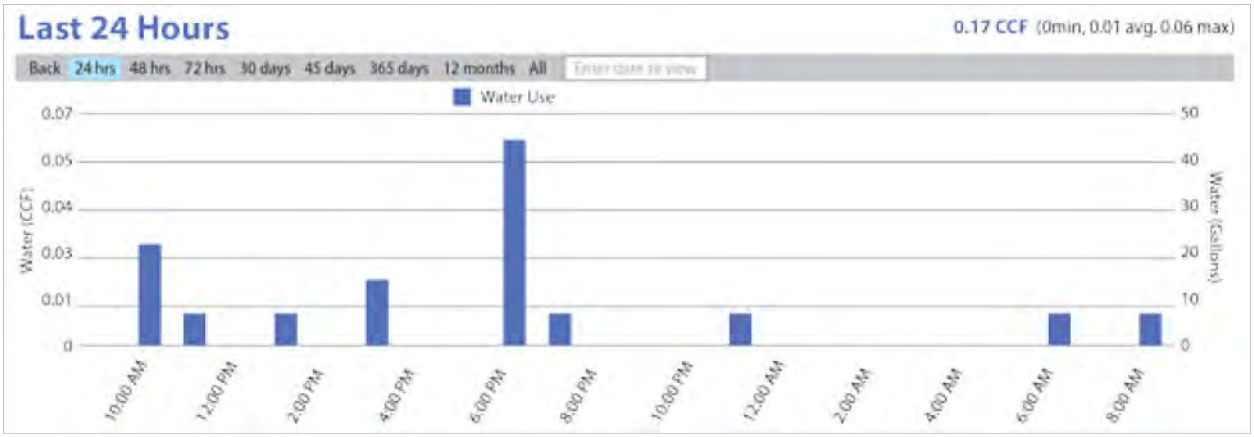
Irrigation

Faucets

Leaks Can't Hide from AquaHawk!

If you have a leak, you'll see it on AquaHawk, our free online customer portal. Compare the blue bars in the sample screens below.

NO LEAK: In the course of a day, you'll see times when there is no water use at all.



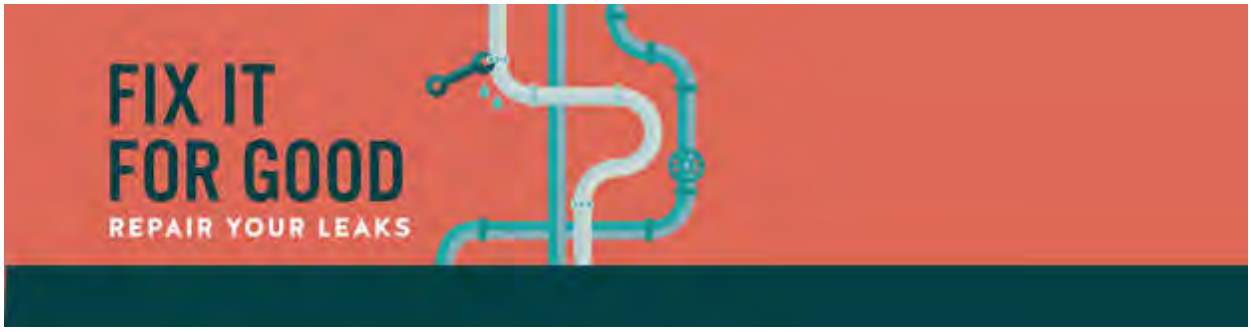
LEAK: You'll see continuous water use, even through the night.



Sign up for AquaHawk today to view your water consumption and look for signs of a leak. Then explore what else you can do on AquaHawk--set alerts, pay your bill, view previous bills, and sign up for paperless billing.

More Resources

- Look for the WaterSense label when replacing a toilet, faucet, showerhead, or irrigation controller. These products meet national standards for efficiency and performance.
- Browse dozens of helpful videos in the California Water Efficiency Partnership's How-to Video Library.
- Learn who's responsible for pipeline repairs.
- Report a leak or theft from a DSRSD water pipe or hydrant.
- Learn how to shut off your water. Please do not shut off your water at the meter box or tamper with the meter. Water meters are the property of DSRSD. If you or your designee damage the meter, you will be billed for repairs.
- If you have questions about water leaks, please call Customer Service during business hours: (925) 828-8524





Four Ways to Save Water and Money

- **Keep sprinklers off through the rainy season.** Calculate an ideal watering schedule for your yard at TriValleyWaterWise.com.
- **Get a $75 rebate on a 21st century irrigation controller.** Qualifying controllers adjust automatically as the weather changes and many come with a smart phone app for easy programming. Learn more and apply at Zone 7 Weather-Based Irrigation Controller Rebate.
- **Plan now to convert lawn to a water-efficient front yard next spring.** You may qualify for a lawn conversion rebate of up to $750 per home and $4,500 per non-residential property. Learn more and apply at Zone 7 Water-Efficient Landscape Rebate.
- **Freeze-proof your pipes.** Prevent costly repairs by insulating hose bibs and other exposed outdoor pipes before winter arrives.

Best Practices for Water Efficiency Outdoors



Tips for spring irrigation practices--save water and money! (PDF)

Don't over-water. Established plants need very little water through the winter unless the weather is very dry.

Keep mulch at least two inches deep in all non-lawn planting areas to reduce evaporation, keep soils moist, add nutrients, and discourage weeds.

Mow less frequently, set mower blades higher (3-3.5 inches), and mow during the cool parts of the day.

Aerate lawns annually and fill the plugs with compost so water can soak in deeply.

Fertilize and prune in cool seasons. New growth needs more water. To avoid stimulating new growth during hot months, do not user high-nitrogen fertilizers or prune after April.

Water between 6 p.m. and 9 a.m. to minimize evaporation in warm or windy weather .

Sources and more information: California Landscape Contractors Association

Irrigate Efficiently

Dry spots on your lawn mean the area is not getting water. Adjust or modify the irrigation system for better coverage instead of watering longer. If unable to adjust, we recommend hand watering the dry spots.

Ponding indicates over-watering or that foliage is blocking spray. Try decreasing the watering duration on your sprinkler system and trim any foliage blocking the sprinkler head.

Soil compaction can be seen in areas of high foot traffic and with clay soils. Aerate your lawn to increase air and water transfer to roots.

Thatch is the build-up of dead stems beneath the green surface of your lawn. De-thatching removes that build-up and lets water and fertilizers reach the soil efficiently.

Hydro-zoning is key to an efficient irrigation system. Set up your system so that each sprinkler valve serves plants that need the same amount of water. For example, shrubs and lawn should not be on the same valve because shrubs require less water than lawn.

Sun vs. shade - Consider sun exposure when setting irrigation run times. Decrease run times in shady areas.

Sprinkler heads - If you have brown spots or ponding, check your sprinkler heads. All sprinkler heads connected to a single station (valve) should have the same application rate and cover the same distance to ensure proper distribution over your landscape. Heads should be straight up and down, not tilted. They should not leak around the head. An efficient system should have even head-to-head spacing, meaning that the water from one sprinkler head should reach the sprinkler heads around it for uniform coverage.

Soil type is an important factor in efficient irrigation. Much of the Tri-Valley's soil contains clay, which has a slow infiltration rate. Apply water slowly and in intervals to minimize runoff.

Check controller settings after a power outage - Some older controllers revert to a default setting, such as "water every day for 10 minutes," after a power outage. Regularly replace batteries that provide backup power.

Tune Up Drip Systems



Emitters should be checked for clogs to ensure even watering. Replace missing emitters immediately to save water and improve system efficiency.

Location is important. Place emitters at the edge of the root-ball on new plantings and at the edge of the foliage of established plants.

High pressure - If compression fittings and emitters are popping off, pressure may be too high. Install a pressure regulator on the valve for all drip stations.

Broken tubing needs to be fixed immediately to save water and to efficiently water your landscape.

Get Help from the Experts

Tri-Valley Water-Wise Gardening - Searchable plant database, advice on landscape and irrigation design, customized watering schedule calculator, a photo gallery of garden ideas, plants that thrive on recycled water, and more. Sponsored by Zone 7 Water Agency in partnership with DSRSD and other water utilities in the Tri-Valley.

LawnToGarden.org - Learn about the benefits of sheet mulching and how to do it, find discounts on materials, get inspired by examples of local lawn conversions, and use a searchable vendor list to find cardboard, compost, and mulch.

RescapeCalifornia.org - Get expert help in creating a renewable landscape.

How-to Video Library - Check out dozens of helpful videos on irrigation and landscaping from the California Water Efficiency Partnership.

SaveOurWater.com - On average, Californians use 30% to 60% of their water outdoors. Click this link for some easy outdoor tips to reduce water use.

DSRSD Drought Garden - On the east side of the District office, see a selection of water-wise trees, shrubs, cactus and groundcovers, all irrigated with recycled water.

Gardens for San Lorenzo: Recommendations from UC Berkeley's Landscape Architecture Department - This 72-page booklet features four student-designed prototypes for low-water gardens that embrace strong design, beauty and function, and are very doable by homeowners.

UC Davis Arboretum All-Stars - Learn about 100 tough, reliable plants that are easy to grow, don't need a lot of water, have few problems with pests or disease, and have outstanding qualities in the garden.

California Native Plant Society - Explore their plant directory, workshops and many other resources.

PlantRight - Avoid using invasive plants in your yard. PlantRight has a list of the worst offenders in our area and better alternatives. They also explain the impact of invasive plants.

Master Gardeners Demonstration Garden - Attend workshops and see hundreds of varieties of drought-tolerant plants at this huge garden in Livermore.

Bringing Back the Natives Garden Tour - Get inside beautiful Bay Area gardens that feature native plants. Workshops and plant sales, too!



Conservation Has Become Our Lifestyle

Year to date through January, DSRSD customers used 3.75 percent more potable water than in the same period in 2013. Residential water use averaged 56.3 gallons per capita per day (GPCD) in January, up from 52.9 GPCD in January 2013.

Water Supplies Are Normal

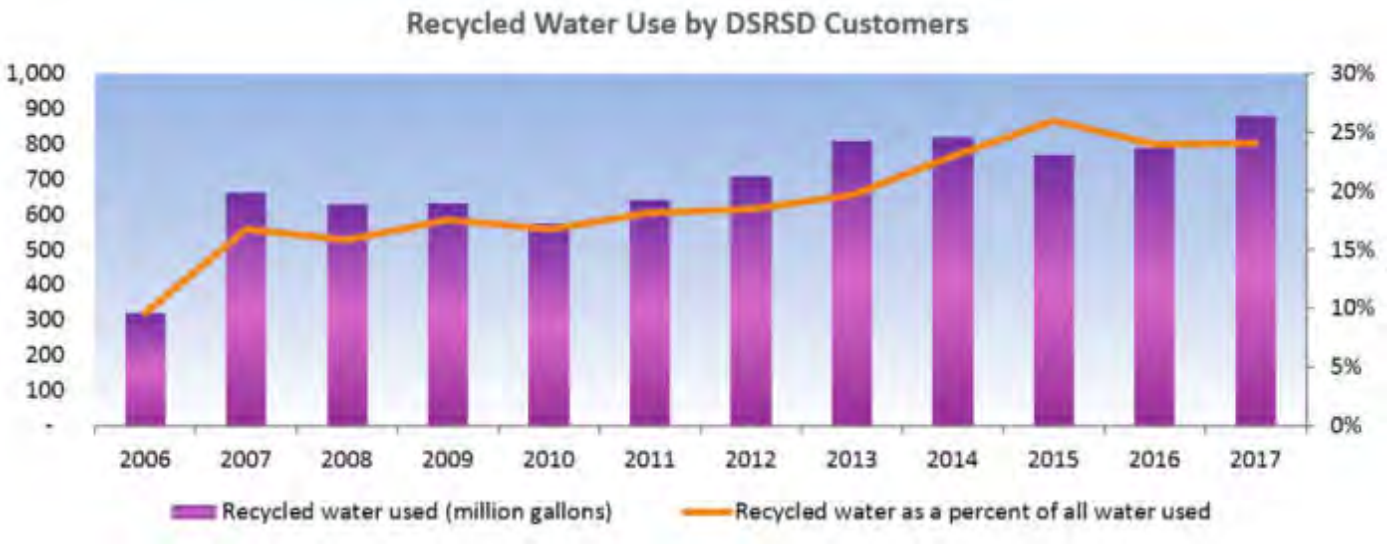
Our wholesale supplier, Zone 7 Water Agency, is receiving 85 percent of its 2017 allocation from the State Water Project, which typically supplies 80 percent of the Tri-Valley's water. On November 30, the California Department of Water Resources announced an initial water allocation of 15 percent for 2018. This allocation is likely to increase, depending on rain and snowfall this winter. Although the fall has been drier than normal, long-range weather forecasts show equal chances of above- and below-normal precipitation in the Bay Area this winter.

Groundwater Basin Has Recovered from Drought

When surplus imported water is available, Zone 7 uses it to recharge the local groundwater basin. According to Zone 7's annual water supply evaluation, on April 1, 2017 the Tri-Valley's groundwater basin had recovered from the drought and was at 91 percent of operational capacity. Zone 7 also stores water in Lake Del Valle, San Luis Reservoir, and groundwater banks in Kern County to help meet the valley's water demands during dry years.

Recycled Water Makes Our Water Supply More Reliable

We have a more diverse, reliable water supply today because DSRSD began investing in recycled water infrastructure more than 20 years ago. In 2017, DSRSD customers used 878 million gallons of recycled water for irrigation and construction. That's 24 percent of all the water the District sold in 2017, up from 8.43 percent in 2013 and 33.00 percent in 2007.



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Always Use Water Efficiently

Thank you for your efforts to use water wisely every day. Here are some resources to help:

- Register your account on AquaHawk and set up your own water use alerts.
- Find and fix leaks.
- Learn how to keep your yard green with less irrigation.
- Get a rebate when you convert lawn to water-efficient landscaping or purchase a qualifying irrigation controller or high-efficiency clothes washer.
- Use our checklist of Best Ways to Save Outdoors.
- Make sure your restaurant or business is using water wisely, too.

Regardless of water supply conditions, customers must always follow state and local regulations that prohibit water waste. Contact Customer Service (925-828-8524) if you have questions.

Revised February 9, 2018

Rebates to Help You Save Water, Energy, and Money

Reward yourself for using less water. DSRSD water customers are eligible to apply for water conservation rebates offered through Zone 7 Water Agency, the wholesale water supplier for the Tri-Valley. Click the links below for details and applications.

Current Rebates*

On hold due to COVID-19 restrictions. **Beautify your yard with help from Garden By Number!** Transform your yard with the Garden By Number rebate program, and apply in advance for a $50 rebate. This do-it-yourself program includes ready-made garden boxes with four themed options to suit your tastes. Add color to your yard and save water with these low-water-use plant options. See complete requirements and information on qualifying products on Zone 7's website.





Upgrade to a high-efficiency clothes washer! If you purchase a qualifying ENERGY STAR Most Efficient labeled high-efficiency clothes washer, you can apply for a rebate of up to $75. These washers use 25% less energy and 33% less water. Washers must be purchased and installed by June 30, 2021. See complete requirements and information on qualifying products on Zone 7's website.



Smart phone meets smart irrigation! If you struggle to program your old irrigation controller, it's time to upgrade. Many new generation controllers offer easy-to-use phone apps and adjust automatically with the weather. Rebates are available on qualifying models: up to $75 for single-family homes, $100 for multi-family properties, and $3,000 for commercial properties.



Convert your front lawn to water-efficient landscaping. Rebates are available for up to half of eligible costs; the maximum rebate is $750 for a single-family home and $4,500 for a multi-family or non-residential property. At least 50 percent of converted area must be covered with qualifying low-water plants when they reach full growth. Do not remove lawn until you receive approval. **Projects may not include artificial turf.** See complete requirements on Zone 7 website.

Free Expert Advice: Get help with designing your water-efficient garden, sheet mulching (the "greenest" way to remove lawn), and selecting beautiful low-water plants. Visit TriValleyWaterWise.com, Lawn to Garden, and Gardening & Irrigation.

**All rebates are subject to the availability of funds and program terms and conditions may change. Visit the Zone 7 website for additional information.*

Rebate FAQs

Do you offer rebates for installing artificial turf?
How can I check on the status of my rebate?
How long will it take to receive my rebate?
How much is the lawn replacement rebate?

Will I receive my rebate as a check in the mail or a credit on my account?

The State of California is offering consumer rebates on lawn replacement. Visit www.SaveOurWaterRebates.com for details, eligibility, applications and FAQs. DSRSD and Zone 7 staff cannot answer questions about the state rebate programs.

Free Resources for Businesses

Request these free items for businesses from the DSRSD public information office: (925) 875-2282.

Public Restroom Mirror Stickers: Remind your customers and employees to conserve at the best possible time — when they are about to turn on the faucet. Request these free mirror stickers.

3.75" wide x 2.875" tall
Static cling for easy removal



Encourage customers to report leaks. A dripping faucet can add 15 – 20 gallons of water a day to your water bill.

More ways to save water: Conservation Strategies for Businesses



Restaurant Table Tents: It's an effective way to reduce water waste and unnecessary dish washing. Simply wait to serve water until a customer asks for it. This compact, table-top reminder will help out your wait staff and encourage customers to join you in using water efficiently.

3.75" tall x 3.5" wide x 2" deep
Coated card stock, scored and notched for folding

More ways to save water: Conservation Strategies for Restaurants

Residential Recycled Water Fill Station

Fill Station Remains Closed Until the Next Major Drought

Recycled water plays an important role in the community's ability to conserve drinking water. In fact in FYE 2016, recycled water provided 24 percent of DSRSD's water supply.

During the 2014–2015 extreme drought, the Residential Recycled Water Fill Station provided individuals the opportunity to irrigate their landscaping, saving 3 percent of the District's total water supply. However, DSRSD's Residential Recycled Water Fill Station is currently closed.

History of the Residential Recycled Water Fill Station at DSRSD



Users fill containers with recycled water at the Residential Recycled Water Fill Station.

Dublin San Ramon Services District opened the state's first Residential Recycled Water Fill Station at its Jeffrey G. Hansen Water Recycling Plant on June 16, 2014, when California was in the midst of an extreme drought. The State Water Project, which supplies 80 percent of the Tri-Valley's source water, informed Zone 7 Water Agency (the water wholesaler for the Tri-Valley) that no water would be available in 2014 before September (during the hot, summer months), and then they might receive 5 percent of their allotment.

Extreme Drought Inspires Start of Fill Station

Zone 7 informed its four retailers—Cal Water Company, Dublin San Ramon Services District, City of Livermore, and City of Pleasanton—and the retailers clicked into high gear, informing their customers that everyone needed to curtail water use by 25 percent, and the easiest way to do so would be to reduce outdoor irrigation by half. Of a typical household's water use, outdoor irrigation consumes approximately 60 percent, flushing toilets 11 percent, washing clothes 9 percent, and bathing 8 percent.

Because of the extreme drought conditions, the District received regulatory approval to provide residents with recycled water for irrigation. And since it was a statewide drought, the District decided to make the water available to anyone willing to come and get it, they didn't have to be DSRSD customers. However, it cost the District $500,000 to set up and operate the Residential Recycled Water Fill Station (we set up pumping stations, hired temporary workers to staff the station and investigators to check that residents were not connecting recycled water containers to potable water systems, and managed the whole enterprise).

Why the Fill Station had to Close



Clean Water Programs Specialist Stefanie Olson pours recycled water into a container labeled "Do Not Drink" for recycled water.

As the extreme drought conditions were ending, three major construction projects were beginning at the plant: (1) Improvements and expansion of the Jeffrey G. Hansen Water Recycling Plant, enabling it to process more recycled water; (2) Adding a fourth and final digester to process solids from the wastewater; and, (3) Relining the large influent sewer pipe so it can continue bringing wastewater to the treatment plant for another 50 years. During this construction, it was not possible to have residents at the fill station, which was a staging area for the construction projects.

Why the Fill Station has to Remain Closed

Due to the high cost and people coming from outside DSRSD's service area to use the system, the District couldn't justify having customers subsidize this project once the extreme statewide drought ended. In 2016, District service area residents received only 25 percent of the benefits of the Residential Recycled Water Fill Station.

Recycled water demand has grown so much that DSRSD's large irrigation customers (sports grounds, school grounds, roadway medians, and golf courses) regularly use a large portion of available recycled water, especially during drier months. From June to August 2017, DSRSD recycled more than

90 percent of wastewater. In fact, in summer 2017, when the Residential Recycled Water Fill Station was closed, there were 10 days where every drop of wastewater was recycled and distributed to large irrigation customers via purple pipes. The District anticipates recycling 100% of wastewater into recycled water for more than 50 days during the upcoming summer 2021.

When Might the Fill Station Reopen?

At its December 20, 2016, regularly scheduled meeting, the DSRSD Board directed staff to close the Residential Recycled Water Fill Station, with the caveat that it may be reopened if mandatory conservation is reinstated. Currently, there is not enough supply of wastewater to turn into recycled water to supply a residential fill station. The treatment facility is also still under construction with the $19 million Primary Expansion and Improvements Project, which makes the plant unsafe for public access. The DSRSD Board of Directors adopted a policy in 2020 establishing guidelines for the use of recycled water that include making it a priority to "provide new recycled water supplies to serve public entity irrigation over new commercial or residential irrigation customers." The Board's priority is to provide recycled water to irrigate public areas such as parks, school grounds, and roadway medians.



Thank you for your extraordinary conservation during the drought emergency. There are many ways to keep saving water outdoors and permanently reduce the need for irrigation. DSRSD customers must continue to comply with local and state regulations that prohibit wasteful and unreasonable uses of potable water. Currently, there are no other restrictions on using potable (drinking) water for outdoor watering in the Tri-Valley.

Updated April 2021

Permanent California Water Laws

DSRSD customers are responsible for complying with local and state regulations that prohibit wasteful and unreasonable uses of water. If you have questions about water efficiency regulations, email waterconservation@dsrsd.com.

All Customers



Irrigation with potable or recycled water must not cause runoff onto adjacent property, non-irrigated areas, private and public walkways, roadways, parking lots, or structures.

Do not irrigate with potable water while it's raining or for 48 hours after measurable rainfall (at least one-tenth of an inch).

If you use a hose for residential vehicle washing, the hose must have a quick-action shut-off nozzle.

Do not use potable water to wash down driveways and sidewalks.

Do not use potable water in ornamental fountains or other decorative water features unless the water is recirculated.

Do not irrigate turf with potable water in public roadway medians or in publicly owned or maintained areas between the street and sidewalk unless the turf serves a community or neighborhood purpose.

Eating and Drinking Establishments



Serve water only upon request.

Hotels and Motels

Allow guests to choose to not have towels and linens laundered daily. Prominently display a clearly written notice about this option in each guest room.

Homeowner Associations

Do not take or threaten to take any action to enforce a provision of governing documents or architectural or landscaping guidelines or policies of a common interest development where that provision is void or unenforceable under section 4735, subdivisions (a) and (b) of the Civil Code.

Do not impose or threaten to impose a fine, assessment, or other monetary penalty against any owner of a separate interest for reducing or eliminating the watering of vegetation or lawns during a declared drought emergency as described in section 4735, subdivision (c) of the Civil Code.

Do not require an owner of a separate interest upon which water-efficient landscaping measures have been installed in response to a declared drought emergency to reverse or remove those measures after the emergency ends.

Builders and Commercial Landscapers

Comply with efficient landscape regulations established by the City of Dublin or the City of San Ramon. For more information, contact the appropriate city's planning staff department.



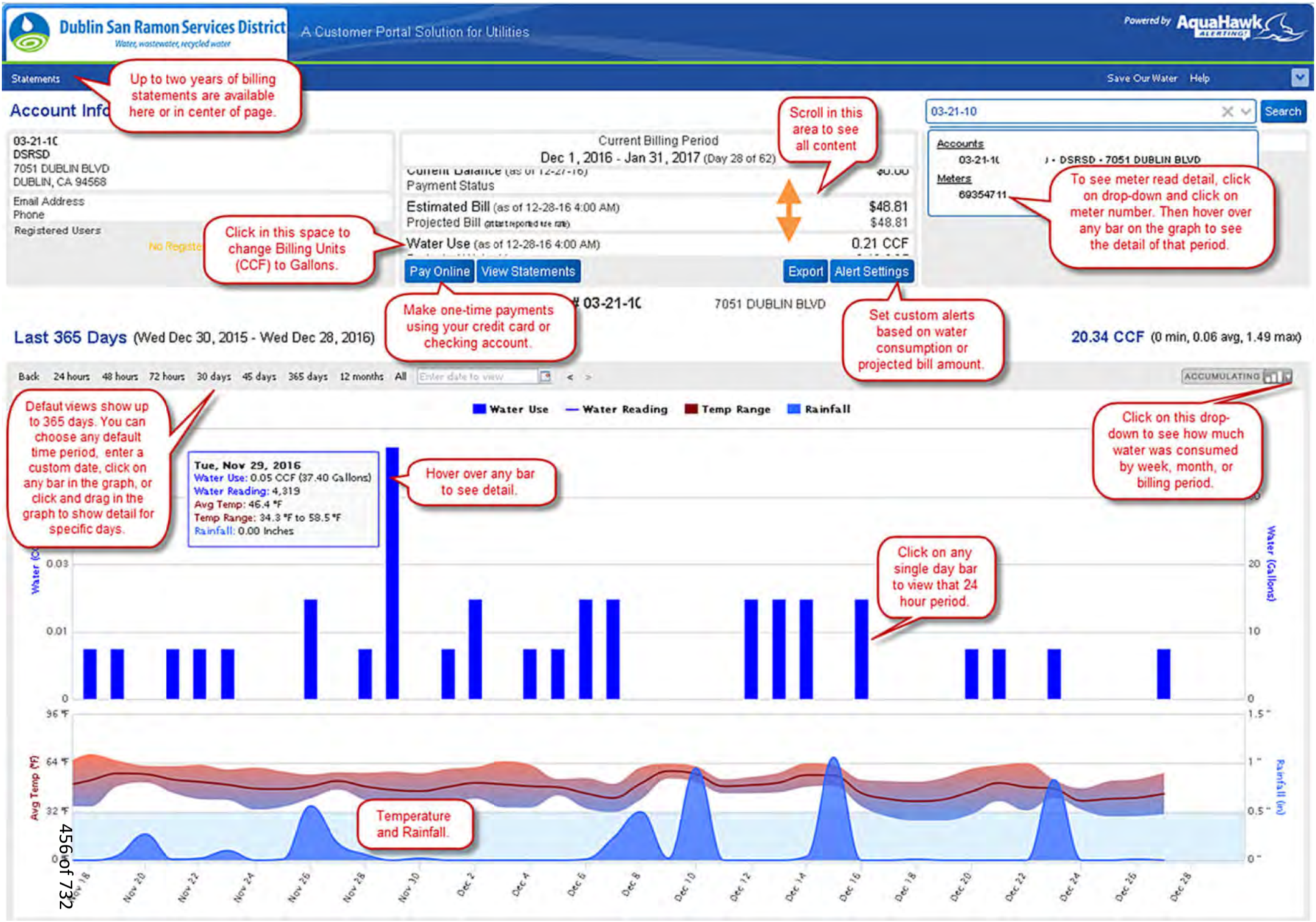
Use recycled water for grading and compaction, wetting pads, dust control, and sewer flushing. Recycled water is available from hydrants and at the water recycling plant in Pleasanton. More information

Resources for Wise Water Use

- AquaHawk Customer Portal where customers can track water use and set up alerts
- Rebates on water-efficient landscaping, irrigation controllers, and clothes washers
- Gardening and irrigation tips
- Water conservation strategies for businesses
- Water conservation strategies for restaurants

This summary is not exhaustive nor is it meant to replace the text of applicable laws and regulations. Please refer to the original documents for clarification.Visit the State Water Resources Control Board website to locate these documents.

Updated November 28, 2017


Dublin San Ramon Services District
Water, wastewater, recycled water
A Customer Portal Solution for Utilities
Powered by AquaHawk ALERTING
Statements
Save Our Water
Help
Up to two years of billing statements are available here or in center of page.
Account Info
03-21-10
DSRSD
7051 DUBLIN BLVD
DUBLIN, CA 94568
Email Address
Phone
Registered Users
Click in this space to change Billing Units (CCF) to Gallons.
Current Billing Period
Dec 1, 2016 - Jan 31, 2017 (Day 28 of 62)
Payment Status
Estimated Bill (as of 12-28-16 4:00 AM) $48.81
Projected Bill $48.81
Water Use (as of 12-28-16 4:00 AM) 0.21 CCF
Scroll in this area to see all content
Pay Online
View Statements
Export
Alert Settings
Make one-time payments using your credit card or checking account.
Set custom alerts based on water consumption or projected bill amount.
03-21-10
Search
Accounts
03-21-10 - DSRSD - 7051 DUBLIN BLVD
Meters
69354711
To see meter read detail, click on drop-down and click on meter number. Then hover over any bar on the graph to see the detail of that period.
7051 DUBLIN BLVD
Last 365 Days (Wed Dec 30, 2015 - Wed Dec 28, 2016)
20.34 CCF (0 min, 0.06 avg, 1.49 max)
Back 24 hours 48 hours 72 hours 30 days 45 days 365 days 12 months All
ACCUMULATING
Water Use
Water Reading
Temp Range
Rainfall
Defaut views show up to 365 days. You can choose any default time period, enter a custom date, click on any bar in the graph, or click and drag in the graph to show detail for specific days.
Tue, Nov 29, 2016
Water Use: 0.05 CCF (37.40 Gallons)
Water Reading: 4,319
Avg Temp: 46.4 °F
Temp Range: 34.3 °F to 58.5 °F
Rainfall: 0.00 Inches
Hover over any bar to see detail.
Click on this drop-down to see how much water was consumed by week, month, or billing period.
Click on any single day bar to view that 24 hour period.
Water (CCF)
Water (Gallons)
Avg Temp (°F)
Rainfall (in)
Temperature and Rainfall.
Nov 18
Nov 20
Nov 22
Nov 24
Nov 26
Nov 28
Nov 30
Dec 2
Dec 4
Dec 6
Dec 8
Dec 10
Dec 12
Dec 14
Dec 16
Dec 18
Dec 20
Dec 22
Dec 24
Dec 26
Dec 28

Appendix P

UWMP and WSCP Adoption Resolutions

Not Included in this Submittal

DRAFT

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: June 1, 2021

TITLE: Public Hearing: Adopt Operating Budget for Fiscal Years Ending 2022 and 2023

RECOMMENDATION:

Staff recommends the Board of Directors hold a public hearing related to the Operating Budget for Fiscal Years Ending (FYE) 2022 and 2023, and adopt, by Resolution, the Operating Budget for Fiscal Years Ending 2022 and 2023.

DISCUSSION:

The Board received the proposed Operating Budget (Budget) for FYE 2022 and FYE 2023 in hard copy on May 5 and electronically in the agenda packet, along with an in-depth presentation on the Budget, on May 18. A revised Budget (Exhibit A to the Resolution) reflects a true-up for the adopted budgets of DERWA and LAVWMA, and recognizes the recently negotiated easement with Pleasanton for $1.3 million dollars for FYE 2022.

The document incorporates initiatives from the new 2022–2026 Strategic Plan within each department's goals and objectives, proposes three new full-time positions, eliminates a limited-term lab technician position and adds a permanent lab technician position, and extends the term of two existing limited-term positions. In addition, the Budget addresses operational and policy issues in the areas of changing regulatory requirements, emergency response, energy uncertainty and cost control, fiscal sustainability, and updated interagency agreements.

The budget is divided into five main sections as follows:

- *Introduction* – Organization chart, Board and senior staff directory, strategic plan, mission, vision, and core values, awards, and adopted resolution.
- *Executive overview* – Message from the General Manager, second generation 10-year financial models, District overview and economic conditions, and service area map.
- *Financial overview* – Descriptions of the budget process and accounting structure, working capital by fund families, financial information/trend analysis on revenues, expenses and transfers, and a summary of the capital improvement program.
- *Department operating budgets* – Department overview, accomplishments, budget summaries and trends, future goals, and performance measures.
- *Appendix* – District financial policies, glossary, debt summary, and working capital summaries by fund.

Despite the economic crisis arising from the Coronavirus pandemic, Local Wastewater, Regional Wastewater, and Water service charges remain strong, and capacity reserve fees are estimated to increase each of the next two years. The expenditures for the current fiscal year (FYE 2021) have been reduced by $4.4 million from the approved amended budget total of $72,982,448 to reflect a more accurate beginning working capital estimate. Overall revenues for the District are estimated to increase 10.59 percent in FYE 2022 and 11.79 percent in FYE 2023. On the expense side of the Budget, the FYE 2022 projections are 4.91 percent higher than the estimated final FYE 2021 expenses, and flat in the second year of the Budget. All three enterprise funds have working capital projections above target reserves for this two-year budget period and remain above minimum reserve levels throughout the 10-year planning model scenarios.

Originating Department: Administrative Services	**Contact: C. Atwood**	**Legal Review: Not required**
Financial Review: Yes	**Cost and Funding Source: $71.9 million for FYE 2022 & $72.0 million for FYE 2023**	
Attachments: ☐ None ☒ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☐ Other (see list on right)		

RESOLUTION NO. _____

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT APPROVING AND ADOPTING THE OPERATING BUDGET FOR FISCAL YEARS ENDING 2022 AND 2023

WHEREAS, the District is required to adopt an operating budget by September 1; and

WHEREAS, on May 18, 2021, the Board was provided a comprehensive overview of the budget process and assumptions, a District-wide financial review, and fund financial allocations in the proposed operating budget for fiscal years ending 2022 and 2023; and

WHEREAS, on May 27, 2021, the Board was provided an updated budget reflecting a true-up for the adopted budgets of DERWA and LAVWMA, and recognizing the recently negotiated easement with Pleasanton for $1.3 million dollars for FYE 2022; and

WHEREAS, the budget as presented provides a financial plan that supports the Board's policy objectives for the next two fiscal years as expressed in the District 2022-2026 Strategic Plan; and

WHEREAS, said budget is balanced and incorporates expenditures for the District to provide reliable and sustainable water, wastewater, and recycled water to the communities it serves in a safe, efficient, and environmentally responsible manner; and

WHEREAS, per California Government Code Section 61110(c), the District Secretary published the notice of public hearing on May 18, 2021, for the biennial Operating Budget for Fiscal Years Ending 2022 and 2023, which was more than fourteen (14) days prior to the public hearing for the operating budget.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the Counties of Alameda and Contra Costa, California, that the Proposed Operating Budget for Fiscal Years Ending 2022 and 2023, attached as Exhibit "A," modified as described above, including the revenues, expenditures, and transfers as described therein, is hereby adopted, and all expenditures made consistent therewith are hereby ratified and approved.

ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 1st day of June 2021, and passed by the following vote:

AYES:

NOES:

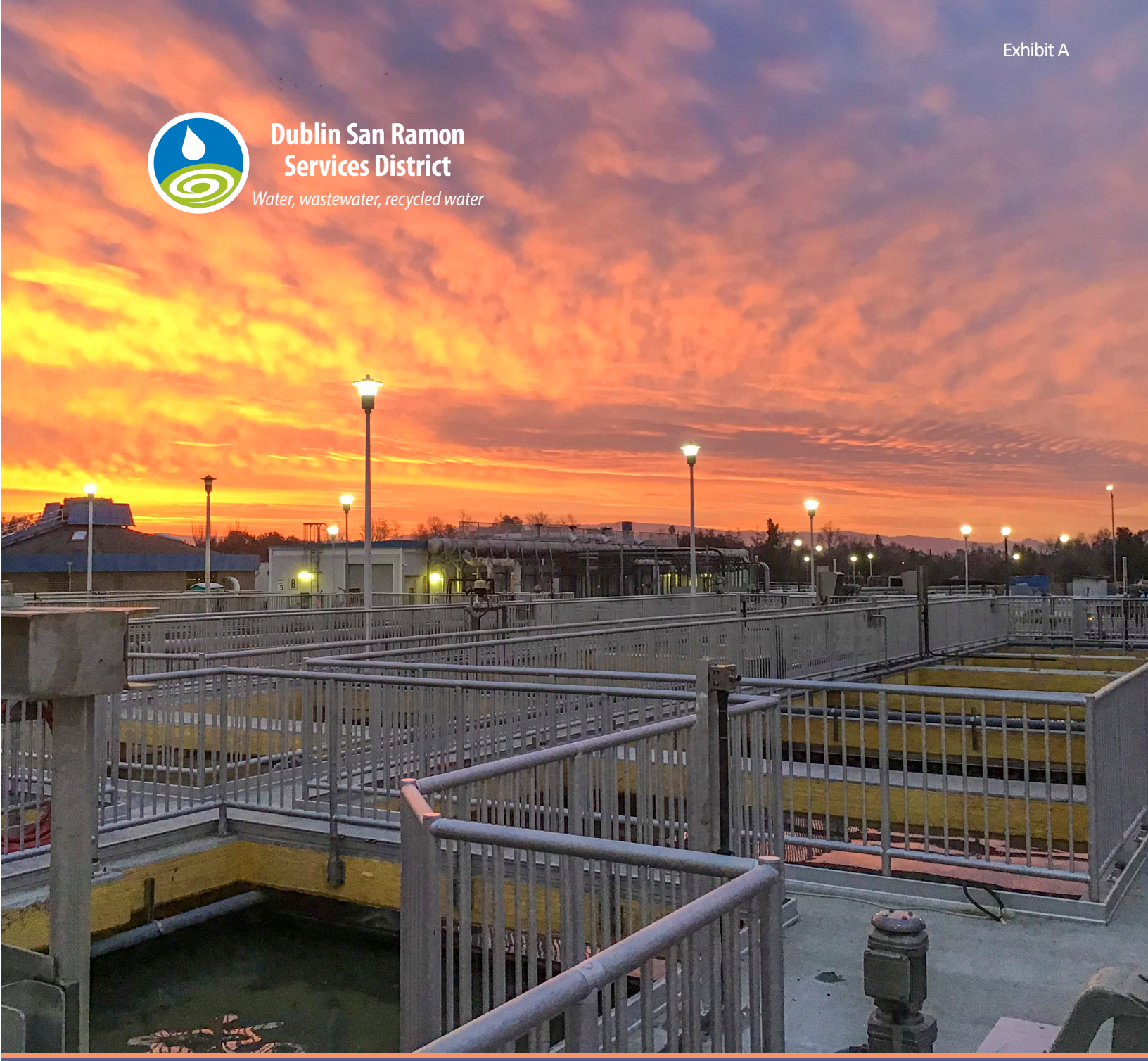
ABSENT:

_____
Ann Marie Johnson, President

ATTEST: _____
Nicole Genzale, District Secretary

Dublin San Ramon Services District

Water, wastewater, recycled water



fiscal years ending

Proposed Operating Budget 2022 and 2023

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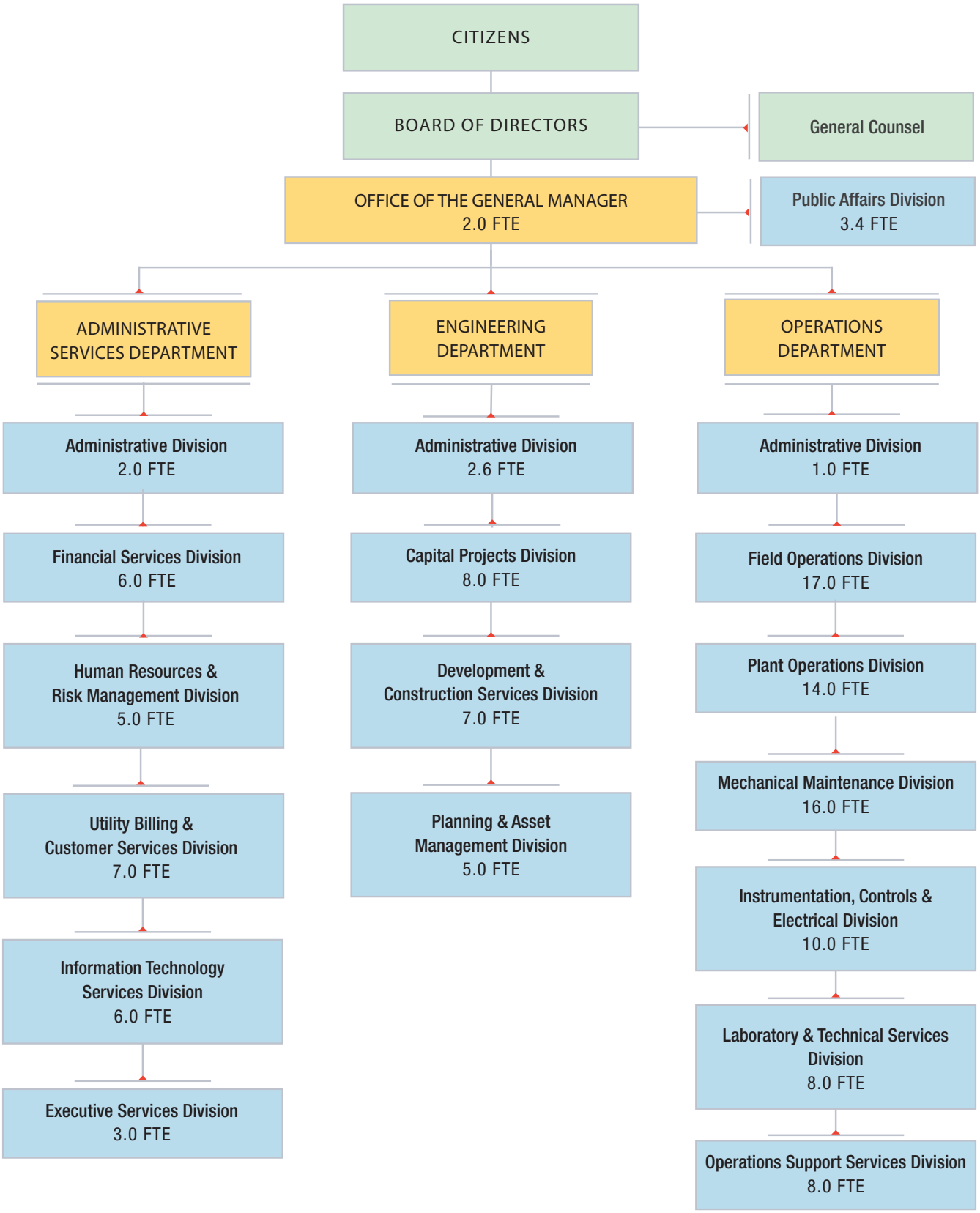
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ORGANIZATION CHART

Fiscal Years 2022-2023



BOARD OF DIRECTORS



ANN MARIE JOHNSON

President

Boardmember since 2018
Term expires December 2022



RICHARD HALKET

Vice President

Boardmember since 2004
Term expires December 2024



GEORGEAN VONHEEDER-LEOPOLD

Director

Boardmember since July 2009
Term expires December 2022
(Previously served 1992–2000)



MARISOL RUBIO

Director

Boardmember since 2020
Term expires December 2024



ARUN GOEL

Director

Boardmember since 2021
Term expires December 2022

SENIOR MANAGEMENT TEAM

DANIEL MCINTYRE ..... *General Manager*

JAN LEE ..... *Assistant General Manager*

CAROL ATWOOD ..... *Administrative Services Director*

JEFF CARSON ..... *Operations Director*

JUDY ZAVADIL ..... *Engineering Services Director*



STRATEGIC PLAN

FYE 2022 - 2026

Updated April 2021

STRATEGIC GOALS AND ACTION ITEMS

Maintain our financial stability and sustainability

- Implement early preventative maintenance and rehabilitation measures to save on greater deferred costs long-term
- Strive to limit future utility rate increases to general inflation trends by responsibly managing District assets and costs
- Update the District's reserve policies

Make additional investment in information systems that provide a strong return on investment

- Expand the use of our electronic records management program
- Replace our finance, utility billing, human resources, and permitting software system by 2022
- Successfully transition to Microsoft 365 online environment
- Expand and enhance our Supervisory Control and Data Acquisition Systems (SCADA)
- Strengthen cybersecurity and network resiliency capabilities

Update our business practices and procedures

- Integrate our business enterprise systems (Geographic Information System, Computerized Maintenance and Management System, Laboratory Information Management System, SCADA, and Records Management System) to more effectively access and share data across the District
- Review and revise our Joint Powers Authority and other interagency agreements to address changing conditions
- Embrace a safety culture by updating the District's environmental health and safety programs
- Coordinate with neighboring agencies to provide more efficient and cost-effective services

Develop a fully integrated Asset Management Program to guide the District's business decisions

- Increase equipment inspections and document all corrective maintenance activities to improve scheduling of preventative maintenance and asset replacement
- Identify and assess the performance of critical assets in each business enterprise to prioritize capital projects
- Optimize efficient and effective use of capital replacement resources in the long term

Enhance the leadership, professional, and technical skills of the District's staff to meet the challenges of staffing transitions over the next five years

- Diversify and strengthen the skills of staff through multi-agency professional development programs, stretch assignments, and active employee engagement
- Develop a succession plan for key positions where feasible

Enhance our ability to respond to emergencies and maintain business continuity

- Complete and implement a comprehensive update of our Emergency Response Plan that builds an enduring emergency preparedness and response culture
- Create an inventory of emergency assets, equipment, and materials in stock
- Integrate ongoing emergency training into District operations and conduct District-wide Incident Command System exercises to assess and improve District capabilities
- Explore coordination of emergency planning with partner agencies and the cities we serve

Meet the objectives of the District's water supply policy by developing and implementing an integrated recycled and potable water program

- Pursue new supplies to meet long-term recycled water demands
- Work collaboratively with our Tri-Valley partners in the development of a more diversified and resilient water supply
- Build public awareness of long-term water supply challenges and opportunities

Develop a long-term strategy to ensure greater energy efficiency and reliability for the District

- Develop a District energy policy and District energy master plan that evaluates sustainable energy sources and a long-term fleet management program
- Develop phased targets for complying with State long-term greenhouse gas emissions mandates

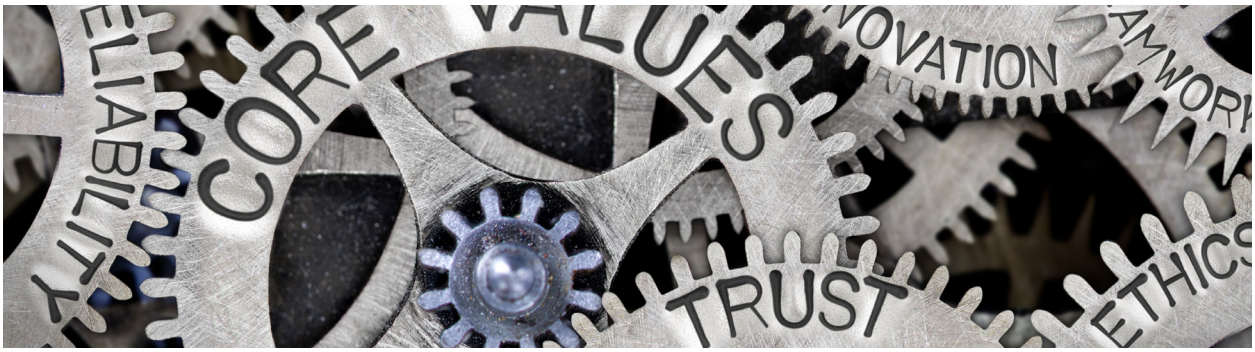
Collaborate with partner agencies to monitor evolving regulatory requirements for constituents of emerging concern and explore potential compliance and mitigation strategies

MISSION

Protect public health and the environment by providing reliable and sustainable water, recycled water, and wastewater services in a safe, efficient, and fiscally responsible manner.

VISION

In our operations, financial practices, and public policies we always strive to be an effective and efficient organization. Our agency is nimble and resilient in navigating the challenges of our ever-changing industry. We relentlessly pursue incremental improvement, and to be seen as a leader of industry best management practices.



DISTRICT CORE VALUES

The core values are simple key words that describe the values of the agency; they are accompanied by questions that are to be asked when major policy decisions are being considered to ascertain if the decision is in conformance to the stated values.

CORE VALUE	CORE VALUE QUESTION
Protect Public Health and the Environment	Does the decision protect public health and the environment?
Sustain Financial Stability	Does the decision sustain or contribute to the financial stability of the District?
Be Open and Transparent	Is the decision being made in an appropriately open and transparent manner and has it considered public input?
Fairness, Respect, Honesty, and Ethics	Does the decision treat all concerned fairly, respectfully, honestly, and ethically?
Operate Safely	Does the decision promote a safe environment for the community and the workforce?
Provide High Quality Customer Service	Does the decision reflect high quality customer service?
Provide Sustainable, Efficient, Reliable, and Secure Services	Does the decision maintain or enhance the District's sustainability, efficiency, reliability, and security?
Perform at a High Standard	Does the decision or action lead to a high performing, highly qualified, motivated, safe, and innovative workforce and an adaptable organization?



California Society of
Municipal Finance Officers

Certificate of Award

Operating Budget Excellence Award
Fiscal Year 2019-2020

Presented to the

Dublin San Ramon Services District 2020-2021

For meeting the criteria established to achieve the CSMFO Excellence Award in Budgeting.

January 31, 2020

Steve Heide
CSMFO President

Yolanda Rodriguez, Chair
Recognition Committee

Dedicated Excellence in Municipal Financial Reporting

In bestowing this award, CSMFO acknowledges the District for its outstanding presentation of financial and budgetary data.

The California Society of Municipal Finance Officers {CSMFO} issues annual awards for outstanding achievement and contributions to the profession. Dublin San Ramon Services District received the Operating Budget Excellence Award for its fiscal years ending {FYE} 2020 and 2021 Operating Budget.

The District's FYE 2022 and 2023 Operating Budget is intended to continue to meet the CSFMO's high standards and will be submitted again to determine eligibility.

RESOLUTION NO. _____

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ADOPTED by the Board of Directors of Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 1st day of June 2021, and passed by the following vote:

AYES:

NOES:

ABSENT:

_____
Ann Marie Johnson, President

ATTEST: _____
Nicole Genzale, District Secretary



Reservoir 4A in Schaefer Ranch

Executive Overview

Dublin San Ramon Services District
Water, wastewater, recycled water

7051 Dublin Boulevard
Dublin, CA 94568-3018

main (925) 828-0515
fax (925) 829-1180
www.dsrsd.com

A LETTER FROM **THE GENERAL MANAGER**

April 28, 2021

Honorable President and District Directors:

I am pleased to submit the fiscal years ending (FYE) 2022 and 2023 operating budget for the Board's review and consideration. This operating budget highlights District accomplishments and challenges over the last two years, identifies major policy and operational issues facing the District over the next two years, and projects the financial condition of the District's three business enterprises over the next decade in an updated long-term Financial Planning Model. This operating budget describes detailed financial plans over the next two years from three perspectives - a fund basis, a category basis, and a department basis - to provide full transparency to the readers.

The District operates three main business enterprises: Local Wastewater for wastewater collection system services in Dublin and southwest San Ramon, Regional Wastewater for wastewater treatment and disposal services for Dublin, southwest San Ramon, and Pleasanton (by contract), and Water for potable and recycled water in Dublin and the Dougherty Valley region of San Ramon. Total operating expenditures for the three enterprises and the District's other funds for FYE 2022 are $71,922,539. This amount is 4.9% more than updated estimated actual expenditures for FYE 2021 of $68,556,680. Total expenditures are projected to remain flat in FYE 2023.

After extraordinarily strong growth in the Tri-Valley from 2010 to 2019, the region's pace of development has tapered off as a result of economic cycle effects compounded by the financial effects of the 2020-2021 COVID-19 pandemic crisis. However, the District's three main business enterprises continue to grow moderately during a period of slower development. The District's main challenges in the near term are: (1) managing the burden of burgeoning State regulation on the water and wastewater industries; (2) bolstering the District's regional emergency response capabilities, and (3) continuing to accelerate a proactive preventative maintenance and rehabilitation program.

With moderately increasing development in our service area from an expected nationwide economic recovery, the addition of new staff resources and contract services in certain key areas will have a modest impact on local wastewater collection, regional wastewater treatment, and water utility rates. Utility rates for the District's three utility enterprises are anticipated to increase at no more than general inflation (3.0% annually) over the next five years, while assuring appropriate funding for operations and robust funding of the District's long-term Asset Management Program.

Highlights and Review of FYE 2020 and FYE 2021

The District began the FYE 2020 and 2021 biennial budget cycle operating without use of its flood-damaged District Office, with staff relocated to the Field Operations Facility in Pleasanton, and Board meetings being held at the Shannon Community Center in Dublin. Our sister agencies: City of Dublin, City of Pleasanton, and Zone 7 Water Agency, graciously shared use of their facilities for various meetings, trainings, and candidate testing. Just as the District Office was ready for re-occupancy in March of 2020, the COVID-19 crisis struck, with the County Health Departments and Governor Newsom issuing shelter-in-place orders. District Office staff that had anticipated relocating in spring of last year from the Field Operations Facility back to the District Office were suddenly telecommuting in the pandemic emergency. Board meetings were transitioned to video conferences under a proclaimed emergency. Operations staff modified their operations and maintenance activities to implement enhanced safety practices to protect staff from the COVID-19 disease, while maintaining all utility services to the community at a high standard.

Additional emergencies faced by the District throughout FYE 2020 and FYE 2021 included PG&E's Public Safety Power Shutoff Program, and the continuing repair of a catastrophic failure of DERWA's electrical system for recycled water facilities. Combined with the COVID-19 crisis, the District has been continuously operating under either one or two proclaimed emergencies for the last two-and-a-half years, since November 11, 2018. Moreover, during this time, the District continued a period of transitional stresses caused by a surge of retirements that began a few years ago. In the last two years, the District hired 27 new staff.

Despite these many unprecedented challenges, the District has had many successes over the last two years. Most notably, the District adapted to the COVID-19 crisis by: (1) drafting and implementing a comprehensive Exposure Control Plan, (2) drafting a new Pandemic Action Plan as part of our Emergency Response Plan, (3) creating a number of interim rules and procedures to assure compliance with the federal Families First Coronavirus Response Act of 2020, and (4) implementing an emergency telecommuting program that allowed us to sustain our most critical engineering, administrative, and support activities at an acceptable level during the pandemic. Moreover, we conducted a Virtual Citizens' Water Academy amidst the pandemic, which received a 2020 CASA Award of Public Outreach.

The District creatively operated its potable and recycled water pump stations and reservoirs through several extended Public Safety Power Shutoff events, continuously maintaining full service to our water and recycled customers during all of these power losses. To address future power shutoff and emergency situations, the District installed standby emergency power at the Field Operations Facility, purchased five portable generators to power our pump stations, and executed a contract to install two new stationary generators to serve two key pump stations. Moreover, we began the design of water Turnout #6 to give the District greater water supply flexibility during major disasters.

To strengthen our ability to respond to and manage future regional emergencies, the District completed its Risk and Resiliency Assessment for the water system, as required by the 2018 American Water Infrastructure Act. Moreover, a comprehensive update of the District's 2004 Emergency Response Plan is nearing completion. Expanded emergency planning and training activities have resumed after a long hiatus.

Amidst the challenges of emergencies, staff turnover, and urgent business improvement efforts, the District has operated its water, wastewater collection, wastewater treatment, and recycled water systems without any permit violations, or any significant service shortcomings over the last two years. This is particularly remarkable, given that a major $19 million, three-year upgrade of the Regional Wastewater Treatment Facility is nearing completion, requiring the Operations Department to operate and maintain the treatment facility with only three of four primary clarifiers in operation during a complicated construction process, as we renovate and expand to five primary clarifiers to meet growth demands. The performance of the entire District team has been superlative during this period of unprecedented difficulties.

The District's medium-term and long-term financial planning has improved considerably. The District developed enterprise fund 10-Year Financial Planning Models to assess the impact of long-term liabilities and guide medium-term financial decisions. In response to the economic pressures of the COVID-19 pandemic, long-term financial stress tests on each of the District's three enterprises and the District's six capital funds were presented to the Board, illustrating the strength of the District's conservative reserve policies and ongoing financial resiliency. Despite the flux in economic conditions, the District was able to restore minimum reserve funding to the weakened Local Wastewater Rate Stabilization Fund, pay off the Temporary Infrastructure Charge (TIC) program ($3 million loan), and advance fund the Water Enterprise contribution to the Water Expansion Fund program ($14 million obligation).

To address long-term water supply, conveyance, and storage uncertainty, the Board adopted a comprehensive Water Resiliency policy. As we enter a second year of drought, the District continues to work collaboratively with other Tri-Valley agencies to evaluate solutions to shared long-term water reliability challenges.

Major Operational and Policy Issues in FYE 2022 and FYE 2023

The District will address a number of operational and policy challenges in coming years. The recently adopted 2021 edition of the Five-Year Strategic Plan outlines an approach to managing many of these challenges. Early District actions requiring budgetary focus over the next two years are reflected in this operating budget. The most critical issues and budgetary responses are:

- **Changing Regulatory Requirements** – There are a number of more stringent regulatory requirements recently adopted or pending that will require a substantial increase in District effort. These include new State Environmental Laboratory Accreditation Program

requirements, chemicals of emerging concern issues, evolving wastewater standards, new drinking water requirements, new air quality standards, new Cal-OSHA requirements, and more rigorous reporting requirements for many District activities. Over two years, an additional investment of $443,000 for technical services is proposed to identify and meet these regulatory requirements.

- **Emergency Response** – Even with the pending completion of an update of the District's 2004 Emergency Response Plan, a second phase of updating will be necessary. Moreover, the District will need to commit significant effort on training and exercises. The budget proposes an extra $190,000 for consultant services over the two years to help us achieve our goals. Moreover, to support our emergency readiness, $500,000 for acquisition of emergency parts for Field Operations is budgeted.
- **Energy Uncertainty and Cost Control** – With the advent of the Public Safety Power Shutoff Program, there is greater energy uncertainty for our operations. Moreover, with changing State energy regulation, District energy costs are anticipated to increase. The budget anticipates an increase in baseline District energy costs of over 20.0%, including $464,000 per year of extra costs for Regional Wastewater Treatment Facility operations costs and water pumping costs. Additional professional services in the amount of $150,000 per year are included to assess and improve the reliability of our electrical systems. To further address rising costs and energy uncertainty, a District energy master plan and energy policy will be developed. This study effort will include planning for future District fleet replacements to be more energy efficient.
- **Financial Sustainability** – As part of fostering a more financially sustainable future for the District, a comprehensive cost of service study is needed to more effectively allocate central administrative costs attributable to new development and capital project construction. Additionally, new five-year rate studies are needed for our Local and Regional Wastewater programs in 2022. Additional consultant services in the amount of $175,000 over two years are included for these and other study efforts. Further refinements to the District's long-term business plans are needed. A limited-term position from the Engineering Department has been reallocated to the Financial Services Division to support these efforts.
- **Update Interagency Agreements** – The District's operational and institutional agreements with DERWA, LAVWMA, and the City of Pleasanton need updating to address changing conditions. Part of the time of a new Management Analyst I will complement a major commitment of senior management resources over the next two to three years on these efforts.

Staffing Resources

The operating budget adds three Full-Time Equivalent (FTE) positions to the Operations Department, eliminates a limited-term Laboratory Technician position while creating a new permanent Laboratory Technician position, and extends the term of two existing limited-term positions. These latter two positions are in the Engineering Department and the Administrative Services Department. These staffing changes will bring the total FTE positions up from 128 to 131, still slightly below the District's peak of 134 FTE positions prior to the Great Recession of 2009. Of these 131 positions, 129 are permanent positions, and 2 are existing limited-term positions that are extended. It should be noted that 2.18 FTEs work on LAVWMA operations and 2.96 FTEs on DERWA operations exclusively.

A new Water/Wastewater Systems Operator is proposed for the Field Operations Division, to further accelerate the District's commitment to preventative maintenance efforts for expanded water distribution and wastewater collection systems. A Wastewater Treatment Plant Operator position is included in the budget to more effectively operate the increasingly complex wastewater treatment, wastewater disposal, and recycled water treatment facilities. Lastly, a Management Analyst I is proposed for the Operations Department to address an array of needs including: supporting an update of the environmental health and safety program, accelerating our emergency preparedness and training efforts, assisting in the creation of an inventory of emergency assets, preparing new documentation for most stringent regulatory reporting requirements, supporting the Asset Management Program, and helping revamp our inter agency operational agreements.

District Financial Issues

The resilient economy, reflected in slowing but continuing new development in Dublin and Dougherty Valley, continues to serve as a beneficial tailwind to the District's finances. Because many of the District's costs are fixed, additions to its customer base enhance the financial condition of the Local Wastewater Enterprise, the Regional Wastewater Enterprise, and the Water Enterprise. For the three enterprises, growth rates of 1.7% to 2.8% are assumed over the next two years.

The slowdown in development can be seen in the reduction of capacity reserve fees collected that are typically in the $20 million to $25 million range. These revenues include the "buy in" component into existing infrastructure which funds in part each enterprise's replacement fund, and an "expansion" component that funds both new projects to serve new development and debt service for expansion projects previously constructed to serve new development. Total capacity reserve fees are anticipated to drop to $7 million for FYE 2021, before rising to over $15 million in FYE 2022 and a more traditional level of $24 million in FYE 2023. Funds collected are sufficient to continue meeting expansion debt service obligations of $7 million per year.

Despite the economic crisis arising from the COVID-19 pandemic, service charges for Local Wastewater, Regional Wastewater, and Water remain strong. For FYE 2021, total service charge revenues will be up 5.2%, before falling by 2.4% in FYE 2022, primarily because of anticipated water conservation in the second year of a major California drought. Revenues will increase by 5.3% in FYE 2023, as the regional economy rebounds. These revenue changes incorporate assumptions of customer base growth combined with annual inflationary adjustments to utility rates.

Revenues by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Service Charges	54,992,658	61,338,555	64,498,928	62,979,805	66,357,836
Capacity Reserve Fees	27,667,385	14,631,801	7,087,697	15,665,369	24,135,485
Other Revenues	9,757,491	11,607,044	6,236,843	7,688,860	6,472,053
Interest	7,137,405	7,108,552	2,108,530	2,062,721	1,853,188
Total	**99,554,938**	**94,685,952**	**79,931,998**	**88,396,756**	**98,818,562**
% Change		**-4.89%**	**-15.58%**	**10.59%**	**11.79%**

On the expense side of the budget, expenses for FYE 2022 will be 4.9% higher than estimated actual expenses for FYE 2021, and flat in the second year of the budget. Despite additional expenditures for contract services and three new positions in the Operations Department, overall expenditure growth is moderate because of staff retirements, and the effect of newer employees entering the CalPERS system as less costly PEPRA members. Lastly, earlier this year the Board suspended the accelerated prepayments toward the CalPERS Unfunded Actuarial Liability, which has reduced the budgeted personnel costs by over $500,000 per year.

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	21,822,628	23,108,273	25,488,243	25,956,204	26,461,966
Materials	18,419,850	20,628,631	20,645,670	21,638,421	22,803,818
Contracts	5,925,183	8,130,434	6,872,495	8,104,870	7,957,528
Other Expenses / JPA / Debt Payments	18,563,513	14,652,905	14,825,773	14,520,373	14,403,861
Capital Outlay	83,489	925,922	724,500	1,702,670	380,000
Total	**64,814,663**	**67,446,166**	**68,556,680**	**71,922,539**	**72,007,173**
% Change		**4.06%**	**1.65%**	**4.91%**	**0.12%**

Enterprise Fund Reserve Levels

As part of developing the operating budget, staff undertook the first comprehensive update of staffing allocations across the three enterprises since the Great Recession. In many cases, individual staff provide support to more than one of the three enterprises, and the cost of this shared staff effort is allocated by formula to the three enterprises. This new reallocation of staff effort towards the enterprises has resulted in savings to the Local Wastewater Enterprise's financial condition. Thus, the Local Wastewater Enterprise has recovered sooner than expected. This enterprise will meet reserve policy goals for the enterprise fund in both budget years, and the rate stabilization fund will meet the target reserve level in the second year. Lastly, the suspension of capital rehabilitation funding can be reversed and funding partially reinstated in FYE 2023, with the transfer of $800,000 from the enterprise fund to the capital replacement fund.

The Regional Wastewater program is extraordinarily well funded, with working capital levels at or near maximum reserve levels throughout both years of this operating budget cycle. Combined Regional enterprise and rate stabilization fund working capital levels will exceed $20 million throughout the two-year budget cycle.

The Water program is also strong, with working capital reserve levels for combined Water enterprise and rate stabilization fund exceeding $23 million throughout the two-year budget cycle. Both the enterprise fund and the rate stabilization fund will be above the target reserve level.

Long-term 10-Year Financial Planning Model

For the first time since FYE 2008, the operating budget includes 10-Year Financial Planning Models to illuminate the future financial path of the District's three utility enterprises. The initial 10-Year Financial Planning Models that were developed and presented to the Board over the last two years have been refined with updated assumptions and build on the latest operational and financial data. A chapter showing this "second generation" of the 10-Year Financial Planning Models immediately follows this budget message, and provides context for how the detailed two-year operating budget might be extrapolated into the future. The three enterprise funds are stable and sustainable throughout the 10-year horizon of the Financial Planning Models.

Asset Management Program / Capital Replacement

The District's Asset Management Program demonstrates that the three enterprise replacement funds are appropriately funded. The three enterprise operations funds contribute $8 million of replacement allocations to the replacement funds in FYE 2022, rising to $12.8 million annually in FYE 2031. Starting replacement fund resources exceed $62 million.

Concluding Comments

Despite all the adversity of the past two years, I am proud to report that the District has provided a high level of customer service, improved on best practices in the areas of water, recycled water, and wastewater, complied with constantly changing regulatory mandates, planned for a sustainable financial position across all the enterprise funds, and has provided a long-term financial model that meets the Strategic Goal of financial stability and sustainability.

I would like to express my appreciation to the Board of Directors for their policy decisions at the District, and for the dedication and diligence of the members of the Senior Management Team during this period of extraordinary stress and expectation. I would also like to thank all of the division managers and supervisors that are the balance of the organization's Leadership Team for their perseverance, dedication, and efforts in planning the District's operating budget and capital budget. Lastly, special thanks to the staff of the Financial Services Division and Public Affairs Division for their work in updating the 10-year Financial Planning Models, comprehensively updating the presentation of the operating budget, and assembling this two-year financial plan.

Respectfully submitted,

Daniel McIntyre
General Manager

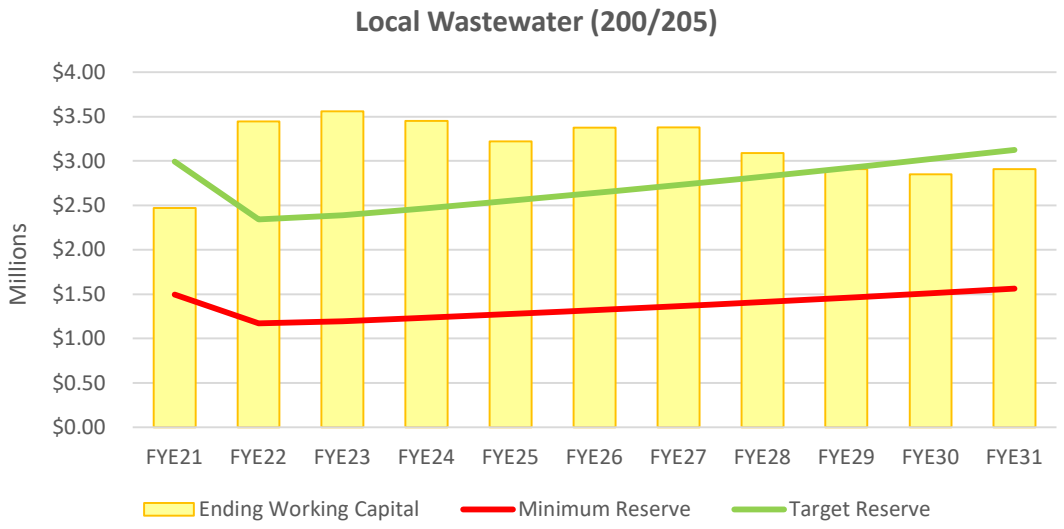
10-YEAR FINANCIAL PLANNING MODELS

The FYE 2022 and 2023 operating budget includes refined, second generation 10-year financial planning models which reflect assumptions such as 5.0% vacancy factors, targeted growth factors by revenue category, additions or removals of one-time project costs, a more detailed analysis of cost allocations, and estimated savings to the starting working capital. These models were modified to provide management a planning tool for forecasting long-term financial sustainability and to strategically evaluate policies that directly affect future rate and fee studies for the District. The operating budget focuses on the next two fiscal years revenue, expenditure and transfer needs. The models below present a big picture to ensure any needed course corrections are proactively discussed and addressed.

The Local Wastewater Model

The Local Wastewater Model has been the focus of concern for the past four years. In 2017, the Board received a report on some systemic financial challenges facing the Enterprise Fund, primarily due to a reduction of rates in 2004 that were not adequate to cover inflation growth and capital replacement needs in the ensuing years. To stabilize the Fund, the Board approved a significant rate adjustment for FYE 2018 - 2022 and deferred transfers to the Local Wastewater Replacement Fund. In addition, staff vacancies and other expenditure savings, augmented by a comprehensive analysis and reallocation of overhead charges as part of developing this two-year operating budget, has resulted in the projected working capital to be above targeted reserve levels through FYE 2028. FYE 2022 reflects the last of the five-year rate adjustments at 9.7%, with a 3.0% rate adjustment assumed for the remaining nine years of the model. The next Local Wastewater Rate Study is scheduled for the Spring of 2022. This 10-Year Financial Planning Model's assumptions and projections will be further refined in a third generation edition as part of that rate study.

The budget proposes the reinstatement of transfers to the replacement reserve starting in FYE 2023. An additional 0.5 FTE has been proposed in the budget to accommodate the demands of increased growth in our service area and reflects costs for proactive subsurface sewer repairs.

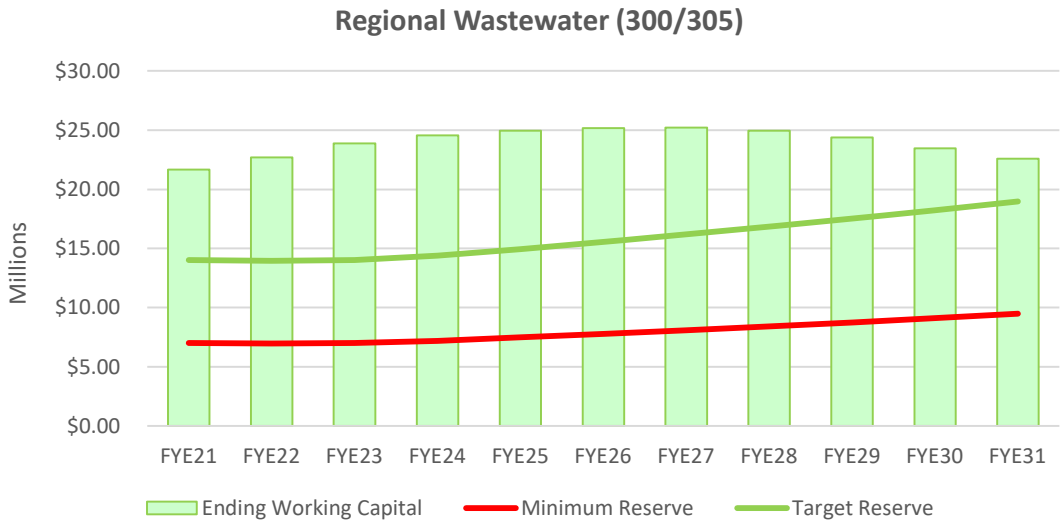


Regional Wastewater Model

The Regional Wastewater Model has been, and continues to be, in a strong financial position, with projected working capital above target reserve levels for all 10 years. Rate increases have been adjusted by CPI only since FYE 2019 as a result of the 2017 Regional Sewer Rate Study, with the next five-year study planned for FYE 2022. Based on the 10-year model below, the District anticipates similar CPI increases for the foreseeable future as a result of prudent cost controls and proactive maintenance efforts. A 1.6% increase is reflected for FYE 2022 (February 2021 Consumer Price Index) and a 3.0% rate adjustment is assumed for the remaining nine years of the model. This 10-Year Financial Planning Model's assumptions and projections will be further refined in a third generation edition as part of that rate study.

Growth in the Tri-Valley is also reflected in the revenue projections based on information from the cities within our service area. Other revenues for this Enterprise Fund include pretreatment and industrial waste lab fees, sampling, permits and interest. During the COVID-19 pandemic, revenues from the commercial and industrial sector decreased slightly as businesses were dealing with shutdowns or reductions in their service levels. These sectors will rebound as restrictions are lifted and businesses re-open in the summer of 2021.

This summer, LAVWMA (JPA comprised of the District and the cities of Livermore and Pleasanton) will be refunding its outstanding debt. Estimated annual savings from the refinancing are assumed in the model. The budget proposes the addition of 1.5 FTE's charged to the regional wastewater program to accommodate the demands of increased growth and reflects increases in our emergency response efforts, energy costs, proactive maintenance of the facilities and growing regulatory requirements.

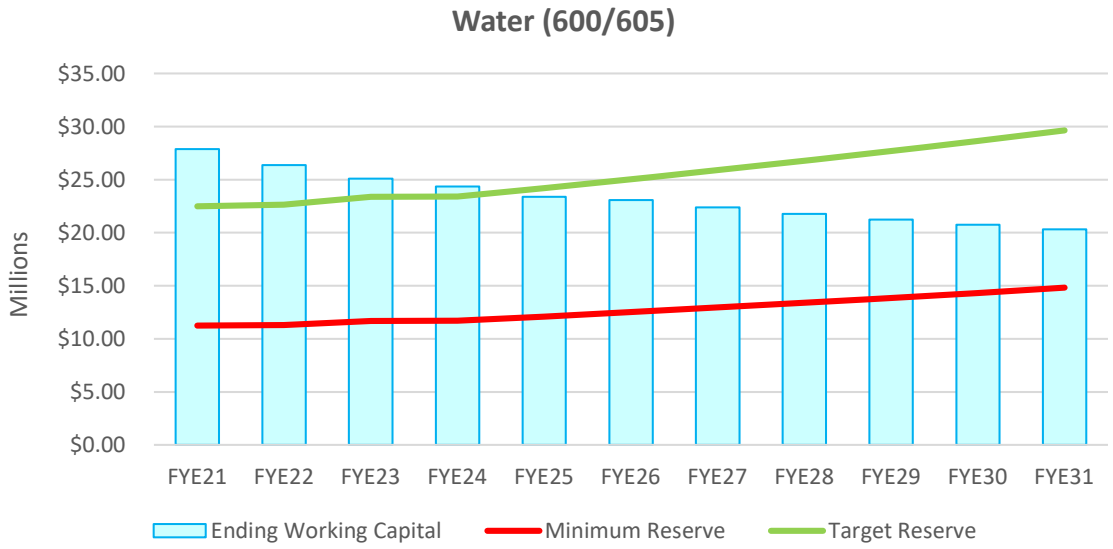


Water Model

The Water Model continues to be in good financial position projecting working capital reserves above target levels over the next three years and then keeping between the minimum and target range. A 2019 Comprehensive Water Cost of Service Study was completed in April 2019 which incorporated major policy decisions by the Board resulting in significant changes to the District's water rate structure. The budget assumes a 3.0% rate adjustment for both budget years. A Water Rate Study Addendum is anticipated for Fall 2021 to refine recycled water rates and State Water Project pass-through charges, and a full rate study is scheduled for FYE 2024. The 10-Year Financial Planning Model will be updated in 2023 as part of the next biennial budget process to reflect updated data and District experience.

During the COVID-19 pandemic, water demand from the commercial and industrial sectors decreased slightly while demand from the residential sector more than offset the decrease as people were sheltering in place. Projections account for the anticipated rebound in demand from the lifting of the COVID-19 restrictions and growth in our service area as the economy comes back on-line, tempered by the drought conservation measures starting in the summer of 2021. Proposed expenditures include the addition of 1.0 FTE's to accommodate growth and new regulatory requirements in the area of water quality and for laboratory operations, gas and electric increases, and proactive subsurface repairs to our water system.

The 10-year model falls between target and minimum reserves starting in FYE 2025 primarily due to the funding of a large alternative water supply project in year ten in the Water Replacement Fund. Transfers from the Water Enterprise Fund to the Water Replacement Fund increase from $6.2 million in FYE 2025 to $7.2 million in FYE 2031. Management will be proposing the use of debt financing on major infrastructure projects with the revision to the Board's Capital Financing and Debt Management Policy next year, which will address this issue. Debt financing of such a large infrastructure project would directly affect the working capital projections in this Fund in a material and positive manner. Additionally, in 2022 staff will undertake a new comprehensive permit/inspection fee study which will reevaluate how development processing and related overhead costs are recovered through current permit and inspection fees.





Jeffrey G. Hansen Water Recycling Plant

DISTRICT OVERVIEW AND ECONOMIC CONDITIONS

Overview

The District was formed in 1953 as the Parks Community Service District. The name was changed to Valley Community Services District (VCSD) in the early 1960s. VCSD became the vehicle for delivering local services before city governments existed, including water and wastewater services, recreation and parks, garbage collection, and fire protection. The name of the District was changed again in 1977 to Dublin San Ramon Services District (DSRSD) to reflect its service areas. By 1988, the cities of Dublin and San Ramon had incorporated and assumed responsibility for many of the services originally provided by the District, which allowed DSRSD to focus on water and wastewater services. In 1999, the District began providing a third service, recycled water. DSRSD currently provides water, recycled water, and wastewater services to more than 188,000 residents in Dublin, southern San Ramon, the Dougherty Valley area of San Ramon, and Pleasanton (by contract).

The District is governed by a Board of Directors that sets policy, adopts budgets, and appoints a general manager to run operations. Previously, all five members of the Board of Directors were chosen by constituents from the District's entire service area under the at-large election system. The District transitioned in May 2019 from an at-large election system to an area-based election system. Five directors are elected to overlapping four-year terms

Economic Conditions

In March 2020, the nation was hit with the rapid spread of the novel COVID-19 causing the government to issue stay-at-home orders for non-essential workers and businesses. The economy slowed down rapidly, resulting in disruptions in supply chains and negatively impacting businesses and financial markets. COVID-19 also had significant impacts to households, as stay-at-home orders forced school closures, quarantines, and lock downs that were needed to fight the spread of the virus.

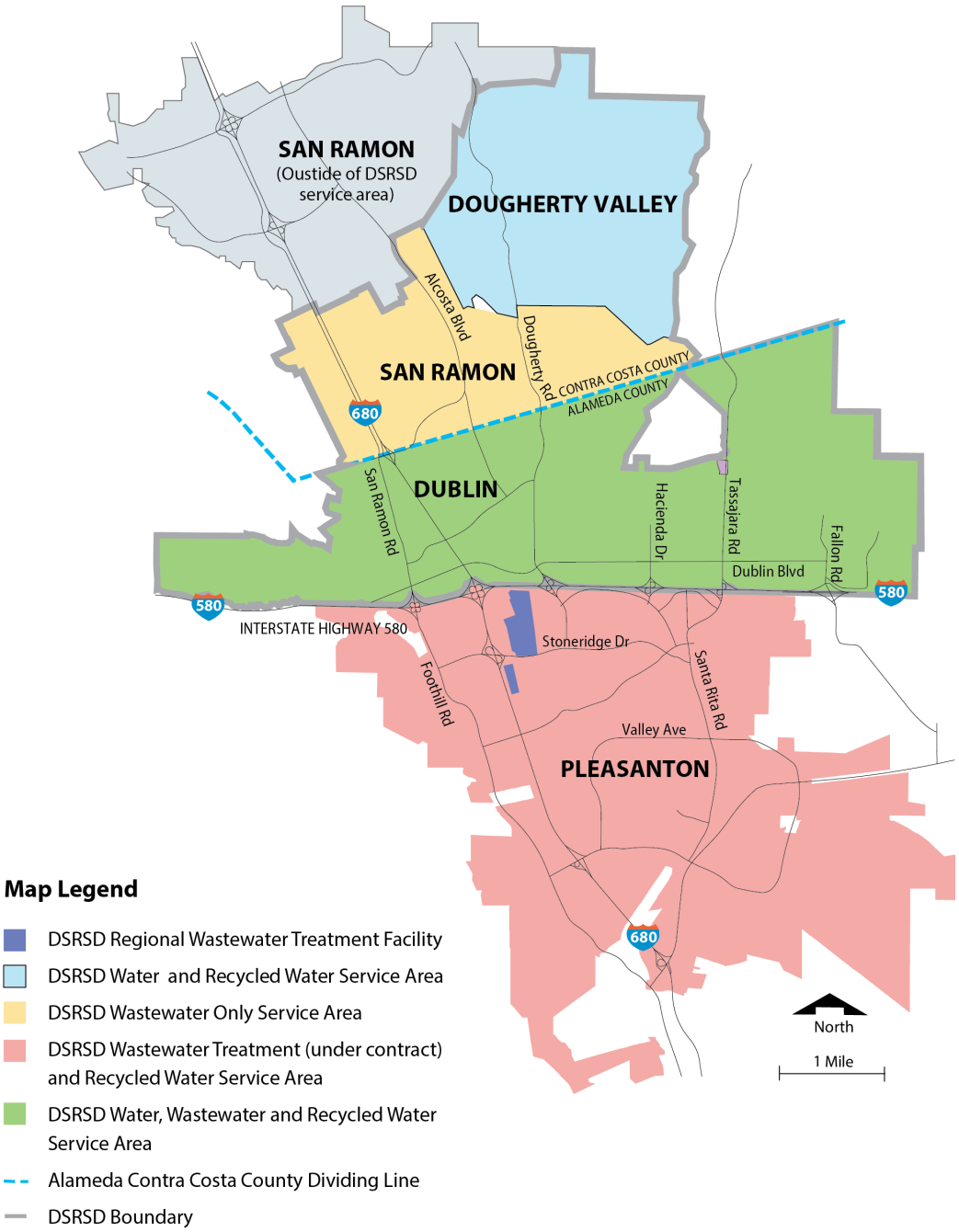
In January 2020, months prior to the major existence of COVID-19, unemployment rates in Alameda and Contra Costa counties were 3.1% and 3.2%, respectively. In contrast, at the peak of the COVID-19 outbreak in April 2020, unemployment rates for the two counties surged at unprecedented rates to 14.0% and 14.5%, respectively. Unemployment rates are slowly improving for the three cities within the district's service area. As of January 2021, unemployment rates have reduced by 50.0% to 5.9%, 5.6%, and 5.4% respectively, compared to the rates at the start of the pandemic which were 11.0%, 10.8% and 10.1% respectively.

The housing market in the East Bay remains strong, with an increase of 7.1% in assessed property values over prior year for Alameda County.

Both Dublin and San Ramon anticipate continued growth in the coming years. Over the past decade, the counties of Alameda and Contra Costa population has grown significantly by an average of 11.0%. Projected population in the next decade for the two counties is estimated to increase by an average of 8.3%.

Service Area

The District's service area lies within the Tri-Valley, which is part of the East Bay region of the San Francisco Bay Area. The City of Dublin, which is located approximately 35 miles east of San Francisco and 35 miles north of San Jose, comprises the largest part of the service area. The service area also includes two portions of the City of San Ramon: the original "Village", which is located to the north of Dublin, and the newer Dougherty Valley, located northeast of Dublin. By contract, the District provides wastewater treatment services for the City of Pleasanton, located south of Dublin. Located within commuting distance of major employers throughout the Bay Area, the Tri-Valley offers many transportation options, including Interstates 580 and 680, Bay Area Rapid Transit (BART), Altamont Commuter Express (ACE), and Livermore Amador Valley Transit Authority (LAVTA).





Wastewater Treatment Plant Digestors

Financial Overview

ANNUAL BUDGET PROCESS

Dublin San Ramon Services District operates on a fiscal year which runs July 1 through June 30. In this document, if a year is used, it means the end of the fiscal year; for example, 2022 refers to the fiscal year ending June 30, 2022. "Fiscal year ending" is abbreviated as "FYE".

The FYE 2022 and 2023 budget was developed explicitly to provide enough detail to address key issues that the Board needs in order to make the fundamental policy decisions the budget adoption reflects. The current Proposed Operating Budget was produced to provide the Board with prior year actual, current year estimated and proposed budget financial information, trend analysis, past accomplishments, future goals, and other supplemental information necessary for the Board decision process.

The District's budget process starts at the January management retreat where the full management team develops strategic goals and objectives for the organization and discusses personnel, operational and capital needs of the District for the ensuing two fiscal years. The District's General Manager provides guidance to division management regarding the five-year strategic plan and budget development based on those goals and objectives. The budget is reviewed by both the Senior Managers and the General Manager before presentation to the Board.

All Board discussions are held in open session and all materials are made publicly available in accordance with the Brown Act. The Board will receive a detailed budget presentation at its May 18, 2021 meeting. A noticed public hearing will be held on June 1, 2021 providing the public an opportunity to formally make comments regarding the budget directly to the Board prior to adoption.



DERWA Reservoir R200

BASIS OF ACCOUNTING/GANN LIMIT

Basis of Accounting

The District is in the business of providing potable and recycled water services and wastewater collection and treatment. The District accounts for these business activities in enterprise funds. Revenues are generated through service charges to customers. Expenses are charged to the appropriate fund to ensure that rates are established to recover those costs.

The District is a proprietary entity and uses an enterprise fund format to report its activities for financial statement purposes. Enterprise funds are used to account for operations that are financed and operated in a manner similar to a private business enterprise, but with the intent of the governing body to recover costs and expenses for providing goods and services to the general public on a continuing basis through user charges.

For enterprise funds, where the proper matching of revenues and costs is important, the District utilizes the full accrual basis of accounting for financial reporting. However, the budget shows items as expenses that normally would be recorded directly to the balance sheet. This provides budgetary control throughout the year. Examples include:

- Principal payments of debt, which reduce the amount of debt owed on the balance sheet
- Purchases of capital outlay items (fixed assets), which are capitalized on the balance sheet

Non-cash items, however, such as depreciation and contributions of property, GASB adjustments related to retirement and compensated leave are not budgeted.

Article XIIIB Appropriations Limit (Gann Limit)

The Community Services District Law (Government Code §61000, et seq.) provides that any district that has previously transferred services and all of the property tax revenue allocation associated with those services to another agency does not need to establish an appropriations limit. The District transferred its property tax allocations to the cities of San Ramon and Dublin in 1988, so no appropriation limit is required.

DESCRIPTION OF FUNDS

Enterprise Funds

Enterprise funds are self-supporting funds that cover the costs of operations and maintenance primarily through service charges. The District's core services are each accounted for in an enterprise fund.

- Local Wastewater Enterprise (Fund 200) – operations relating to wastewater collection. The service area consists of the southern part of San Ramon and the City of Dublin.
- Regional Wastewater Enterprise (Fund 300) – operations relating to wastewater treatment. The service area consists of southern part of San Ramon, the City of Dublin, and the City of Pleasanton (under contract).
- Water Enterprise (Fund 600) – operations relating to delivering potable and recycled water. The service area consists of the City of Dublin and the Dougherty Valley area of San Ramon.

Rate Stabilization Funds

Each enterprise fund is paired with a rate stabilization fund (RSF) to support the District's strategic goal of managing public funds to assure financial stability, including stability of revenues and related rates and charges. In some years, there may be a surplus above the working capital target in one or more of the District's enterprise funds; in other years, unexpected events may cause a fund balance to fall below the target. Rate stabilization funds allow the District to properly mage these different circumstances to achieve the desired stability; avoiding wide fluctuations in rates to fund operations. Cell tower lease and property tax revenues are also recorded in the water rate stabilization fund.

Replacement Funds

Replacement funds receive non-operating revenue from developer capacity reserve fees ("buy-in" component) and replacement allocation transfers from enterprise funds. Replacement allocations are based upon funding requirements identified in the District's updated Asset Replacement Planning Model. The buy-in component represents the benefit developers receive from connecting to existing infrastructure that is maintained primarily by ratepayers. This long-term planning model ensures that sufficient funds will be available when capital

Description of Funds (Cont'd)

assets need refurbishment or replacement.

In addition to capital projects, replacement funds also fund the District's capital outlay expenses. A "capital asset" is defined as any individual asset costing $10,000 or more with a useful life of more than two years.

Expansion Funds

Expansion funds receive revenue from developer capacity reserve fees. These fees are designed to cover the cost of building expanded facilities for new development, including debt service for assets built to serve new development. Capacity reserve fees, which are considered "non-operating" revenue, are recognized upon receipt but may not be used for many years until the need arises.

Costs for growth-related capital projects, including direct staff time and overhead, are charged to expansion funds.

Administrative Cost Center

The District uses the Administrative Cost Center to capture costs that are not specifically identifiable to any one of its enterprises. Costs for all of the District's administrative divisions are included in this fund. General administrative costs for services provided to two joint powers authorities (DERWA and LAVWMA) are also recorded in this fund.

Net fund costs are allocated based upon staff allocations across enterprise funds.

Other Post-Employment Benefits Fund

In August 2004, the Governmental Accounting Standards Board (GASB) issued Statement No. 45, Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions. Under the GASB 45 standard, retiree health care and other non-pension benefits for retirees must be paid for as the benefit is earned. In response to this requirement, the District hired an actuary to provide information on the costs of these benefits.

In 2007, the Other Post-Employment Benefits (OPEB) Fund was established to set aside monies for post-retirement insurance costs. The District transferred funds in 2007 from other funds into the OPEB Fund. In 2008, the District passed a resolution to participate in the California Employers' Retiree Benefit Trust (CERBT), an irrevocable trust established to fund OPEB and administered by CalPERS. Funds held by CERBT are managed by an appointed board not under control of the District Board. The OPEB fund records transactions between the District and CERBT.

Dougherty Valley Standby Assessment District Fund

The Dougherty Valley Standby Assessment District (DVSAD) Fund was established to collect assessments and pay ongoing costs associated with the State Water Project specifically tied to the Dougherty Valley. An assessment is levied each year after the budget is finalized. All assessments received for the DVSAD, as well as related expenses, are accounted for in this fund.

WORKING CAPITAL BY FUND FAMILIES

Working Capital Targets

The District funds operations from its enterprise and rate stabilization funds. Operating reserves, referred to as "working capital," are defined as current assets minus current liabilities. Working capital is a measure of available resources to meet fluctuations in cash flows.

The Board of Directors establishes working capital targets to define the appropriate amount of operating reserves available in each fund to cover ongoing costs. These targets are defined in terms of "months of working capital," or the amount of cash needed to cover expenses for a set period.

For all three enterprise funds, the target is four months of working capital (or four months of that year's budgeted operating expenses). The working capital target is one of several measures the Board uses to determine when rate adjustments are needed.

The District's Financial Reserves Policy (P400-15-1) establishes reserve guidelines for enterprise, replacement, and expansion funds.

Working Capital by Fund Families

The following pages summarize the District's overall financial picture by individual fund, including revenue and expenses, as well as cash activity that is not accounted for as a revenue or expense (such as loans). The fund schedules are grouped by enterprise and its related rate stabilization fund, followed by the Administrative Cost Center, the Other Post-Employment Benefits Fund, and the Dougherty Valley Standby Assessment District Fund. Financial reserve/working capital targets are included for each funds.

Local Wastewater Operating Funds: Enterprise (200) and Rate Stabilization (205)

The Local Wastewater (WW) fund group provides sewer collection services in Dublin and southern San Ramon. The collection system consists of the sewer pipes that transmit wastewater from the residences and businesses to the Regional Wastewater Treatment Plant. Of the three DSRSD utility enterprises, Local Wastewater is the smallest, representing only about 5% of total operational costs.

In 2017, the Board received a report on some systemic financial challenges facing the Local WW Enterprise Fund, primarily due to a substantial reduction of the rates back in 2004. To stabilize the Fund, the Board approved a significant rate adjustment in FYE 2017 that would increase the local annual charge for residential users by over 94% over five years and deferred transfers to the Local Wastewater Replacement Fund. In addition, vacancies and expenditure reductions over the past four years have resulted in the working capital balance to rebound to minimum reserve policy levels faster than anticipated. Finally, a comprehensive review of allocation of administrative overhead costs has been completed, resulting in some transfer of costs from the Local WW Fund. As a result of all of the above actions, the Local WW Enterprise Fund currently shows a sustainable financial position.

The FYE 2023 Budget will ramp up funding to the Replacement Fund once again in order for the Local Replacement Fund to be properly funded. Staff will evaluate restoring full replacement allocations during the next Local Wastewater Rate Study, which is anticipated for Spring 2022. The Budget proposes the addition of 3.0 FTEs of which 0.5 FTE are allocated to support local collection operations. FYE 2022 and 2023, combined local enterprise and rate stabilization funds are projected to be above reserve policy targets (four months of working capital).

Local Wastewater Operating Funds

	Local Enterprise (200)		Local Rate Stabilization (205)	
OPERATING BUDGET	**FYE 2022**	**FYE 2023**	**FYE 2022**	**FYE 2023**
(Estimated) Beginning Working Capital	1,727,693	1,752,172	743,787	1,694,455
Operating Revenues				
Total Service Charges	4,240,208	4,493,869	-	-
Other Revenues	335,001	81,300	-	-
Interest	15,111	17,522	7,438	13,304
Total Operating Revenues	4,590,319	4,592,691	7,438	13,304
Total Revenues	4,590,319	4,592,691	7,438	13,304
Operating Expenses				
Wages and Benefits	2,088,972	2,105,715	-	-
Unfunded Actuarial Liability (Pension/OPEB)	123,317	154,276	-	-
Materials & Supplies	90,528	88,034	-	-
Contracts	369,871	378,938	-	-
Other	27,120	27,120	9,000	9,000
Allocated Costs	804,536	818,789	-	-
Total Operating Expenses	3,504,344	3,572,873	9,000	9,000
Transfers Out				
Replacement Allocations	-	800,000		
Transfers Out - Others	109,267	110,936	-	-
Total Transfers Out	109,267	910,936	-	-
Total Expenses	3,613,611	4,483,809	9,000	9,000
Net increase (decrease) pre RSF	976,708	108,882	(1,562)	4,304
Ending Working Capital pre RSF transfers	2,704,402	1,861,054	742,225	1,698,759
RSF Transfer In (Out)	(952,230)	(74,617)	952,230	74,617
Ending Working Capital post RSF transfers	1,752,172	1,786,436	1,694,455	1,773,376
Target Reserve (4 months operating expenses)	1,168,115	1,190,958	1,168,115	1,190,958

Regional Wastewater Operating Funds: Enterprise (300) and Rate Stabilization (305)

The Regional Wastewater Fund group provides sewer treatment and disposal services in the City of Dublin, the southern part of the City of San Ramon, and the City of Pleasanton (by contract). The District's LAVWMA operations costs are funded through this fund.

The Regional Enterprise Fund continues to be in good financial condition with no rate increases implemented in FYE 2017 and FYE 2018, and inflationary adjustments from FYE 2018 through FYE 2022. A 1.6% rate adjustment (February 2021 Consumer Price Index) is reflected for FYE 2022 and a 3.0% rate adjustment is assumed for FYE 2023. The next Regional Rate Study is anticipated for Spring 2022.

The Budget approves the addition of 3.0 FTEs of which 1.5 FTEs are allocated to support regional treatment operations. For the budget period, combined regional enterprise and rate stabilization funds are projected to be near maximum reserve policy targets (six months of working capital), far exceeding the target reserve of four months of working capital.

Regional Wastewater Operating Funds

OPERATING BUDGET	Regional Enterprise (300) FYE2022	Regional Enterprise (300) FYE2023	Regional Rate Stabilization (305) FYE2022	Regional Rate Stabilization (305) FYE2023
(Estimated) Beginning Working Capital	9,726,066	10,459,022	11,950,251	12,243,851
Operating Revenues				
Total Service Charges	22,906,653	24,069,190	-	-
Other Revenues	1,727,900	1,156,873	-	-
Interest	101,056	103,289	108,118	112,704
Total Operating Revenues	24,735,609	25,329,352	108,118	112,704
Total Revenues	24,735,609	25,329,352	108,118	112,704
Operating Expenses				
Wages and Benefits	8,153,722	8,220,994	-	-
Unfunded Actuarial Liability (Pension/OPEB)	485,447	607,320	-	-
Materials & Supplies	3,142,025	3,135,865	-	-
Contracts	1,567,791	1,436,274	-	-
Other	243,894	250,894	9,000	9,000
5th Supplemental Agreement (Pleasanton)	123,600	123,600	-	-
Contribution to JPA	2,437,609	2,437,609	-	-
Debt Service	1,463,294	1,463,591	-	-
Allocated Costs	3,300,663	3,360,965	-	-
Total Operating Expenses	20,918,045	21,037,112	9,000	9,000
Transfers Out				
Replacement Allocations	1,800,000	2,100,000	-	-
5th Supplemental Agreement (to Fund 600)	660,000	680,000	-	-
Transfers Out- Others	430,125	436,694	-	-
Total Transfers Out	2,890,125	3,216,694	-	-
Total Expenses	23,808,170	24,253,807	9,000	9,000
Net increase (decrease) pre RSF	927,439	1,075,545	99,118	103,704
Ending Working Capital pre RSF transfers	10,653,505	11,534,568	12,049,369	12,347,555
RSF Transfer In (Out)	(194,483)	(1,016,011)	194,483	1,016,011
Ending Working Capital post RSF transfers	10,459,022	10,518,556	12,243,851	13,363,567
Target Reserve (4 months operating expenses)	6,972,682	7,012,371	6,972,682	7,012,371

Water Operating Funds: Enterprise (600) and Rate Stabilization (605)

The Water Fund Group supports the District's potable and recycled water system for the City of Dublin and the Dougherty Valley area of the City of San Ramon. The District has provided recycled water service since 1999, which currently represents 25.0% of our water sales.

The 2019 Comprehensive Water Rate Study was completed in April 2019 and incorporated significant changes to the District's water rates to more accurately reflect cost of service principles. To partially mitigate the impact of the restructured rates on lower water users, the District did not increase rates in FYE 2019 and 2020, and future rate adjustments were limited to inflation for FYE 2021 through 2023. The Budget assumes a 3.0% rate adjustment for both budget years. A Water Rate Study Addendum is anticipated for Fall 2021 to refine recycled water rates and State Water pass-through charges.

The Budget approves the addition of 3.0 FTEs of which 1.0 FTEs is allocated to support the Water Enterprise Fund operations. Efforts are underway to take District operations to a proactive versus reactive approach for maintenance of our water system, embracing current best practices in regards to water flushing, infrastructure maintenance and increased water flows throughout the system to enhance water quality. Those maintenance contracts are expected to continue until FYE 2024 as the district catches up on deferred maintenance activities.

Both the Water Enterprise and Rate Stabilization funds are projected to remain above reserve policy targets (four months of working capital).



Scheduled hydrant flushing maintains water quality.

Water Operating Funds

OPERATING BUDGET	Water Enterprise (600) FYE2022	Water Enterprise (600) FYE2023	Water Rate Stabilization (605) FYE2022	Water Rate Stabilization (605) FYE2023
(Estimated) Beginning Working Capital	11,910,810	11,276,619	15,978,910	15,103,022
Operating Revenues				
Total Service Charges	35,832,945	37,794,779	-	-
Other Revenues	1,466,475	807,190	885,390	911,622
Interest	120,503	112,551	159,789	147,817
Total Operating Revenues	37,419,923	38,714,519	1,045,179	1,059,439
Transfers In				
5th Supplemental Agreement (from Fund 300)	660,000	680,000	-	-
Total Transfers In	660,000	680,000	-	-
Total Revenues	38,079,923	39,394,519	1,045,179	1,059,439
Operating Expenses				
Wages and Benefits	7,748,773	7,839,584	-	-
Unfunded Actuarial Liability (Pension/OPEB)	442,310	553,352	-	-
Materials & Supplies	2,028,039	2,041,036	-	-
Water Purchase	16,071,869	17,238,103	-	-
Contracts	2,040,707	1,703,749	-	-
Other	170,954	170,534	133,300	140,625
Contribution to JPA	2,343,689	2,343,689	-	-
Allocated Costs	2,983,517	3,038,224	-	-
Total Operating Expenses	33,829,857	34,928,271	133,300	140,625
Transfers Out				
Replacement Allocations	6,169,688	6,280,000	-	-
Transfers Out -Others	391,936	397,922	-	-
Cross-Connections	110,400	-	-	-
Total Transfers Out	6,672,024	6,677,922	-	-
Total Expenses	40,501,881	41,606,193	133,300	140,625
Net increase (decrease) pre RSF	(2,421,958)	(2,211,674)	911,879	918,814
Ending Working Capital pre RSF	9,488,852	9,064,945	16,890,789	16,021,836
RSF Transfer In (Out)	1,787,767	2,577,811	(1,787,767)	(2,577,811)
Ending Working Capital post RSF transfers (estimated)	11,276,619	11,642,757	15,103,022	13,444,024
Target Reserve (4 months operating expenses)	11,276,619	11,642,757	11,276,619	11,642,757

Internal Service Funds: Administrative Cost Center (900), Other Post-Employment Benefits (965), and Dougherty Valley Standby Assessment District Fund (995)

Administrative Cost Center

The Administrative Cost Center captures costs that are not specifically identifiable to any one of the District's operational activities. A majority of the cost for the Administrative Services Department and the Legislative & Office of the General Manager Department is included in this fund. Revenue is generated in the fund for general administrative services provided to the two joint powers authorities (DERWA and LAVWMA), the Dougherty Valley Standby Assessment District, and miscellaneous services to customers and other local agencies. The net fund costs are allocated across funds of the District's three main enterprises based upon staff cost allocations.

Other Post Employee Benefits (Retiree Medical

The Other Post-Employment Benefits (OPEB) Fund records transactions between the District and California Employers' Retiree Benefit Trust (CERBT), an irrevocable trust established to fund future OPEB costs. The fund reflects the costs of current retiree benefits and the amount that may be drawn from CERBT ($215,416 and $289,427) to cover these costs. The District is currently super-funded" with a funded ratio of 118.0%.

Dougherty Valley Standby District

The Zone 7 Water Agency (Zone 7) recovers State Water Project (SWP) costs through the Alameda County property tax roll and charges to Tri-Valley retailers. The DVSAD was established in 2000 to provide potable water service to the newly developed Dougherty Valley in the City of San Ramon, which is located in Contra Costa County (CCC). Since Zone 7 does not have jurisdiction to place assessments on the CCC property tax roll, DSRSD assessed the DVSAD a proportionate share of SWP costs on Zone 7's behalf. SWP costs have increased significantly over the years and have exceeded the DVSAD limit of $1.6 million. Based on estimates from the Zone 7 Water Agency, an additional increment is now charged to recover SWP costs that exceed the DVSAD limit.



View of Dougherty Valley. Looking north you can see Mt Diablo in the background.

Internal Service Operating Funds

OPERATING BUDGET	Administrative Cost Center (900) FYE2022	FYE2023	OPEB (965) FYE2022	FYE2023	DVSAD (995) FYE2022	FYE2023
(Estimated) Beginning Working Capital	-	-	-	-	816,458	809,091
Operating Revenues						
Other Revenues	1,490,335	1,515,605	-	-	1,783,759	1,999,463
Interest	-	-	-	-	8,165	8,091
Total Operating Revenues	1,490,335	1,515,605	-	-	1,791,924	2,007,554
Transfers In						
Transfers In - Others	-	-	931,328	945,553	-	-
Total Transfers In	-	-	931,328	945,553	-	-
Total Revenues	1,490,335	1,515,605	931,328	945,553	1,791,924	2,007,554
Operating Expenses						
Wages and Benefits	5,980,736	6,033,555	1,146,744	1,234,980	-	-
Unfunded Actuarial Liability (Pension/OPEB)	1,600	1,618	(215,416)	(289,427)	-	-
Materials & Supplies	305,960	300,780	-	-	-	-
Contracts	2,203,610	2,310,486	-	-	1,799,291	2,004,481
Other	87,145	87,145	-	-	-	-
Allocated Costs	(7,088,715)	(7,217,979)	-	-	-	-
Total Operating Expenses	1,490,335	1,515,605	931,328	945,553	1,799,291	2,004,481
Total Expenses	1,490,335	1,515,605	931,328	945,553	1,799,291	2,004,481
Net increase (decrease)	-	-	-	-	(7,367)	3,073
Ending Working Capital	-	-	-	-	809,091	812,164
Target Reserve	n/a	n/a	n/a	n/a	n/a	n/a

OPERATING REVENUE

Service charges are the District's primary source of revenue. The District conducts periodic rate and fee studies to ensure financial sufficiency to meet operation and maintenance (O&M) and capital replacement costs, achieve policy reserve targets, realign rates/fees to more closely reflect costs incurred, and adequately recover the revenue requirements of each enterprise. The budget reflects adopted rates and fees, as well as anticipated annual adjustments based on the Consumer Price Index (CPI) or Construction Cost Index (CCI). Projections on customer consumption, account growth, and development forecast have been used to develop operating revenue budgets. DSRSD's current rates, fees, and charges are available on the District's website at www.dsrsd.com/your-account/rates-fees.

Revenues by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Service Charges	54,992,658	61,338,555	64,498,928	62,979,805	66,357,836
Capacity Reserve Fees	27,667,385	14,631,801	7,087,697	15,665,369	24,135,485
Other Revenues	9,757,491	11,607,044	6,236,843	7,688,860	6,472,053
Interest	7,137,405	7,108,552	2,108,530	2,062,721	1,853,188
Total	**99,554,938**	**94,685,952**	**79,931,998**	**88,396,756**	**98,818,562**
% Change		**-4.89%**	**-15.58%**	**10.59%**	**11.79%**

Service Charges

Total Service Charge revenue is projected to decrease by 2.3% in FYE 2022 as a result of the COVID 19 restrictions but rebound 5.4% in FYE 2023 as the economy moves away from the business mandates and with customer base growth.

Local Wastewater: Local service charge revenue is projected to increase 11.0% in FYE 2022 as a result of the *2017 Local Wastewater Rate Study*. Local rates had not kept pace with rising costs and reserves had fallen below policy minimum target levels resulting in the Study recommending an aggressive five-year rate adjustment plan to improve the fund's financial outlook. As a new study will not be conducted until Spring of 2022, the FYE 2023 budget reflects an assumed 3.0% inflation increase.

Regional Wastewater: Regional service charge revenue is projected to decrease by 1.7% in FYE 2022. Due to the good fiscal position of the Regional Operations Fund, the *2017 Regional Sewer Rate Study* recommended inflationary rate adjustments for the five-year rate study timeline. As a new study will not be conducted until Spring of 2022, the FYE 2023 budget reflects an assumed 3.0% inflation increase.

Water: Water service charge revenue is projected to decrease by 4.1% in FYE 2022 and increase 5.5% in FYE 2023. Projections reflect refinements to water demand, customer account growth, customer behavior changes with the COVID-19 restriction, and a reduction in water usage in 2022 as a result of water conservation measures.

Service Charge Revenues by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	3,082,734	3,514,768	3,821,529	4,240,208	4,493,869
Regional Wastewater Enterprise	21,457,680	22,969,168	23,311,552	22,906,653	24,069,190
Water Enterprise	30,452,244	34,854,619	37,365,847	35,832,945	37,794,778
Total	**54,992,658**	**61,338,555**	**64,498,928**	**62,979,805**	**66,357,836**
% Change		**11.54%**	**5.15%**	**-2.36%**	**5.36%**

Local Wastewater Service Charges

Local service charges fund the operation and maintenance of the District's wastewater collection system, and are billed to customers in Dublin and the southern part of San Ramon. Residential customers are primarily billed through county (Alameda and Contra Costa) property tax rolls. Multi-family and non-residential customers in Dublin are billed directly by the District. For south San Ramon, customers excluded from the Contra Costa County property tax roll, such as apartments and commercial accounts, are billed by the East Bay Municipal Utility District (EBMUD), which are then remitted to DSRSD on a monthly basis.

The last Local study (*2017 Local Wastewater Rate Study*) was completed in June 2017. The Study determined that Local service charges had not kept pace with rising costs and projected that reserves would fall below policy minimum target levels. The Study recommended an aggressive five-year rate adjustment plan to improve the fund's financial outlook. The Budget reflects year five of the adopted rate plan from the five-year study and an inflation placeholder for FYE 2023. The next Local study is anticipated in Spring of 2022.

Below is a summary of the Local Wastewater Service Charge revenues for years 2019 through 2023. DSRSD rates have been historically low compare to other providers due to a rate decrease of approximately 20.0% in FYE 2008, followed by inflation increases until FYE 2016. Revenues dropped in the commercial sector in FYE 2021 due to COVID-19 restrictions which hit this sector hard and resulted in business shut downs. Due to rate increases and prior growth, however, total revenues continued to show an increase of 8.7%. Detailed rates for customer classes are available at www.dsrsd.com/your-account/rates-fees/wastewater-rates

Local Wastewater Fund Service Charge Revenue	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Sewer Service Charges - Dublin	2,482,923	2,864,487	3,100,762	3,446,176	3,675,993
Sewer Service Charges - San Ramon	599,811	650,281	720,767	794,032	817,876
Total	**3,082,734**	**3,514,768**	**3,821,529**	**4,240,208**	**4,493,869**
% Change		**14.01%**	**8.73%**	**10.96%**	**5.98%**

Regional Wastewater Service Charge

Regional service charges fund the operation and maintenance of the District's wastewater treatment system, and are primarily billed via county (Alameda and Contra Costa) property tax rolls for residential customers in the City of Dublin and the southern part of the City of San Ramon. Multi-family and non-residential customers in Dublin are billed directly by the District based on actual water consumption. For south San Ramon customers excluded from the Contra Costa County property tax roll, EBMUD bills on behalf of the District. DSRSD also provides wastewater treatment to the City of Pleasanton, by contract. Pleasanton bills its customers and remits payment to the District once received.

The last Regional study (*2017 Regional Sewer Rate Study*) was completed in June 2017. Due to the strong fiscal position in Regional Operation Funds, the Study recommended no increase in FYE 2018, followed by inflationary rate adjustments for the next four years. Based on the February 2021 Consumer Price Index, a 1.6% rate adjustment is reflected for FYE 2022 and a 3.0% rate adjustment is assumed for FYE 2023. The next Regional study is anticipated in Spring of 2022. This fund also experienced a drop in revenues during FYE 2021 from the commercial sector during COVID-19 as reflected in the chart below. The current study is available at www.dsrsd.com/home/showdocument?id=5330

Regional Wastewater revenues have increased annually by a combination of an adjustment to the rates by the CPI factor and growth, with the exception of FYE 2021 where the COVID-19 crisis directly affected revenues from our commercial and industrial sectors. Detailed rates for customer classes are available at www.dsrsd.com/your-account/rates-fees/wastewater-rates

Regional Wastewater Fund Service Charge Revenue	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Sewer Service Charges - Dublin	9,248,229	9,666,235	9,736,327	9,777,629	10,528,862
Sewer Service Charges - Pleasanton	10,109,279	11,173,522	11,473,839	10,899,061	11,243,642
Sewer Service Charges - San Ramon	1,925,190	1,985,571	2,023,726	2,077,578	2,139,883
Sewer Service Charges - Industrial Waste (all others)	96,710	69,566	32,659	71,994	74,081
Sewer Service Charges - Industrial Waste (Pleasanton)	78,271	74,274	45,000	80,391	82,721
Total	**21,457,680**	**22,969,168**	**23,311,552**	**22,906,653**	**24,069,190**
% Change		**7.04%**	**1.49%**	**-1.74%**	**5.08%**

Potable Water Service Charge

The District provides potable water service to the City of Dublin and the Dougherty Valley area in the City of San Ramon. The District's potable water supply is primarily through purchases from the Zone 7 Water Agency, which represents the largest expense in the Water Enterprise Fund. To recover the costs of water purchases, the District established a pass-through Cost of Water charge based on the wholesale rate charged by Zone 7. The wholesale rate is adjusted by Zone 7 annually, typically in January, and is not directly controlled by the District. Revenue from the Zone 7 Cost of Water is intended to fully offset water purchases.

The 2019 Comprehensive Water Rate study was completed in April 2019. The Study incorporated a number of major policy decisions resulting in significant changes to the District's water rates to better address cost of service principles. To partially mitigate the impact of the restructured rates on our lower water rate users, the Board deferred rate increases for FYE 2019 and 2020, with future rate adjustments limited to inflation for FYE 2021 through 2023. Revenues increased 16.1% in FYE 2020 due to increased user demand and growth. The Budget assumes a 3.0% rate adjustment for FYE 2022 and 2023, with anticipated drought conditions reflected in the FYE 2022 water demand projections. The next comprehensive water rate study is anticipated in FYE 2024. The current study is available at www.dsrsd.com/home/showdocument?id=6831. Detailed rates for customer classes are available at www.dsrsd.com/your-account/rates-fees/water-rates.

Water Fund Service Charge Revenue	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Water Service Charges - Potable Water	24,708,782	28,687,492	30,836,528	29,400,944	31,144,885
Total	**24,708,782**	**28,687,492**	**30,836,528**	**29,400,944**	**31,144,885**
% Change		**16.10%**	**7.49%**	**-4.66%**	**5.93%**

Recycled Water Service Charge

Water recycling continues to be a prime focus for the District. With California's water supply situation, recycled water is becoming increasingly critical to water resource conservation. DSRSD has worked many years in partnership with East Bay Municipal Utility District (EBMUD) to develop a comprehensive recycled water program for Dublin and San Ramon Valley customers. This effort is represented through the DSRSD-EBMUD Recycled Water Authority (DERWA) Joint Powers Authority (JPA). DERWA is currently providing recycled water for irrigation customers in Dublin, Pleasanton and the Dougherty Valley portion of San Ramon.

The *2019 Comprehensive Water Cost of Service Study* revised the Recycled Water Charge to be based on the District's contribution to JPA costs for DERWA. The Recycled Water Charge is adjusted annually in January based on the Consumer Price Index for the San Francisco-Oakland-Hayward, CA area. The Budget assumes a 3.0% CPI for FYE 2022 and 2023, offset by anticipated 2022 drought conservation measures.

Detailed rates for customer classes are available at www.dsrsd.com/your-account/rates-fees/water-rates.

Water Fund Service Charge Revenue	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Water Service Charges - Recycled	4,966,095	5,362,533	5,678,499	5,602,658	5,772,733
Total	**4,966,095**	**5,362,533**	**5,678,499**	**5,602,658**	**5,772,733**
% Change		**7.98%**	**5.89%**	**-1.34%**	**3.04%**

Power Charge

A power charge applies to service locations in Pressure Zones 2 – 4, where water must be pumped above 389 feet in elevation. The *2019 Comprehensive Water Cost of Service Study* recommended a slight decrease based on projected power costs. The Power Charge is typically adjusted annually in January based on the Consumer Price Index (CPI) for the San Francisco-Oakland-Hayward, CA area. The Budget assumes a 3.0% CPI in FYE 2022 and 2023, reduction in water usage and thus power charges for drought conditions in FYE 2022, and a modest recovery in water demand in FYE 2023.

Water Fund Service Charge Revenue	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Water Service Charges - Power	777,368	804,593	850,821	829,342	877,161
Total	**777,368**	**804,593**	**850,821**	**829,342**	**877,161**
% Change		**3.50%**	**5.75%**	**-2.52%**	**5.77%**

Capacity Reserve Fees

Capacity Reserve Fees fund the cost of new or expanded District infrastructure to support growth and contribute toward the benefit received through connection to existing infrastructure. The revenue from the "buy-in" component is to contribute a proportionate share of the benefit received from rehabilitation and replacement of existing infrastructure maintained by ratepayers. Fees are comprised of the following components:

- **Expansion** – Funds new or expanded facilities needed to support growth from planned development.
- **Debt** – Principal and interest costs associated with the "expansion" portion of facilities built to support growth (projects are allocated between current and future customers when built; only the "future" portion of those facilities funded by debt are included)
- **Buy-in** – "Buy-in" to existing infrastructure (net of the principal on any related debt) that is available to serve development

Capacity Reserve Fee revenue is cyclical and tied to new building activity. Revenue will decline as developable land in the District's service area is exhausted (build out). A Local and Regional Capacity Fee study was conducted in FYE 2019 which changed the "buy-in" and "expansion" component calculations significantly, resulting in a reduction of 11.0% to the rates effective January 2019. The Total Capacity Reserve Fee in FYE 2020 and 2021 continued to decrease as a result of a general development slow down in the Tri-Valley, followed by COVID-19 restrictions in 2020 and 2021. Increases are projected in FYE 2022 and 2023 as restrictions are lifted and as the economy expands and delayed projects come back on line. Revenues are calculated using growth estimates and fee adjustments based on a change in the construction cost index. The District works closely with the cities of Dublin, San Ramon, and Pleasanton planning departments to estimate the anticipated development activity included in these projections .

Capacity Reserve Fees by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Replacement	1,091,368	861,350	394,625	1,075,668	1,422,509
Local Wastewater Expansion	429,144	44,473	12,037	32,811	43,391
Regional Wastewater Replacement	2,630,188	1,659,180	854,699	2,000,231	3,302,790
Regional Wastewater Expansion	10,722,405	4,795,579	2,344,757	5,390,728	8,746,658
Water Replacement	3,920,991	2,301,768	1,078,230	2,238,643	3,346,116
Water Expansion	8,873,289	4,969,452	2,403,348	4,927,288	7,274,021
Total	**27,667,385**	**14,631,801**	**7,087,697**	**15,665,369**	**24,135,485**
% Change		**-47.12%**	**-51.56%**	**121.02%**	**54.07%**

Interest

The District uses a pooled interest allocation method for all funds; any unrestricted interest earned is allocated each month based upon the cash balances in each fund. COVID-19 resulted in a significant decrease to the percentage of return on investment portfolios. Although improving, investment rates remain low. These rates are not expected to increase materially during the budget cycle. For the next two fiscal years, a 1.0% interest rate is assumed as the economy transitions back to pre-COVID-19 conditions. Interest revenue is based on projected cash balances in each fund and a low interest rate environment.

Other Revenue

Other revenues include inspection and plan check fees, administrative fees charged by the District to the DERWA and LAVWMA JPAs, Dougherty Valley Standby Assessments, developer non-cash contributions and other miscellaneous items. Inspection and plan check fees declined approximately 20.0% in FYE 2021 due to COVID-19 restrictions, with future revenue based on city permit projections. A cost allocation study is planned in 2022 to ensure fees are appropriately capturing all cost of service. The Dougherty Valley Standby Assessment continues to increase each year but these costs are controlled by the State and are a pass-through only for DSRSD. Finally, miscellaneous revenue increased in FYE 2020 due to the adjustment of a long-term liability and in FYE 2022 due to a one-time easement.

Other Revenues by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Administrative Fees	1,584,465	1,447,881	880,000	1,333,035	1,353,646
Backflow Prevention	215,641	223,257	208,957	232,000	190,914
Fireline Service	235,140	237,382	195,376	185,851	185,851
Inspections	705,925	295,559	200,410	388,000	99,000
Meter Assemblies	349,911	163,848	350,200	140,000	140,000
Penalties	165,730	142,164	166,823	156,800	161,459
Plan Check Fees	400,001	189,817	126,991	116,000	94,000
Property Tax	727,849	766,723	761,086	774,390	797,622
DV Standby Charge District	1,576,112	1,458,434	2,077,106	1,783,759	1,999,463
Miscellaneous Revenue	3,796,718	6,681,979	1,269,894	2,579,025	1,450,098
Total	**9,757,491**	**11,607,044**	**6,236,843**	**7,688,860**	**6,472,053**
% Change		**18.96%**	**-46.27%**	**23.28%**	**-15.83%**

Other Revenues by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	1,000,619	481,828	119,415	335,001	81,300
Local Wastewater Replacement	-	-	1,222	-	-
Local Wastewater Expansion	395,352	-		-	-
Regional Wastewater Enterprise	965,255	1,127,635	1,123,178	1,727,900	1,156,873
Regional Wastewater Replacement	3,270	-	14,909	-	-
Regional Wastewater Expansion	43,063	-	75,672	-	-
Water Enterprise	2,039,042	2,429,233	1,011,337	1,466,475	807,190
Water Rate Stabilization	811,258	866,844	761,086	885,390	911,622
Water Replacement	9,782	-	23,218	-	-
Water Expansion	1,055,761	3,488,325	-	-	-
Administrative Cost Center	1,857,978	1,754,746	1,029,700	1,490,335	1,515,605
DV Standby Charge District	1,576,112	1,458,434	2,077,106	1,783,759	1,999,463
Total	**9,757,491**	**11,607,044**	**6,236,843**	**7,688,860**	**6,472,053**
% Change		**18.96%**	**-46.27%**	**23.28%**	**-15.83%**

OPERATING EXPENSES

The Board approves the operating budget at the fund level, providing resources for the General Manager to run the District while ensuring that it maintains overall control of rates and fees. By Board Policy, the General Manager is authorized to make "no net change" budget adjustments within a fund.

The following charts summarize District operating expenses by fund and by category (expense type). The changes driving expense increases by expenditure category are discussed in more detail on the following pages. Additional departmental detail is included in the Department Operating Budget section.

Operating Expenses by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	2,646,256	3,190,920	3,229,834	3,504,344	3,572,873
Local Wastewater Rate Stabilization	-	1,411	4,100	9,000	9,000
Local Wastewater Replacement	31,766	-	-	550,900	43,000
Local Wastewater Expansion	714,222	33,020	-	-	-
Regional Wastewater Enterprise	16,709,506	19,434,914	19,452,132	20,918,045	21,037,112
Regional Wastewater Rate Stabilization		1,411	4,100	9,000	9,000
Regional Wastewater Replacement	35,995	1,095,735	823,600	953,694	403,600
Regional Wastewater Expansion	8,107,320	4,319,754	4,313,654	4,310,354	4,311,229
Water Enterprise	26,233,515	31,561,699	32,380,163	33,829,857	34,928,271
Water Rate Stabilization	46,213	57,884	88,800	133,300	140,625
Water Replacement	66,320	119,036	358,620	763,796	386,880
Water Expansion	5,728,116	3,551,074	3,755,110	2,719,295	2,699,945
Administrative Cost Center	1,830,814	1,488,616	1,029,700	1,490,335	1,515,605
Other Post-Employment Benefits	859,824	981,328	1,064,867	931,328	945,553
DV Standby Charge District	1,804,794	1,609,364	2,052,000	1,799,291	2,004,481
Total	**64,814,663**	**67,446,166**	**68,556,680**	**71,922,539**	**72,007,173**
% Change		**4.06%**	**1.65%**	**4.91%**	**0.12%**

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	21,822,628	23,108,273	25,488,243	25,956,204	26,461,966
Materials	18,419,850	20,628,631	20,645,670	21,638,421	22,803,818
Contracts	5,925,183	8,130,434	6,872,495	8,104,870	7,957,528
Other Expenses / JPA / Debt Payments	18,563,513	14,652,905	14,825,773	14,520,373	14,403,861
Capital Outlay	83,489	925,922	724,500	1,702,670	380,000
Total	**64,814,663**	**67,446,166**	**68,556,680**	**71,922,539**	**72,007,173**
% Change		**4.06%**	**1.65%**	**4.91%**	**0.12%**

PERSONNEL TABLE BY DEPARTMENT

Div		FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
	BOARD OF DIRECTORS AND OFFICE OF THE GENERAL MANAGER					
12	Office of the General Manager	1.00	2.00	2.00	2.00	2.00
14	Public Affairs	3.50	3.50	3.40	3.40	3.40
15	Executive Services[1]	4.00	-	-	-	-
		8.50	5.50	5.40	5.40	5.40
	ADMINISTRATIVE SERVICES					
30	Administrative Services Administration	1.50	1.00	2.00	2.00	2.00
31	Financial Services	4.00	5.00	6.00	6.00	6.00
32	Human Resources & Risk Management	4.50	5.50	5.00	5.00	5.00
33	Utility Billing & Customer Service	8.00	7.00	7.00	7.00	7.00
34	Information Technology Services	6.00	6.00	6.00	6.00	6.00
35	Executive Services[1]		4.00	3.00	3.00	3.00
		24.00	28.50	29.00	29.00	29.00
	ENGINEERING					
40	Engineering Services Administration	2.50	2.00	2.60	2.60	2.60
41	Capital Projects	7.00	10.00	8.00	8.00	8.00
42	Development & Construction Services[2]	11.00	11.00	7.00	7.00	7.00
43	Planning & Asset Magement[2]	-	-	5.00	5.00	5.00
		20.50	23.00	22.60	22.60	22.60
	OPERATIONS					
50	Operations Administration	1.00	1.00	1.00	1.00	1.00
51	Field Operations	16.00	17.00	16.00	17.00	17.00
52	Plant Operations	12.00	14.00	13.00	14.00	14.00
53	Mechanical Maintenance	15.00	17.00	16.00	16.00	16.00
54	Instrumentation, Controls, & Electrical	10.00	10.00	10.00	10.00	10.00
55	Laboratory & Technical Services	7.00	8.00	8.00	8.00	8.00
56	Operations Support Services	7.00	4.00	7.00	8.00	8.00
		68.00	71.00	71.00	74.00	74.00
	Total	**121.00**	**128.00**	**128.00**	**131.00**	**131.00**
	Change	**-**	**7.00**	**-**	**3.00**	**-**

NOTES

1 In FYE2020, Executive Division moved to Administrative Services Department

2 In FYE2021, Planning & Permitting Divisions split into two separate divisions

Personnel Costs

The Board reviews all new position requests, authorizes total full time equivalent positions, and approves salary ranges for positions. Below is a summary of current and projected staffing levels. The adopted budget reflects the addition of three new FTE positions and extends three limited-term FTEs. Of the 131 proposed employee count, 2.2 FTE are dedicated to LAVWMA, 3.0 FTE to DERWA, and 125.9 FTE are exclusive to DSRSD.

Staffing Overview and Salaries

The District decreased staffing levels in conjunction with the Great Recession in 2009 by approximately 20.0% and kept at those levels until FYE 2017. Over that period, DSRSD experienced a huge growth in the customer base and new infrastructure was added to maintenance efforts as follows:

- Potable water lines increased by 14.2%, from 281 miles to 321 miles;
- Sewer lines increased by 11.6%, from 185.5 miles to 207 miles;
- Recycled water lines increased by 33.3%, from 51 miles to 68 miles; and
- Recycled water production capacity increased by 70.0%.

To meet growing regulatory requirements and continued service level increases, the proposed budget is asking for three new positions. Not only will these positions place the District in a solid maintenance mode, but will provide additional resources to meet new regulatory requirements and focus on District priorities in the Strategic Plan. Position detail by division can be found on the preceding page and in each division operating budget.

As in most service industries, personnel costs are one of the District's largest expense categories, representing approximately 36.1% of the total District operating expenditures. Negotiations were completed with four bargaining groups in late 2017 which provided for modest cost-of-living adjustments (COLA) and increased medical benefits. The contracts will expire in late 2021. The District will adjust the budget for salary and benefit impacts once the Memorandums of Understanding are approved.



Dublin's continued development fuels expansion and demand for DSRSD services.

Retirement Benefits: CalPERS & UAL

All regular and limited-term employees who work more than 1,000 hours per fiscal year are enrolled as "classic members" in the California Public Employees Retirement System (CalPERS) 2.7% at age 55 retirement program if employed by the District prior to January 1, 2013, or, if hired after January 1, 2013, was a member of a public retirement system within 6 month of hire date with DSRSD. New employees not qualifying as classic members are designated as "new members" or "PEPRA members," and are enrolled in the CalPERS 2.0% at age 62 plan in accordance with state law. Classic employees contribute 10.0% of salary toward their retirement (8.0% is the employee's portion and 2.0% is paid by the employees on behalf of the employer, as negotiated in exchange for the current retirement plan). PEPRA members contribute 50.0% of the total normal cost of benefits (currently 6.3% of salary) toward retirement. The District's employer contribution varies from year to year. Based on the most recent actuarial valuation (2019), the budget assumes net employer contributions of 12.0% (14.0%-2.0%) of salary in FYE 2022 and 12.0% in FYE 2023 for classic members. Employer contributions for PEPRA members are 7.59% and 7.6% of salary in FYE 2022 and 2023, respectively.

Other Employee Benefits (OPEB)

All full-time employees and Board members are eligible to receive medical, dental, and vision benefits. Part-time employees receive prorated benefits. Health premiums that will be paid by the District are set forth in a cost sharing agreement in each of the labor contracts. Per negotiated labor agreements in 2017, the maximum monthly District contribution for medical is set at $2,072 (Kaiser family rate) per month. Increases in medical costs are shared by the District and the employees.

The District provides retiree medical coverage subject to a vesting schedule established by CalPERS. Retiree dental coverage is provided to employees hired prior to July 1, 2014. Funding of these benefits is from the Other Post-Employment Benefits (OPEB) fund.

The table below summarizes all personnel and benefit costs. Cost fluctuations are explained below.

Wages increased in FYE 2020 and 2021 as a result of seven new positions added to the District, offset by a large vacancy factor for most of each fiscal year. FYE 2022 denotes full salary projections including the addition of three new proposed positions, with benefits following this trend.

In FYE 2019, the District charged UAL costs directly to the divisions, thus showing only year-end adjustments in this category. In FYE 2020 and 2021, all UAL costs were consolidated, and the Board approved an accelerated 15-year pay down schedule to tackle this liability. In FYE 2022 and 2023, UAL budgets decreased as the Board held off funding accelerated payments until the effects of COVID-19 are behind us.

Finally, as the percentage of our workforce began to fall under the CalPERS PEPRA benefits (30.0%), our normal costs of retirement will start to decline as payments into that system are substantially less that the CalPERS Classic benefit plan, as shown in our FYE 2022 and 2023 retirement projections.

Personnel Costs	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages	13,352,183	13,133,635	14,089,150	16,323,643	16,605,908
Benefits	2,342,140	2,420,217	3,020,601	3,230,798	3,300,800
Retirement	4,283,688	4,487,756	4,683,431	3,342,793	3,386,115
Pension-Unfunded Actuarial Liability (UAL) & Advance Funding	198,695	1,301,508	1,566,198	1,052,674	1,316,565
Other Post-Employment Benefits (OPEB)	859,824	981,328	1,064,867	931,328	945,553
Other Personnel Costs	786,098	783,830	1,063,997	1,074,969	907,025
Total	**21,822,628**	**23,108,273**	**25,488,243**	**25,956,204**	**26,461,966**
% Change		**5.89%**	**10.30%**	**1.84%**	**1.95%**

Materials

Water Purchase

All of the District's potable water is purchased from Zone 7 Water Agency, which represents the largest District materials expense. The Zone 7 component of water rates is designed to cover the full cost of water and is adjusted based upon the rate established by Zone 7, generally effective January 1 of each year. The Zone 7 wholesale water rate remained flat in FYE 2021 due to the Zone's deferral of rate increases during COVID-19. Water purchase costs are mainly driven by this increase, customer growth, and water demand. Water purchases are projected to increase 2.3% and 7.3% in FYE 2022 and 2023, respectively. Although drought conservation is expected in FYE 2022, the projections show a slight increase for purposes of conservatism and additional growth in the Tri-Valley.

The District continues to focus on identifying and minimizing water that is used but not billed for. Some reasons for unbilled water include inaccurate data (under-reading) from water meters, flushing fire hydrants, and testing new water lines. The budget assumes a 4.6% rate of unbilled water.

Gas & Electric

Gas and electric charges were slightly lower in FYE 2021 due to COVID-19 restrictions and the fact that the District Office was closed for most of the year due to renovations from a fire service break in the building. In FYE 2022 and 2023, increases are expected as PG&E expands peak hours for higher rates in California, thus directly affecting the District's pumping costs for our water and wastewater systems.

Chemicals

To curtail the rise in chemical costs, the District formed and facilitates the Bay Area Chemical Consortium (BACC) which is now managed by BACWA. BACC is an informal cooperative of 68 water and wastewater agencies in the Bay Area working together to purchase chemicals in higher volume at lower cost. With the consortium, chemical costs are projected to be flat over the next two years.

Materials	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Water Purchase	13,679,135	15,174,032	15,716,711	16,071,869	17,238,103
Gas & Electric	2,077,411	2,592,871	2,250,319	2,703,006	2,704,406
General Supplies	1,378,056	1,624,961	1,221,850	1,470,732	1,496,844
Chemicals	422,851	484,555	506,368	496,136	497,736
Meter Equipment	374,940	254,786	345,000	277,000	277,000
Equipment Under $10,000	262,760	260,474	319,359	321,194	296,669
Fuel	85,387	94,146	117,643	112,116	112,934
Tools	73,215	49,943	55,748	67,148	63,056
Office Supplies/Services	58,738	50,819	64,172	70,720	68,570
Fluids	7,357	42,044	48,500	48,500	48,500
Total	**18,419,850**	**20,628,631**	**20,645,670**	**21,638,421**	**22,803,818**
% Change		**11.99%**	**0.08%**	**4.81%**	**5.39%**

Contract Services

Contract expenses are projected to increase 17.9% in FYE 2022 and decrease 1.8% in FYE 2023. Insurance costs has increased upwards of 22.0% for general liability and 35.0% for property insurance as a result of increased claim experience with our risk pool provider, California Sanitation Risk Management Authority (CSRMA). Other service costs for the District Office (DO) represents costs due to a fire service break which caused major portions of the building to be renovated.

Professional Services

Professional services expenses are for various consultants to assist with long-range financial planning and capital planning and ongoing system support. FYE 2022 will increase 57.4% for the budget period, due to the Water Capacity Reserve Fee Study, Local and Regional Wastewater Rate Study, support for the Electronic Management System (EMS), Microsoft 365 Implementation, Emergency Response Program, Electrical Engineering, and update of our laboratory to new compliance standards. FYE 2023 will decrease 15.8% as these projects are completed.

Other Services - Dougherty Valley Standby Charge District (DVSCD)

DSRSD's largest contractual services expense under Other Services is the remittance of standby charges from the DVSCD Fund to Zone 7. In order for DSRSD to provide water services to Dougherty Valley, DSRSD must collect a proportionate share of State Water Project (SWP) costs charged to Zone 7 and then reimburse Zone 7 for these costs. SWP costs are projected at $1.8 million in FYE 2022 and $2 million in FYE 2023. In addition, due to the District's aging infrastructure, on call subsurface and after hour repairs have increased to approximately $600,000 annually. Finally, the FYE 2023 budget also includes $200,000 for board election costs.

Contracts	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Insurance	340,062	216,498	251,552	492,271	581,202
Legal Services	263,873	182,769	235,000	275,000	255,000
Professional Services	841,313	717,003	1,130,705	1,780,030	1,499,180
Advertising	35,817	58,624	59,830	88,500	55,500
Equipment Lease/Rental	124,047	115,271	156,585	116,980	117,980
Maintenance Contracts	646,027	644,551	815,808	855,366	881,572
Monitoring & Testing Services	33,191	48,182	58,500	107,500	107,500
Other Services	3,941,576	4,683,080	3,928,865	4,128,773	4,216,144
Other Services - District Office Flood	(502,828)	1,260,857	-	-	-
Printing Services	97,794	112,786	117,150	136,950	119,950
Telecommunication Services	104,310	90,811	118,500	123,500	123,500
Total	**5,925,183**	**8,130,434**	**6,872,495**	**8,104,870**	**7,957,528**
% Change		**37.22%**	**-15.47%**	**17.93%**	**-1.82%**

Other Expenses/JPA Debt Payments

Debt Payments

Per the District's Capital Financing and Debt Management policy, the District may use debt financing only to purchase or build capital assets that cannot be acquired from either current revenues or replacement reserves and to fund capital improvements and additions. Debt for operating and maintenance costs is not allowed. See Appendix for fund Debt Service schedule.

2017 Water Revenue Refunding Bonds

The District refinanced the outstanding $33,590,000 bonds, as 2017 Water Revenue Refunding Bonds on December 1, 2017. Proceeds of the issuance were used to refund the outstanding portion of the 2011 Water Revenue Refunding Bonds and pay costs of issuance. Interest rates range from 2.0% to 4.0%. Principal payments are due annually beginning August 1, 2018 through August 1, 2041.

Debt expenses shown below are budgeted for both principal and interest to ensure the working capital by fund is accurately reflected for forecasting purposes.

Other Expenses	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Debt Payments	1,877,175	1,873,820	1,880,513	1,880,438	1,877,188
Total	**1,877,175**	**1,873,820**	**1,880,513**	**1,880,438**	**1,877,188**
% Change		**-0.18%**	**0.36%**	**-0.00%**	**-0.17%**

In addition to the debt service mentioned above, the District also pays the 2011 LAVWMA Pledge Obligation explained below. LAVWMA debt is paid through a DSRSD Contribution to Joint Powers Authorities (LAVWMA) covered as a separate expense later in this budget document.

2011 LAVWMA Pledge Obligation

On September 28, 2011, LAVWMA issued $105,345,000 of 2011 Sewer Revenue Refunding Bonds (2011 LAVWMA Bonds) to refund and retire its Series A Sewer Revenue Bonds and to pay costs of issuance. As a member of LAVWMA, the District has pledged its regional service charges to a portion of the 2011 LAVWMA Bonds. DSRSD's portion of the original debt issue was $40,975,094, the annual payment is approximately $3.1 million, and the debt will be retired in 2031. The Budget also includes approximately $2.7 million for the City of Pleasanton's share of the LAVWMA debt which is paid by DSRSD on Pleasanton's behalf under terms of the Pleasanton-DSRSD agreements. LAVWMA intends to refinance this debt in FYE 2022 to take advantage of the current bond market interest rates.

Contributions to Joint Powers Authorities

The District is a member agency in two joint powers authorities: the Livermore Amador Valley Water Management Agency (LAVWMA) and the DSRSD-EBMUD Recycled Water Authority (DERWA). Each JPA Board of Directors is comprised of representatives of their respective member agencies and adopt operating and capital budgets independently. Budgeted Contributions to JPAs are based on the adopted budget of each JPA. Debt for each JPA is based on the debt service schedule for each offering. DSRSD is the contractual operator of both the LAVWMA and DERWA facilities. The District directly budgets for expenditures for operating the JPA facilities, and is reimbursed by the JPAs for the operations and maintenance costs.

LAVWMA

Formed in 1974, participants in LAVWMA include the District and the Cities of Livermore and Pleasanton. The authority operates an export pumping facility through which all non-recycled treated wastewater is discharged. DSRSD is the contract operator under a 1980 Maintenance Agreement. Contributions to LAVWMA for operations and maintenance expenses is funded by the Regional Enterprise Fund. As the JPA budget is adopted annually, the FYE 2022 O&M budget has been reflected in both years, with the FYE 2023 budget modified through a mid-cycle adjustment once approved by the JPA Board. LAVWMA's replacement capital projects are funded through the Regional Replacement Fund. LAVWMA debt is funded by the Regional Enterprise Fund (repair portion) and the Regional Expansion Fund (expansion portion). Under terms of agreements with the City of Pleasanton, DSRSD's Regional Wastewater Program funds Pleasanton's share of all LAVWMA costs.

DERWA

DSRSD and East Bay Municipal Utility District (EBMUD) participate in DERWA, a Joint Power Authority formed in 2006 to provide recycled water service. DSRSD is the contract operator under a 2005 Maintenance Agreement. Contributions to DERWA for operations and maintenance are funded by the Water Enterprise Fund. As the JPA budget is adopted annually, the FYE 2022 O&M budget has been reflected in both years, with the FYE 2023 budget modified through a mid-cycle adjustment once approved by the JPA Board. DERWA also holds debt for recycled water infrastructure, and annual debt payments are included in the contributions to DERWA from the Water Expansion Fund. Replacement capital projects are funded by the Water Replacement Fund and expansion capital projects are funded by the Water Expansion Fund. DERWA state loan repayments are also funded by the Water Expansion Fund.

Contribution to JPA	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
DERWA - O&M Expense	2,068,175	2,310,658	2,170,731	2,343,689	2,343,689
DERWA - Capital Expense/Replacement Funding	1,679,954	828,200	1,229,960	302,220	173,880
DERWA - Debt Expense	810,087	810,087	822,757	822,757	822,757
LAVWMA - O&M Expense	2,175,635	2,219,963	2,073,734	2,437,609	2,437,609
LAVWMA - Capital Expense/Replacement Funding	3,685,835	279,600	279,600	279,600	279,600
LAVWMA - Debt Expense	5,776,444	5,777,707	5,778,068	5,773,648	5,774,821
Total	**16,196,130**	**12,226,215**	**12,354,850**	**11,959,523**	**11,832,356**
% Change		**-24.51%**	**1.05%**	**-3.20%**	**-1.06%**

Other Expenses

Costs that cannot be classified in other categories are budgeted to other expenses. Low income credits for fixed charges continue to grow, especially during the COVID-19 crisis. Meeting expense is expected to increase as travel restrictions are lifted, and subscriptions have increased as a means to keep abreast of the growing compliance requirements and legal mandates on the District. Credit card transaction fees were absorbed by the District in FYE 2020 to encourage electronic payments and has been widely received by our customer base, as reflected in the additional budget costs.

Other Expenses	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Permits, Licenses & Memberships	400,340	434,128	433,892	473,815	480,815
Low Income Credit (UB)	46,213	46,598	56,000	61,300	68,625
Meetings	22,842	19,812	33,450	32,450	32,030
Prior Year Adjustments	11,498	26,337	-	-	-
Subscriptions & Publications	7,587	10,137	26,068	22,848	22,848
Bond Issuance Costs	1,750	1,750	-	-	-
Credit Card Transaction Fees	-	14,108	41,000	90,000	90,000
Utility Billing Balance Write-Offs	(23)	-	-	-	-
Total	**490,207**	**552,870**	**590,410**	**680,413**	**694,318**
% Change		**12.78%**	**6.79%**	**15.24%**	**2.04%**



The District implemented electronic payment.

Capital Outlay

Capital outlay assets, generally vehicles and equipment, are assets costing $10,000 or more per item with an estimated useful life of over two years. The following is the list of new and replacements assets to be purchased in FYE 2022 and FYE 2023. Capital Outlay expenses vary from year to year depending on District needs and fleet replacement schedules.

During FYE 2022 a total of six vehicles will be purchased and 18 obsolete vehicles sent to auction. During FYE 2023 a total of four vehicles will be purchased. This downsizes the fleet, reduces fuel consumption and the District's overall carbon footprint.

The Fleet Division will consider the District's Green Business Policy, current available technology, and business need when updating or replacing fleet vehicles with the goal of replacing larger higher fuel-consumption vehicles with lower fuel-consumption vehicles when available. Unfortunately, the technology has not kept pace with green initiatives and is not yet available for the replacement of our larger vehicles with electric or hybrid vehicles. In an effort to move in that direction, however, the District will be replacing the following with more energy efficient assets:

- 2 full-size F-150 pickups will be replaced with 2 Ranger Supercab 4x4.
- 2 full-size F-150 pickups will be replaced with small transit minivans.
- 1 mid-size S-10 pickup will be replaced with a Transit Connect minivan.

Guidance for future purchases of replacement vehicles will be presented in the results of an Energy Master Plan and new Board Energy Policy that will be prepared during this two year budget cycle.

CAPITAL OUTLAY

Div	Asset Description	Fund 210	Fund 310	Fund 610	Budget FYE22	Budget FYE23
34	Vehicle - Ford Escape Hybrid	20%	30%	50%	$35,000	
42	Vehicle - Ranger Supercab 4x4 (Qty 2)	35%	5%	60%	$74,000	
51	Vehicle - Ford F-250 Trucks (FYE22: Qty 2/FYE23: Qty 4)	10%		90%	$110,000	$220,000
51	Vehicle - Transit Connect	20%	30%	50%	$35,000	
51	CCTV Tuck	100%			$500,000	
51	Valve Truck			100%	$200,000	
53	Long Reach Forklift		100%		$150,000	
53	Influent Gate Control		100%		$120,000	
53	Environmental Compliant Blasting/Removal System		100%		$50,000	
53	Pump Station 20A Pump #1 and #3 Replacement			100%	$60,000	
53	D7 Tractor for Bio-Solids Harvesting (carryover)		100%		$303,210	
53	Facultative Sludge Lagoon Surface Mixers		100%			$100,000
54	Vehicle - Ford Transit Connect Van	20%	30%	50%		$30,000
55	Ion Chromatography Unit		40%	60%	$65,460	
55	Vehicle - Van	50%	50%			$30,000
	Total				**$1,702,670**	**$380,000**

INTERFUND TRANSFERS

Transfers are transactions that are used to move money from one fund to another for specified purposes. Transfers are included in both the revenue and expense sections of the District budget. Each enterprise fund contributes money to its respective replacement fund for the future repair and replacement of its facilities and infrastructure. Amounts are determined each budget cycle based on the fund balance and future projected expenses. As stated earlier, Local Replacement Fund transfers were deferred and will commence in FYE 2023, representing the majority of the increase.

On May 4, 2021, the Board approved the payoff of the Temporary Infrastructure Charge (TIC) in the amount of $2.9 million dollars from the Water Expansion Fund to the Water Enterprise Fund. In addition, the Board approved the payoff of the ratepayer debt to the Water Expansion Fund from the Water Enterprise Fund, thus eliminating an $14.0 million liability funded over 20 years. The corresponding annual transfer payment of $675,000 will no longer appear in the budget.

On May 2, 2017, the Board approved an interfund loan from Local Wastewater Expansion to Local Wastewater Replacement of $5 million for a six-year term with interest rates reflective of the District's investment portfolio. This loan paid for the Dublin Trunk Sewer Rehabilitation and the Sewer Lift Station Relocation projects and will help pay for the other projects until transfers from the Local Wastewater Enterprise Fund are sufficient to cover the costs. The sixth and final installment of the replacement funds transfer approved by Resolution #23-17 is scheduled for FYE 2024.

Replacement Allocations	FYE22		FYE23	
	From	To	From	To
Local Wastewater Enterprise			800,000	
Local Wastewater Replacement				800,000
Regional Wastewater Enterprise	1,800,000		2,100,000	
Regional Wastewater Replacement		1,800,000		2,100,000
Water Enterprise	6,169,688		6,280,000	
Water Replacement		6,169,688		6,280,000
Total	**7,969,688**	**7,969,688**	**9,180,000**	**9,180,000**

Transfers Out-Other	FYE22 From	FYE22 To	FYE23 From	FYE23 To
Local Wastewater Replacement	895,833		875,000	
Local Wastewater Expansion		895,833		875,000
Local Wastewater Enterprise	109,267		110,936	
Regional Wastewater Enterprise	430,125		436,694	
Water Enterprise	391,936		397,922	
Other Post-Employment Benefits		931,328		945,553
Total	**1,827,161**	**1,827,161**	**1,820,553**	**1,820,553**

Cross-Connections	FYE22 From	FYE22 To	FYE23 From	FYE23 To
Water Enterprise	110,400		-	
Water Replacement		110,400		-
Total	**110,400**	**110,400**	-	-

Interfund Transfers for 5th Supplemental Agreement (Pleasanton)	FYE22 From	FYE22 To	FYE23 From	FYE23 To
Regional Enterprise	660,000		680,000	
Water Enterprise		660,000		680,000
Total	**660,000**	**660,000**	**680,000**	**680,000**



The new primaries are shown here (top center).

CAPITAL IMPROVEMENT PROGRAM (CIP)

The Capital Improvement Program (CIP) is a capital investment plan to maintain and enhance the DSRSD infrastructure. The CIP serves as a guide for identifying current and future projects in support of the District's mission to protect public health and the environment by providing reliable and sustainable water, recycled water, and wastewater services in a safe, efficient, and fiscally responsible manner.

The CIP consists of the Ten-Year Capital Improvement Plan and the Two-Year Capital Improvement Budget. The first two years of expenditures in the Capital Improvement Plan comprise the District's Two-Year Capital Improvement Budget for Fiscal Years 2022 and 2023.

The two-year capital improvement budget authorizes replacement and expansion projects based on a ten-year plan.

Expand and Improve

- $8.9M construction of Turnout 6 (17-W003)
- $8.9M to expand Reservoir 10A from 3.0 million-gallon with a new 4.1 million-gallon reservoir
- $4.6M construction of Reservoir 20B to increase storage capacity for Eastern Dublin (14-W008)
- $2.3M improvements to Biogas Treatment System (16-P028)

Repair

- $1.3M to replace the East Amador Lift Station for the City of Pleasanton (21-P009)
- $1.0M to rehabilitate concrete sewer pipelines in East Dublin (20-S013)

Replace

- $6.6M to replace 10,900 feet of water pipelines in the Wineberry and Canterbury Area (16-W017)
- $3.2M to replace 4,610 feet of water pipelines in the Camp Parks Water Main (20-W024)

For further detail on capital project expenditures, as well as, the Ten-Year Capital Improvement Plan, the complete CIP Ten-Year Plan for FYEs 2022 through 2031 and Two-Year Budget for FYE 2022 and 2023 are available at www.dsrsd.com/about-us/library/financial-information.

Capital Improvement Program Expenditures

The CIP Ten-Year Plan for FYE 2022 through 2031 includes 113 projects and programs totaling $281.2 million. The CIP Two-Year Budget includes 66 projects and programs totaling $72.9 million. The following table provides a summary of CIP expenditures in the Two-Year CIP Budget for each fund, grouped by business enterprise. All expenditures are shown in current dollars.

10-YEAR CAPITAL IMPROVEMENT PLAN (IN THOUSANDS OF $)

Fund	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	10 Year Total
210	1,655	1,325	1,172	1,284	1,097	3,572	859	1,569	399	399	13,329
220	-	100	830	1,300	175	500	-	-	275	2,557	5,737
310	9,902	6,557	3,795	10,017	4,624	3,574	6,789	7,674	13,074	14,474	80,479
320	4,934	1,166	661	-	2,358	2,525	12,120	-	6,094	3,000	32,858
610	11,310	13,223	6,760	8,553	3,393	10,958	9,705	8,743	12,193	21,543	106,379
620	8,701	14,049	13,087	965	125	720	375	625	625	3,125	42,397
Total	**36,502**	**36,420**	**26,305**	**22,119**	**11,772**	**21,849**	**29,848**	**18,610**	**32,659**	**45,097**	**281,179**

The Local Wastewater Replacement Fund (210) is to replace and improve local sewer facilities that transfer wastewater from the point of origin to the regional wastewater treatment facility. The service area consists of the southern part of San Ramon and the City of Dublin with revenues from capacity reserve fees, interest and replacement funding.

The Local Wastewater Expansion Fund (220) accounts for projects that expand or add local sewer facilities to accommodate increased wastewater flows from new development. Revenues consist of capacity reserve fees and interest earned.

The Regional Wastewater Replacement Fund (310) funds projects which replace and improve the existing Regional Wastewater Treatment Plant processes and facilities. The Regional Wastewater service area consists of the City of Dublin and the southern part of the City of San Ramon and the City of Pleasanton by contract. Revenues consists of capacity charges, interest and replacement funding.

The Regional Wastewater Replacement Fund (320) funds projects which expand or add to the wastewater treatment process to accommodate future wastewater flows, ultimately conveyed through the LAVWMA pipeline to the San Francisco Bay for disposal. Revenues come from capacity reserve fees and interest earned.

The Water Replacement Fund (610) funds projects which replace and improve facilities to treat recycled water, as well as the pipelines, pump stations, reservoirs, and related appurtenances to distribute potable water (from the Zone 7 turnouts to the customers) and recycled water (from the Dublin San Ramon Services District East Bay Municipal Utility District Recycled Water Agency (DERWA) transmission system to recycled customers). The service area consists of the City of Dublin and the Dougherty Valley area of San Ramon with revenues from capacity reserve fees, interest and replacement allocations.

The Water Expansion Fund (620) funds projects which expand or add facilities to treat recycled water and to distribute potable and recycled water. Revenues come from capacity reserve fees and interest earned.

For more information on the Capital improvement Program, please refer to the DSRSD Ten-Year Capital Improvement Plan and Two-Year Capital Improvement Budget.

Capital Funds-Replacement & Expansion Fund

OPERATING BUDGET	FYE 2022					
	Fund 210	Fund 220	Fund 310	Fund 320	Fund 610	Fund 620
(Estimated) Beginning Working Capital	4,117,198	7,585,333	32,272,598	42,061,722	26,581,086	41,636,229
Capacity Reserve Fees	1,075,668	32,811	2,000,231	5,390,728	2,238,643	4,927,288
Interest	41,172	75,853	322,726	420,617	265,811	416,362
Total Revenues	1,116,840	108,664	2,322,957	5,811,345	2,504,454	5,343,650
Transfers In:					-	
Replacement Allocations	-	-	1,800,000	-	6,169,688	-
Interfund Loan Repaid	-	895,833	-	-	-	-
Transfers In-Cross Connections	-	-	-	-	110,400	-
Total Transfers In	-	895,833	1,800,000	-	6,280,088	-
Total Revenue	1,116,840	1,004,497	4,122,957	5,811,345	8,784,542	5,343,650
Operating Expenses:						
Staff Time Charged to Projects/JPAs	-	-	279,600	-	286,120	16,100
Debt Service	-	-	-	4,310,354	-	2,703,195
Capital Outlay	550,900	-	674,094	-	477,676	
Total Operating Expenses	550,900	-	953,694	4,310,354	763,796	2,719,295
Capital Projects - Proposed Fund Limits	1,654,986	-	9,902,013	4,934,286	11,309,711	8,700,706
Transfers Out:					-	
Interfund Loan Repayment	895,833	-	-	-	-	
Total Transfers Out	895,833	-	-	-	-	-
Total Expenses	3,101,719	-	10,855,707	9,244,640	12,073,507	11,420,001
Net increase (decrease)	(1,984,879)	1,004,497	(6,732,750)	(3,433,295)	(3,288,965)	(6,076,350)
(Estimated) Ending Working Capital	$2,132,319	$8,589,830	25,539,847	38,628,427	23,292,121	35,559,879

Capital Funds-Replacement & Expansion Fund

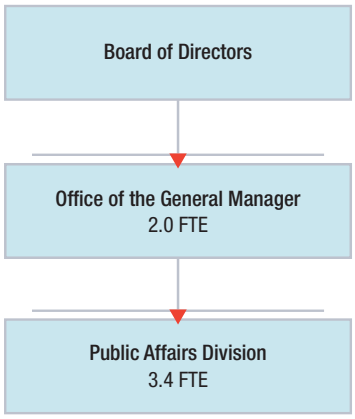
OPERATING BUDGET	FYE 2023					
	Fund 210	Fund 220	Fund 310	Fund 320	Fund 610	Fund 620
(Estimated) Beginning Working Capital	2,132,319	8,589,830	25,539,847	38,628,427	23,292,121	35,559,879
Capacity Reserve Fees	1,422,509	43,391	3,302,790	8,746,658	3,346,116	7,274,021
Interest	21,323	85,898	255,398	386,284	233,547	355,460
Total Revenues	1,443,832	129,289	3,558,188	9,132,942	3,579,663	7,629,481
Transfers In:					-	
Replacement Allocations	800,000	-	2,100,000	-	6,280,000	-
Interfund Loan Repaid	-	875,000	-	-	-	-
Transfers In-Cross Connections	-	-	-	-	-	-
Total Transfers In	800,000	875,000	2,100,000	-	6,280,000	-
Total Revenue	2,243,832	1,004,289	5,658,188	9,132,942	9,859,663	7,629,481
Operating Expenses:						
Staff Time Charged to Projects/JPAs	-	-	279,600	-	173,880	-
Debt Service	-	-	-	4,311,229	-	2,699,945
Capital Outlay	43,000	-	124,000	-	213,000	
Total Operating Expenses	43,000	-	403,600	4,311,229	386,880	2,699,945
Capital Projects - Proposed Fund Limits	1,325,400	100,000	6,557,063	1,165,640	13,223,130	14,048,725
Transfers Out:					-	
Interfund Loan Repayment	875,000	-	-	-	-	
Total Transfers Out	875,000	-	-	-	-	-
Total Expenses	2,243,400	100,000	6,960,663	5,476,869	13,610,010	16,748,670
Net increase (decrease)	432	904,289	(1,302,475)	3,656,072	(3,750,347)	(9,119,189)
(Estimated) Ending Working Capital	$2,132,751	$9,494,119	24,237,373	42,284,499	19,541,774	26,440,690

NOTES



Wastewater Treatment Plant Secondary Clarifiers 1 and 2

Department Overview



Board of Directors and Office of the General Manager Department

Board of Directors and Office of the General Manager Department consists of three divisions including Legislative, the Office of the General Manager, and Public Affairs. The department is responsible for directing policy, providing executive leadership to the District, and managing public affairs and community outreach.

DIVISION INTRODUCTORY/OVERVIEW

10 - Legislative

The Dublin San Ramon Services District Board of Directors is an independently elected legislative body consisting of five Directors. The Directors govern the District by setting policies and hiring and overseeing the District's General Manager. The Board exercises these powers under the authority of the Community Services District Law (California Government Code section 61000 et seq.) and is ultimately responsible and accountable to the people of the District.

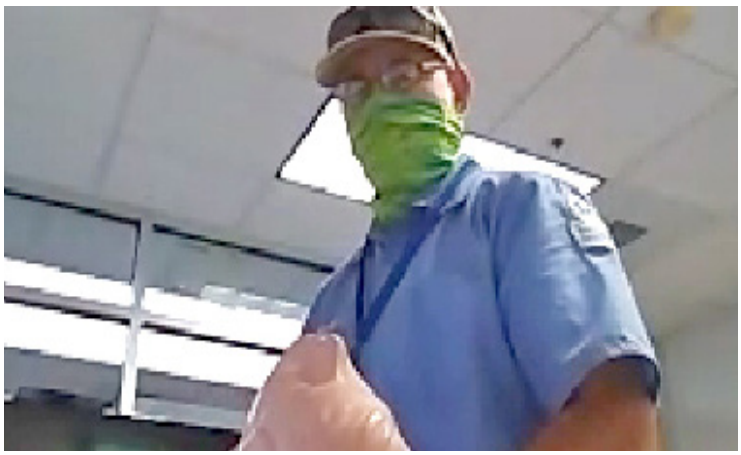
The Board of Directors' budget includes Boardmember travel and training costs at industry conferences, meetings, and community events as well as the consolidated election held every two years with the statewide general election.

12 - Office of the General Manager

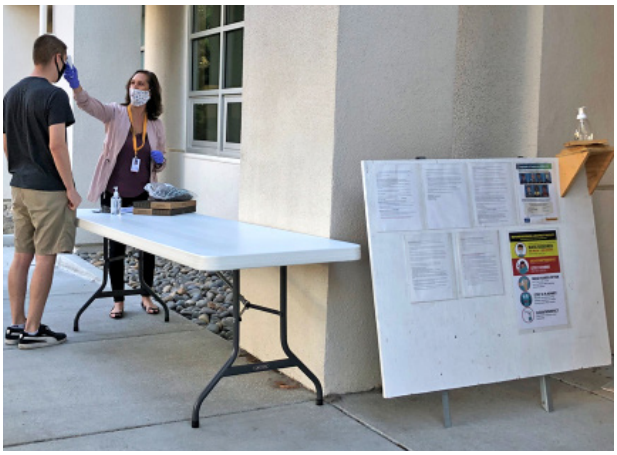
The General Manager provides executive leadership and management of the District's business, including oversight to the three main operating departments (Operations, Administrative Services, and Engineering). The General Manager is the primary liaison between the Board of Directors and the staff of the District and is responsible for interagency coordination and collaborations.

14 - Public Affairs

The Public Affairs Division communicates priorities, initiatives, and services delivered to the customers and stakeholders of the District.



To protect staff during the COVID outbreak, scheduled training was conducted via video.



DSRSD's COVID Task Force responded to continually evolving county and state regulations.

ACCOMPLISHMENTS, FYE 2020 AND 2021

BOARD ACCOMPLISHMENTS

- Continued conducting District business and policy development by meeting remotely throughout the COVID-19 crisis.
- Comprehensively updated the Water Recycling Policy.
- Approved a "Water Resiliency Policy."
- Approved streamlining of purchasing policy to allow for informal bidding procedures and flexibility.
- Encouraged public participation in the election process by increasing the District's contribution for candidate statements.
- Provided leadership in the industry with Boardmembers serving on the CASA Board of Directors, the CSDA Alameda County Chapter Board of Director, and the CSDA Contra Costa County Chapter Board of Directors.
- Approved the conclusion of the Temporary Infrastructure Charge (TIC) loan program.

OTHER ACCOMPLISHMENTS

- Created a COVID-19 Task Force to coordinate interdepartmental response efforts and on-site safety practices, and to create a practical telecommuting program to comply with the Alameda County Shelter-in-Place Order.
- Initiated a comprehensive review and update of the DERWA Water Sales, Water Supply and Operations Agreements.
- Assisted in and facilitated the negotiation of a favorable extension of the LAVWMA-EBDA 20-Year Agreement Extension.
- Completed the 2021 Alternative Water Supply Study that evaluates and recommends both near-term and long-term options for improving long-term water supply reliability.
- Initiated a comprehensive phase one re-write of the 2004 District Emergency Response Plan with completion in June 2021.
- Provided leadership in the industry by serving as a Director on the East Bay Leadership Council and as the Co-Chairperson of the Water & Environment Task Force.
- Conducted a virtual Citizens Water Academy to educate 20 residents on the essential water and wastewater services DSRSD provides to the community and received the California Association of Sanitation Agencies' *Excellence in Public Outreach and Education* award for the virtual Citizens Water Academy.
- Provided leadership in the water industry by serving on the Association of California Water Agencies Board of Directors and in the local community by serving on the Dublin Chamber of Commerce Board of Directors.

BUDGET SUMMARY

Operating Expenses by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	14,244	26,007	12,700	31,725	31,725
Regional Wastewater Enterprise	242,442	288,648	284,942	269,802	272,279
Water Enterprise	298,441	291,742	461,852	447,722	450,373
Administrative Cost Center	1,007,242	994,734	1,122,169	1,319,820	1,378,460
Total	**1,562,368**	**1,601,130**	**1,881,663**	**2,069,068**	**2,132,837**
% Change		**2.48%**	**17.52%**	**9.96%**	**3.08%**

Div	Operating Expenses by Division	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
10	Board of Directors	289,439	158,373	154,444	268,035	371,407
12	Office of the General Manager	570,173	673,941	943,607	944,518	962,545
14	Public Affairs	702,756	768,816	783,613	856,515	798,885
	Total	**1,562,368**	**1,601,130**	**1,881,663**	**2,069,068**	**2,132,837**
	% Change		**2.48%**	**17.52%**	**9.96%**	**3.08%**

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	1,113,493	1,239,955	1,498,526	1,473,338	1,503,107
Materials	5,413	1,797	12,300	10,300	10,300
Contracts	280,895	196,427	168,100	407,600	441,600
Other Expenses	162,568	162,951	202,737	177,830	177,830
Total	**1,562,368**	**1,601,130**	**1,881,663**	**2,069,068**	**2,132,837**
% Change		**2.48%**	**17.52%**	**9.96%**	**3.08%**

BUDGET TRENDS, FYE 2022 - 2023

The Board of Directors' proposed budget for FYE 2022 and FYE 2023 is a status quo budget with the exception of bi-annual elections and re-districting costs. In FYE 2019, costs were incurred for the election and to convert from an at-large election to a district/division election process. No election costs were incurred in FYE 2020 or 2021. For FYE 2022, $100,000 has been budgeted to complete the realignment process for the District's election divisions for the 2020 Census results. In FYE 2023, the budget includes $200,000 for the Board bi-annual election involving three districts.

The Office of the General Manager's proposed budget is status quo with the exception of the addition of an Assistant General Manager position added in FYE 2020 and fully staffed in FYE 2021, and the addition of $75,000 each year starting in FYE 2022 to accommodate unanticipated consulting services.

Public Affairs added two audiovisual/public relations interns at approximately $50,000 per year starting in FYE 2022. In addition, costs have increase this year to prepare and distribute the annual report to all customers, for a "live" citizen water academy and for a marketing wrap for the new CCTV truck.

TOP DEPARTMENT GOALS, FYE 2022 AND 2023

BOARD GOALS

- Build consensus with Tri-Valley partners on the importance of diversification and local control of water supplies.
- Represent the District at industry conferences, meetings and community events.
- Obtain the CSDA "District of Distinction Accreditation" whereby DSRSD would be recognized for their prudent fiscal practices along with other areas important to effectively operate and govern a special district.

OTHER GOALS

- Integrate on-going emergency training into District operations and conduct a District-wide Incident Command System exercise to assess and improve District capabilities.
- Work collaboratively with our Tri-Valley partners in the development of a more diversified and resilient water supply.
- Review, propose and negotiate revisions to our joint powers authority and City of Pleasanton agreements to address changing conditions.
- Complete a second phase update of the Emergency Response Plan.
- Implement the new Strategic Plan adopted in April 2021.
- Build public awareness of long-term water supply challenges and opportunities.
- Produce the District's annual report.
- Work with Tri-Valley partners to develop a public outreach program on water supply alternatives.
- Facilitate the Citizens Water Academy in 2022 to educate residents on our industry and the role DSRSD plays in the Tri-Valley.
- Implement quality recording and live streaming of Board meetings with the new audio and video hardware/software.

PERFORMANCE MEASURES

Legislative and Office of the GM	Objective	FYE23 Target	FYE22 Target	FYE21 Estimates	FYE20 Actual
Office of the GM	Conduct District-wide emergency exercise to assess District capabilities	one drill	one drill	*new	n/a
	% of staff that have completed at least two NIMS/ICS training courses	95%	75%	*new	n/a



The Administrative Services Department

The Administrative Services Department consists of six divisions including Administration, Financial Services, Human Resources & Risk Management, Utility Billing & Customer Service, Information Technology Services and Executive Services. These divisions provide all internal support functions for the District including financial management, human resource management, utility billing information technology services and administrative support to the Board and General Manager.

DIVISION INTRODUCTORY/OVERVIEW

30 - Administrative Services

The Administration Division sets the priorities and provides overall management for the Administrative Services Department. The division ensures the internal service divisions are operating efficiently and effectively to provide timely, quality service to the Board, our citizens and the other departments.

31 - Financial Services

The Financial Services Division coordinates the District's annual audit, produces the Comprehensive Annual Financial Report (CAFR) and the biennial budget, performs various rate studies, and prepares long- term financial projections. This division maintains the District's financial records, pays vendors, processes payroll, invests District funds, and prepares reports, financial statements, and statutory filings.

32 - Human Resources and Risk Management

The Human Resources and Risk Management Division conducts recruitment and selection processes, maintains classification and compensation structure, and coordinates employee benefits, employee relations, organizational personnel planning, and policy development. The Division also supports labor relations and administers employee engagement programs, including employee feedback, coaching, and recognition, as well as District-wide training and development, and the District's pooled insurance programs, including liability, property and workers compensation.

33 - Utility Billing & Customer Services

The Utility Billing & Customer Service Division manages all aspects of customer utility billing, communications, remittance processing, debt collections, equipment installation and maintenance, and monitoring of the District's advanced metering infrastructure (AMI). They have been instrumental in educating customers on the use of the AquaHawk software so that the customer has 24/7 feedback on their water usage, eBills and payments.

34 - Information Technology Services

Information Technology Services provides strategic IT vision, planning, and enterprise solutions to assist in achieving DSRSD's strategic plan, goals, and objectives. Collaborating with other District divisions, they provide innovative, secure, reliable, technology solutions that add value to key business processes. This division helps keep the organization operating by maintaining critical servers, key software and administering and maintaining the IT infrastructure on a day-to-day basis. This division also maintains and makes continuous improvements to the District cyber posture and policy.

35 - Executive Services

The Executive Services Division provides administrative services in support of the Board of Directors, General Manager's Office and the public. The division performs District Secretary duties and facilitates Board and Committee meetings (including packets, noticing,and minutes), provides timely responses to Public Records Act requests, facilitates the Board of Directors elections and appointments, manages mandatory Fair Political Practices Commission (FPPC) filings and tracks Boardmember compliance trainings, oversees records management, facilitates district noticing requirements, manages contract and recordation processes, and maintains the District Code and District policies.

ACCOMPLISHMENTS, FYE 2020 AND 2021

- Continued District services for internal and external customers throughout the COVID pandemic through the use of technology and telecommuting strategies. Developed District COVID-19 response matrix and reporting guidelines, and administered new federal and state benefit programs related to the pandemic. Worked successfully with customers to maintain consistency in outstanding utility billing payments during COVID-19.
- Rolled-out key technology to enhance telecommuting/social distancing possibilities including TEAMS, Planner, and Forms.
- Promoted Employee Engagement via the Employee Academy, the Virtual Bring your Kids to Work Day, the monthly Supervisor Training Series and our Annual Management Retreat.
- Received the Government Finance Officers Association (GFOA) Certificate of Achievement for Excellence in Financial Reporting for the 20th year in a row for the FYE 2020 CAFR.
- Received the California Society of Municipal Finance Officers (CSMFO) Operating Budget Excellence Award for Fiscal Year 2019-2020.
- Updated the District's purchasing regulations including code revisions and preparation of purchasing guidelines.
- Developed 10-year financial planning modules.
- Began implementation of a new Enterprise Resource Planning system for Finance, HR and Utility Billing.
- Completed 26 recruitments.
- Completed a District-wide Classification Study and Compensation Study, and implemented the Classification Study.
- Updated seven personnel rules, including the Anti-Harassment, Retaliation and Discrimination Rule.
- Increased on-line customer payments in conjunction with changing the credit card fee structure.
- Increased users on the self-monitoring AquaHawk system to proactively manage abnormal water usage patterns.
- Initiated phishing campaigns, cybersecurity awareness training, and migrated antivirus to a cloud based for additional protection against ransomware and threats.
- Implemented a desktop firewall policy to contain ransomware and limit lateral movement on the network.
- Created an online application for service via our website.
- Implemented Governance Planning for the District's secure use of the M365 online environment and transitioned from Exchange to M365.
- Identified a solution for virtual Board meetings to ensure the meetings meet good quality standards for audio/video.
- Completed the first District General Election by the new area-based Division voting system in November, 2020. Facilitated the Division 5 vacancy appointment process in February 2021.
- Implemented an electronic filing system for FPPC Form 700.
- Expanded our electronic content management system with scanning of easements, as-builts, record drawings, resolutions and agreements.
- Implemented eSignatures for virtual document approval.
- Revised key Board policies including Day of Service, Director Travel and Expenses, and Candidates' Statement Costs.

BUDGET SUMMARY

Operating Expenses by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	137,358	102,268	149,664	137,261	146,316
Local Wastewater Replacement	-	-	-	7,000	-
Regional Wastewater Enterprise	138,076	101,861	149,666	138,461	176,316
Regional Wastewater Replacement	-	-	-	10,500	-
Regional Wastewater Expansion	26,297	785,592	-	-	-
Water Enterprise	1,033,655	-	1,146,863	1,054,693	964,008
Water Replacement	-	-	-	17,500	-
Administrative Cost Center	4,763,429	4,616,080	5,291,671	5,330,433	5,370,045
Total	**6,098,815**	**5,605,800**	**6,737,865**	**6,695,846**	**6,656,684**
% Change		**-8.08%**	**20.19%**	**-0.62%**	**-0.58%**

Div.	Operating Expenses by Division	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
30	Administrative Services Administration	349,345	382,982	383,412	428,711	433,796
31	Financial Services	983,417	1,062,382	1,058,097	1,269,627	1,299,381
32	Human Resources & Risk Management	1,147,157	1,119,869	1,160,462	1,269,921	1,267,203
33	Utility Billing & Customer Services	1,231,621	963,801	1,447,486	1,233,414	1,221,639
34	Information Technology Services	1,629,212	1,407,614	1,925,993	1,798,833	1,732,120
35	Executive Services	758,064	669,152	762,415	695,341	702,545
	Total	**6,098,815**	**5,605,800**	**6,737,865**	**6,695,846**	**6,656,684**
	% Change		**-8.08%**	**20.19%**	**-0.62%**	**-0.58%**

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	5,083,942	4,681,768	5,422,983	5,230,737	5,274,931
Materials	29,362	39,516	47,812	45,280	36,423
Contracts	979,800	878,347	1,242,800	1,365,279	1,325,780
Other Expenses	5,711	6,168	24,270	19,550	19,550
Capital Outlay	-	-	-	35,000	-
Total	**6,098,815**	**5,605,800**	**6,737,865**	**6,695,846**	**6,656,684**
% Change		**-8.08%**	**20.19%**	**-0.62%**	**-0.58%**

BUDGET TRENDS, FYE 2022 AND 2023

The Administrative Services Department experienced a high turnover rate due to retirements in FYE 2020 which led to a decrease in salary and benefit costs. For FYE 2021, vacancies were filled and a full year of salary and benefit cost is reflected for a new Accountant position. In addition, a three-year limited term Finance Analyst position has been added starting in FYE 2022. The department is converting from a legacy Finance, HR and Utility Billing system to a new electronic records system. Approximately $110,000 has been added for overtime and temporary staffing during this process and additional costs are reflected for the new Tyler-Munis software maintenance agreements. Another $30,000 per year represents the addition of a part-time position in the Executive division. Finally, professional fees have increased in FYE 2022 to reflect costs associated with upcoming negotiations, rate studies and additional consultant costs associated with expanded IT programs including MS 365 governance, continued transition of physical records into our electronic records management platform and current costs associated with telecommuting needs.



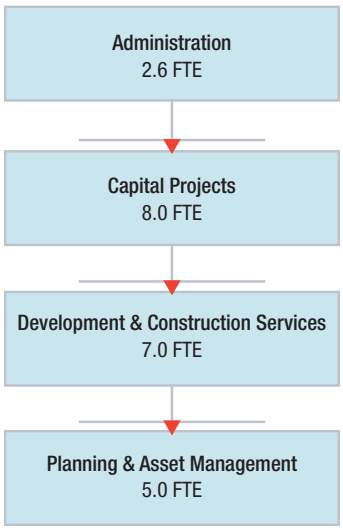
The District equipped office employees, enabling them to telecommute and meet via Teams.

TOP DEPARTMENT GOALS, FYE 2022 AND 2023

- Prepare a two-year operating budget and create a streamlined document for enhanced use.
- Review and update the District's reserve policies.
- Facilitate the refunding of the LAVWMA debt in 2021.
- Support the Office of the General Manager in revisions to our City of Pleasanton agreements.
- Implement the new Enterprise Resource Planning System for Finance, Human Resources, Utility Billing and Planning, including integration with other systems of record.
- Finalize the Water Capacity Reserve Fee Study.
- Complete an addendum to the 2018 Water Rate Study to Update Recycled Water Rates and the Dougherty Valley Incremental Assessment.
- Perform an overhead and indirect cost allocation study and cost of service study in 2022.
- Perform a local and regional Wastewater Rate Study in 2022.
- Explore a debt financing policy for equitable funding of new and replacement infrastructure.
- Negotiate the 2021 labor negotiations for four successor Memorandums of Understanding (MOUs).
- Update and implement employee engagement programs including coaching and feedback, employee recognition, and training and development.
- Continue to educate our customers on the use of the AMI system and promote e-Bills, Automated payments and AquaHawk monitoring to all customers.
- Implement a new collection policy for the District.
- Identify areas of investment in information systems to optimize operations and enhance business processes.
- Enhance the functionality of our computerized maintenance and asset management system (Lucity).
- Link and provide integrated platform access to all document systems (Sharepoint/Office365/OnBase) to deliver relevant information as needed by staff,
- Continue to build and expand the use of the Electronic Content Management System (ECMS) including JPA agreements and all District contract management.
- Further strengthen our cybersecurity and network resiliency capabilities.
- Facilitate adjustment of election district boundaries once 2020 Federal census data becomes available, in preparation for 2022 Board elections.
- Update the Board Guidelines Policy.
- Obtain the Transparency Certification renewal.

PERFORMANCE MEASURE

Administrative Services	Objective	FYE23 Target	FYE22 Target	FYE21 Estimates	FYE20 Actual
Executive Services	Respond to public records requests within initial 10-day requirement	100%	100%	100%	100%
	Post agendas and publish agenda packets for regular meetings earlier than the 72-hour requirement	100%	100%	100%	100%
	Ensure annual filing requirements for Form 700 Statement of Economic Interests are adhered to	100%	100%	100%	100%
Human Resources & Risk Management	Average number of days to fill external recruitments from requisition to hire	145	145	145	143
	% of employees current on AB1825, workplace violence prevention and diversity compliance training	100%	100%	97%	98%
Utility Billing & Customer Service	Mail bills within five days of the first or 15th of each month	100%	95%	95%	100%
	Provide error free bills	98%	95%	95%	95%
Information Technology Services	Provide full network connectivity	99%	99%	99%	99%
	Block all SPAM email messages	99%	99%	99%	99%
	Perform regular third party penetration testing	100%	100%	100%	100%
	Perform daily backups of critical systems to ensure business continuity	100%	100%	100%	100%
Financial Services	Maintain good credit rating and debt service coverage	AA+	AA+	AA+	AA+



The Engineering Department

The Engineering Department consists of four divisions that ensure District infrastructure is planned, designed, and constructed in accordance with the District's ordinances, specifications, policies, and all applicable laws and regulations.

The department leads the efforts in support of the Asset Management/GIS Program and oversees the Capital Improvement Program Ten-Year Plan and Two-Year budget. In addition, the department provides planning and permitting services, construction inspection and the Clean Water Program.

DIVISION INTRODUCTORY/OVERVIEW

40 - Engineering Services Administration

The Engineering Services Division sets the priorities and provides overall management for the Engineering Department, which includes the Capital Projects Division, the Development and Construction Services Division, and the Planning and Asset Management Division. The division ensures district infrastructure is planned, designed, funded and constructed in accordance with District's ordinances, specifications, policies and all applicable laws and regulations. The division coordinates execution of District Strategic Plan goals with other departments and represents the District at an executive level with other agencies and professional organizations.

41 - Capital Projects

The Capital Improvement Projects Division prepares and administers two elements of the Capital Improvement Program (CIP): 1) the CIP ten-year plan and 2) the CIP two-year budget. Following the guidance of Master Plans and Asset Rehabilitation and Replacement Models, the division administers, plans, designs, and manages the construction of all of the District's CIP projects. The division supports the Wastewater Treatment Plant (WWTP) and Field Operations by evaluating processes and operations to improve efficiency and resolve issues, designing equipment and facility improvements, and procuring specialty equipment and services.

42 - Development & Construction Services

The Development and Construction Services Division oversees the expansion and construction of the District's water and sewer systems through development projects. The division reviews plans, provides permits and inspections to conform to the latest DSRSD standards in coordination with the associated cities. The division also provides construction inspection services for District repairs and small capital improvement projects.

43 - Planning & Asset Management

The Planning and Asset Management Division manages the long term utility planning activities and leads the Asset Management Program, including developing and maintaining asset rehabilitation and replacement models that are integral to the development of capital improvement and capital outlay budgets. Through the Clean Water Section, the Division monitors the water and wastewater users for water conservation, pollution prevention, and State Water Resources Control Board Division of Drinking Water Regulatory requirements for backflow prevention. The GIS Section maintains the water and wastewater collection system mapping and hydraulic models.

ACCOMPLISHMENTS, FYE 2020 AND 2021

- Revamped the District Water Recycling Policy to reflect the increasing value of wastewater as a water supply.
- Prepared CIP 10-Year Plan in Fiscal Year 2021.
- Purchased five mobile generators as part of the Potable Water Pump Station Standby Generators/Emergency Response project, bid Phase II of the project to continue assuring emergency standby power and reliability, and installed a standby generator at the Field Operations Facility.
- Created and implemented the ability for customers to apply and pay for Limited Construction Permits online.
- Updated electronic construction project tracking to provide construction project acceptance and warranty review in a timely fashion.
- Provided technical support to the LAVWMA/EBDA contract negotiations.
- Worked with the development community and the Regional Water Quality Control Board to resolve compliance issues.
- Provided comments and edits on the Alameda County Local Agency Formation Commission Municipal Services review, emphasizing the need for coordination between water and wastewater agencies to maximize water recycling.
- Provided presentations on water supply and diversity to various organizations.
- Completed construction of District Office renovation, including the Board Room Audio/Video Improvements.
- Initiated planning and design of Reservoir 20B, Turnout 6, WWTP SCADA, Camp Parks Water Main Replacements, East Dublin Trunk Sewer Rehabilitation, Biogas Skid and Flare Replacement, Alum Addition, Pump Station 3A MCC Replacement, Water Line Replacements - Wineberry & Canterbury Area, Pump Station 1A Rehabilitation, Reservoir 2A Recoating and Reservoir 20A roof recoating.
- Designed/constructed facilities to divert 1 mgd of untreated wastewater as recycled water supplemental supply to DERWA.
- Reviewed and updated DSRSD Standards and Specifications.
- Performed over 200 plan reviews and 105 Commercial and Institutional Site inspections.
- Incorporated plan review software to communicate more efficiently with developers and designers.
- Established an electronic repository of approved project drawings for use by field operations staff prior to project acceptance to streamline USA requests in new developments.
- Completed the 2019 Annual Water Loss Audit and the 2020 Urban Water Management Plan
- Assisted in the Tri-Valley Water Demand Study.
- Coordinated completion of the American Water Infrastructure Act – Risk and Resilience Assessment certification.
- Monitored and maintained regulatory compliance for 337 recycled water irrigation users, 18 recycled water construction meters, 4 recycled water commercial fill station users, 3,632 back- flow preventers and 112 dental facilities.
- Supported a California Association of Sanitation Agencies study on wastewater flows and loads.
- Completed Business Risk Evaluation (BRE) for WWTP Equipment.
- Established an automated process for new assets/updates into GIS and remote field entry of work orders.
- Assisted in the update of the District's purchasing regulations, including code revisions and guidelines.

BUDGET SUMMARY

Operating Expenses by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	292,592	693,616	664,864	724,609	710,974
Local Wastewater Replacement	16,678	-	-	25,900	-
Local Wastewater Expansion	586,308	-	-	-	-
Regional Wastewater Enterprise	705,411	808,383	924,366	946,783	960,578
Regional Wastewater Replacement	7,617	-	-	3,700	-
Regional Wastewater Expansion	56,391	-	-	-	-
Water Enterprise	1,221,004	2,064,164	2,183,929	2,340,273	2,295,168
Water Replacement	30,096	-	-	44,400	-
Water Expansion	747,433	-	-	-	-
Administrative Cost Center	75,960	156,518	123,774	194,168	168,055
Total	**3,739,491**	**3,722,680**	**3,896,933**	**4,279,832**	**4,134,776**
% Change		**-0.45%**	**4.68%**	**9.83%**	**-3.39%**

Div	Operating Expenses by Division	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
40	Engineering Services Administration	545,233	565,167	564,188	631,963	608,491
41	Capital Projects	1,091,551	1,277,822	1,467,994	1,051,438	1,071,711
42	Development and Construction Services	2,102,707	1,879,691	1,864,751	1,430,188	1,365,725
43	Planning and Asset Management	-	-	-	1,166,243	1,088,849
	Total	**3,739,491**	**3,722,680**	**3,896,933**	**4,279,832**	**4,134,776**
	% Change		**-0.45%**	**4.68%**	**9.83%**	**-3.39%**

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	3,324,759	3,520,139	3,711,268	3,814,482	3,784,146
Materials	19,979	28,293	30,920	37,470	30,170
Contracts	337,042	172,519	149,745	347,680	314,680
Other Expenses	3,320	1,730	5,000	6,200	5,780
Capital Outlay	54,391	-	-	74,000	-
Total	**3,739,491**	**3,722,680**	**3,896,933**	**4,279,832**	**4,134,776**
% Change		**-0.45%**	**4.68%**	**9.83%**	**-3.39%**

BUDGET TRENDS, FYE 2022 AND 2023

One limited-term engineering position transfered to the Administrative Services Department to cover the need for a limited-term Finance Analyst. In addition, staffing increased by 0.6 FTE in FYE 2022 due to the addition of a shared administrative assistant position to support all department functions while focusing primarily on supporting the recycled water, water conservation, and backflow programs. The FYE 2022 budget also includes additional temporary support to assist in the conversion of the department records to the electronic content management system and to support staff during the conversion to the new enterprise resource planning system (ERP).

The increase in professional services is due to a deferred need to enhance the Facilities and Regional Wastewater Treatment Facility asset management replacement model, which is estimated to cost approximately $100,000. In addition, the department has budgeted to update the District's standard specifications and perform a higher level water loss report in FYE 2022,

Finally, the department incurred capital outlay expenditures for FYE 2019 and FYE 2022 for replacement of a pool car and two construction inspection vehicles.









Engineering planned and directed the post flood remodeling of the District Office.

TOP DEPARTMENT GOALS, FYE 2022 AND 2023

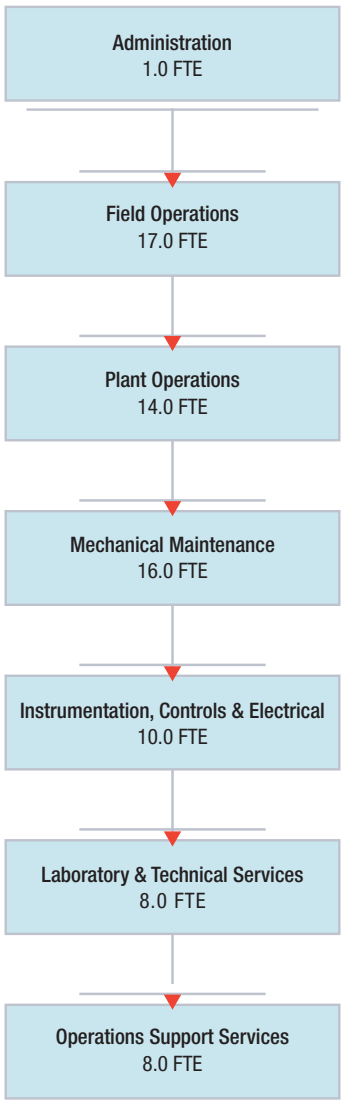
- Update the District's procedures to conform to the California Environmental Quality Act.
- Propose a District Energy Policy.
- Develop wastewater process engineering expertise within the department to assist with day-to-day operational issues and to evaluate facilities to address effluent nutrient and biosolids disposal regulations.
- Support Financial Services Division in developing water rate and fee studies.
- Support Office of the General Manager in revisions to our joint powers authority and City of Pleasanton agreements.
- Prepare Capital Improvement Program Two-Year Budget for FYE 2022 and 2023 and Ten-Year Plan for FYE 2022-2031.
- Prepare an Energy Master Plan and Electrical System Master Plan Update for Wastewater Treatment Plant.
- Evaluate biosolids dewatering options and determine a preferred option with preliminary design.
- Complete design, bid, and initiate construction of key water expansion projects, including Reservoir 20B, and Turnout 6.
- Secure necessary property rights and begin design of Reservoir 10A.
- Complete design, bid, and initiate construction of the East Dublin Trunk Sewer Rehabilitation project.
- Complete WWTP SCADA replacement project.
- Bid and construct high-priority waterline replacement projects, including the first phase of Camp Parks water main replacements and water line replacements in the Wineberry and Canterbury area.
- Design and bid the Bio-Gas Treatment System Improvements.
- Migrate historic development plan paper files to electronic content management system.
- Implement permitting software that will create a customer portal to submit plans to streamline the development review and inspection process.
- Update plan check and inspection fees to ensure direct, indirect and overhead costs are fully recovered through fees.
- Incorporate purchased capacity information by parcel into the Geographic Information System.
- Prepare the Water System Master Plan Update and Operations Plan Update.
- Collaborate with Field Operations to complete a pilot study on leak detection program for the potable water distribution system.
- Complete Business Risk Evaluation for potable water system assets to inform maintenance strategies and replacement planning and avoid unscheduled or costly system outages.
- Develop a replacement plan for WWTP process pipelines, based on material, age, process, surrounding environment, and criticality.
- Review and update the estimated asset life cycle and replacement costs in the asset replacement models for each business enterprise in conjunction with the Capital Improvement Program 2022-2023 Two-Year Budget and 2022-2031 Ten-Year Plan.

PERFORMANCE MEASURE

Engineering Department	Objective	FYE23 Target	FYE22 Target	FYE21 Estimates	FYE20 Actual
Capital Improvement Projects	1 mile of water pipeline replaced per year	100%	100%	*new	*new
	Spot repair fifty sewer pipe segments every two years	100%	0% (Yr 1 of a 2 Yr Metric)	*new	*new
Permitting & Construction Services	Review planning applications on or before due dates	80%	80%	80%	77%
	Return review comments of improvement plan submittals within 15 days for first submittal and 10 days for second submittal	90%	90%	90%	86%
Planning & Asset Management	District staff complete 75 recycled water site inspections per year	75	75	*new	*new
	Incorporate final project drawing in GIS within 1 month of project acceptance	100%	100%	*new	*new



Florence Khaw, Environmental Compliance Inspector II-Clean Water, performs a recycled water irrigation system inspection.



The Operations Department

The Operations Department is the District's largest department with over half of staff, and consists of seven divisions which provide customers with planned, uninterrupted and responsive water, recycled water, and wastewater collection and treatment services. The Department also provides the Operation and Maintenance (O&M) oversight of DERWA's recycled water facility and LAVWMA's pump station and export transport pipeline to EBDA.

DIVISION INTRODUCTORY/OVERVIEW

50 - Operations Administration

The Operations Administration Division provides operational and regulatory direction. Responsible for the overall permits obligations for water, wastewater, biosolids, recycled water, laboratory, air boards, and safety.

51 - Field Operations

The Field Operations Division (FOD) operates the District's potable water distribution, recycled water distribution, and wastewater collection systems. The division's personnel also conduct scheduled, unscheduled, and emergency maintenance and repairs of those facilities. FOD operation and maintenance activities meet or exceed the regulatory requirements and best practices recommendations of the State Water Resources Control Board (SWRCB).

52 - Plant Operations

The Plant Operations Division operates the wastewater, recycled water treatment, biosolids treatment and final effluent disposal facilities for DSRSD, LAVWMA and DERWA. Currently, the DSRSD wastewater plant has a designed treatment capacity of 17 million gallons per day (mgd) with an average dry weather flow of 10.3 mgd. The recycled water treatment facilities consists of a newly expanded 16.2 mgd continuous backwash sand filtration plant.

53 - Mechanical Maintenance

The Mechanical Maintenance Division repairs and maintains mechanical systems for the wastewater treatment plant, potable water distribution system, recycled water treatment and distribution system, and LAVWMA and DERWA facilities. The division also maintains the District's fleet of vehicles and mobile support equipment, as well as buildings and facilities at the District Office and Field Operations. The division performs routine preventative, predictive, corrective, and emergency maintenance around the clock.

54 - Instrumentation, Controls and Electrical

The instrumentation, Controls and Electrical (ICE) Division provides corrective maintenance, preventative maintenance, and executes projects in order to enhance processes. The Division supports electrical, instrumentation, and Supervisory Control and Data Acquisition (SCADA) for District, LAVWMA, and DERWA facilities. Division staff also assists with the design and construction of new facilities.

55 - Laboratory & Technical Services

The Laboratory & Technical Services Division monitors drinking water, wastewater, groundwater, and biosolids to ensure compliance with regulatory standards and optimize process controls. The Laboratory is the primary point of contact for District customers to answer questions on water quality and is certified by the State Water Board Environmental Laboratory Accreditation Program (ELAP). The Environmental Compliance Section implements the District's Pre-treatment Program, as required by the Wastewater Treatment Plant NPDES permit.

56 - Operations Support Services

The Operations Support Services (OSS) Division provides administrative support to the Operations Department and manages safety, environmental protection, regulatory compliance, and emergency response. OSS manages over 20 Safety Programs, environmental programs including compliance with air quality permits, hazardous materials and waste management, petroleum storage (aboveground and underground), and spill response for all District facilities and personnel.



Two 275kW portable standby generators for the Potable Water Pump Station Emergency Response CIP.

ACCOMPLISHMENTS, FYE 2020 AND 2021

- Sustained full operations without permit violations and while assuring a safe work environment for Operations staff during the COVID-19 crisis.
- Restructured work schedules to minimize COVID exposure risk.
- Facilitated relocation of skeleton staff and equipment back into the renovated District Office.
- Continued to aggressively reduce the frequency of water quality events, averaging one annual bacteriological detection over the last two years compared to an average of four annual detections in FY18-19 and an average of 13 annual detections in FY16-17.
- Added more advanced pump station operational controls which allow for new options, including pumping, to ideal volumetric targets or only during specific optimal time windows.
- Flushed an annual average of 80.0% of the system dead-ends.
- Received regulatory approval to operate recycled water sand filtration process at 16.5 MGD.
- Cleaned the Anaerobic Digester #3 - 1,000,000 gallon capacity.
- Cleaned the Facultative Sludge Lagoon #4.
- Began a pilot test of predictive maintenance and vibration monitoring of critical plant and field assets.
- Completed 28,000 feet of LAVWMA pipeline inspections.
- Completed BLDG A Locker room sewer line rehabilitation and locker room remodel.
- Purchased and upgraded two Environmental Compliance (EC) Trailers for septage and future FOG haulers.
- Replaced air handler system for the influent pump room.
- Built specialized decontamination response trailer for emergency cleaning.
- Started Plant Process Piping repaint to use and area specific color codes.
- Installed chilled water system on DAFT/plant air compressor system.
- Re-piped Building #S.
- Installed power to Water Reservoir 200B.
- Upgraded the electrical instrumentation for the Facultative Sludge Lagoons mixers.
- Completed electrical repairs and improvements for WWTP Building Q and the WWTP Emergency Standby 750kW generator.
- Installed improved air valve monitoring at the Aeration Basins.
- Renewed our application for the Environmental Laboratory Accreditation Program (ELAP).
- Maintained compliance for both the Environmental Compliance Program and the Laboratory throughout COVID.-19
- Developed a permitting mechanism for the plant's reception of hauled Fats, Oil and Grease (FOG) waste.
- Participated in PFAS (per and polyfluoroalkyl substances) monitoring with San Francisco Estuary Institute in the regional monitoring required program.
- Joined BACWA and UC Berkeley's Wastewater surveillance efforts with Alameda County Public Health for COVID-19 identification project.
- Facilitated the COVID-19 Task Force which included implementation of the District-wide Exposure Control Plan, management of Personal Protective Equipment (PPE) supplies and distribution, development of a Site Specific Plan, and oversight of the COVID-19 compliance contractor.
- Facilitated the development of an update of the District's 2004 Emergency Response Plan.
- Overhauled New Employee Safety Orientation.
- Successfully led BAAQMD and California Unified Program Agencies (CUPA) inspections for environmental compliance with no violation.

BUDGET SUMMARY

Operating Expenses by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	1,552,615	1,210,439	1,353,383	1,681,197	1,709,093
Local Wastewater Replacement	2,248	-	-	518,000	43,000
Regional Wastewater Enterprise	9,587,709	10,340,065	10,253,928	11,533,687	11,410,155
Regional Wastewater Replacement	(19,538)	816,135	544,000	659,894	124,000
Water Enterprise	6,111,458	7,111,488	6,724,930	7,816,085	7,715,653
Water Replacement	46,388	109,787	180,500	415,776	213,000
Water Expansion	13,357	-	-	-	-
Administrative Cost Center	857,952	641,306	978,371	829,410	820,853
Total	**18,152,190**	**20,229,220**	**20,035,113**	**23,454,049**	**22,035,754**
% Change		**11.44%**	**-0.96%**	**17.06%**	**-6.05%**

Div.	Operating Expenses by Division	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
50	Operations Administration	571,409	704,768	745,599	776,538	744,128
51	Field Operations	5,713,884	6,080,414	5,508,839	6,877,782	6,216,170
52	Plant Operations	3,973,367	4,666,459	4,666,489	4,712,194	4,680,711
53	Mechanical Maintenance	2,943,629	3,785,380	3,600,788	4,668,996	4,061,455
54	Instrumentation, Controls & Electrical	2,329,984	2,652,568	2,646,531	2,849,603	2,879,218
55	Laboratory and Technical Services	1,513,872	1,572,164	1,848,103	1,869,217	1,743,889
56	Operations Support Services	1,106,045	767,466	1,018,763	1,699,718	1,710,184
	Total	**18,152,190**	**20,229,220**	**20,035,113**	**23,454,049**	**22,035,754**
	% Change		**11.44%**	**-0.96%**	**17.06%**	**-6.05%**

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	11,434,648	11,464,650	12,216,101	13,445,345	13,629,364
Materials	4,151,762	4,968,964	4,283,213	4,996,502	5,010,822
Contracts	2,278,089	2,576,555	2,549,896	3,092,999	2,683,035
Other Expenses	258,593	293,129	261,403	325,533	332,533
Capital Outlay	29,098	925,922	724,500	1,593,670	380,000
Total	**18,152,190**	**20,229,220**	**20,035,113**	**23,454,049**	**22,035,754**
% Change		**11.44%**	**-0.96%**	**17.06%**	**-6.05%**

BUDGET TRENDS, FYE 2022 AND 2023

The department's budget continues to reflect the increase in service area size and growing State and Federal regulatory requirements. To accommodate this additional workload, the proposed budget requests three positions which includes a management analyst, wastewater operator in training and water/wastewater operator.

Increases in total pumping demand , water and wastewater quality requirements, and the reopening of our District Office has impacted PG&E costs over the next two years. As a result, the materials and supplies budget has increased approximately $350,000. The District will be monitoring the new PG&E peak demand charges and their effect on our power costs. In addition, catch up on a backlog of electrical projects has increased this budget category by an additional $150,000 for each of the next two years.

The contracts and other expense categories increased in FYE 2022 by approximately $500,000 in total due to the District's Emergency Response Initiative ($300,000) and increased compliance for new Water Board standards and purchasing updated equipment to increase testing capabilities ($200,000). The budget continues our commitment to a five-year water subsurface repair program, root evasion maintenance, reservoir cleanings, and other key proactive maintenance efforts. In addition, a new vibration monitoring system is being installed to proactively identify pump failures.

Finally, the capital outlay budget fluctuates widely from year to year based on District needs for replacement and new equipment. The increase over prior years for FYE 2022 include a tractor for bio-solids harvesting ($303,000), Laboratory improvements ($65,000), and forklift and valve truck ($350,000).

PERFORMANCE MEASURES

Operations Department	Objective	FYE23 Target	FYE22 Target	FYE21 Estimates	FYE20 Actual
Water Distribution	Bacteriological Positive Samples	0	0	1	1
Collections System	Sanitary Sewer Overflows	0	0	1	4
BAAQMD/Facility Compliance	Program Compliance/ Inspections	100%	100%	100%	100%
WWTP Self-Generation Power	Power 70% of annual electrical demand	70%	70%	70%	69%
Diverted WWTP Effluent from LAVWMA	Annual diversion of 40%	40%	40%	40%	38%

TOP DEPARTMENT GOALS, FYE 2022 AND 2023

- Review and amend our key operational agreements for DERWA and LAVWMA.
- Monitor evolving regulatory requirements for constituents of emerging concerns.
- Incorporate innovative forecasting technology for operational process/ water quality data.
- Perform annual hydro cleaning of 150,000 feet of the wastewater collection system using frequencies and priorities established by the asset management program.
- Flush approximately 700 dead-end mains in the water distribution system on an annual basis.
- Exercise 25.0% of system valves in the water distribution system annually.
- Record 50,000 feet of closed circuit television (CCTV) to view the wastewater collection system using frequencies and priorities established by the asset management program.
- Perform preventative maintenance on at least 20.0% of the 3500 fire hydrants in the system.
- Update the Water System Distribution Operations and Maintenance Plan in FYE 2023.
- Harvest biosolids from facultative lagoon #6.
- Update electronic operations and maintenance manual.
- Obtain regulatory approval to chlorinate wastewater effluent after DERWA during peak recycled water irrigation season in order to save on chemical and power costs.
- Achieve preventive maintenance work orders to at least 60.0% for the fiscal year.
- Create an inventory of emergency assets, equipment, and materials in stock.
- Eliminate all paper preventive maintenance work orders using desk top or mobile device for assignment and completion.
- Complete vendor choice on vibration equipment and installation on critical assets and start machine predictive health monitoring.
- Cogeneration equipment and compliance upgrades.
- Complete the Wastewater Treatment and Recycled Water Treatment SCADA system upgrade.
- Complete WWTP Electrical Master Plan.
- Support Electronic Records Management efforts by capturing record drawing red-lines and O&M shop drawings into OnBase.
- Create SOPs, Worksheets, Work Instructions, and Document Control that is compliant with the 2016 TNI Standards the accreditation body CA Environmental Laboratory Accreditation Program (ELAP) has adopted.
- Implement the 2022 Third Party Assessment and the 2016 National Environmental Laboratories Accreditation Conference (TNI) Standards before the end of 2023.
- Improve reporting efficiency and accuracy by working with IT to pull data from multiple systems into a report for compliance and monitoring.
- Review and improve the pre-treatment program by updating the Pre-Treatment Program's Administrative Manual, review/ make updates to permits, enforcement and sampling.
- Ensure compliance with CUPA program reporting and implementation requirements (fire safety, hazardous materials, hazardous waste, aboveground storage tank, underground storage tank).
- Ensure compliance with BAAQMD and CARB program reporting and implementation requirements.
- Update the District's Environmental Heath and Safety Program and foster a District-wide safety culture.
- Update the Emergency Response Plan and the Emergency Operations Center (EOC).

Non-Departmental

Non-Departmental consists of account groups used for costs that are not specifically related to any one department. Expenses in this group are overseen by the Administrative Services Department. Expenses include personnel costs (retiree medical and dental, unemployment payments, medical insurance administration fees, pension/Other Post Employee Benefits (OPEB) Unfunded Actuarial Liability (UAL) funding), materials (meters for new accounts, wholesale water purchases from Zone 7, replacement of smaller computer equipment), contract services (liability insurance, legal services, general maintenance contracts, bond administration) and other costs (payments to joint powers authorities, debt payments and bond issuance costs).

BUDGET TRENDS, FYE 2022 AND 2023

This budget is basically a status quo budget. Variations from FYE 2020 include increases of 30.0-35.0% for property insurance and 22.0% for general liability insurance (approximately $240,000 in FYE 2022 and another $90,000 in FYE 2023), a policy decision to not accelerate payment of the District's Unfunded Actuarial Liability (UAL) starting in FYE 2022 until economic recovery from COVID-19 ($-300,000) is reflected in our revenue base, additional credit card fee absorption to encourage our customers to auto pay their bills ($50,000), and general inflation. Variations in the other expense category are generally due to contributions to our Joint Powers Authorities, including capital projects which can vary by year, and the fluctuations in the Dougherty Valley State Water Project pass-through charges.

Debt expenses are budgeted for principal and interest payments to adjust working capital for forecasting needs. Upon actual payment however, expenditures reflect interest only while actual principal paydowns are deducted from the outstanding debt liability accounts.

BUDGET SUMMARY

Operating Expenses by Fund	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Local Wastewater Enterprise	(13,370)	174,111	260,178	125,017	155,976
Local Wastewater Rate Stabilization	-	1,411	4,100	9,000	9,000
Local Wastewater Replacement	12,839	-	-	-	-
Local Wastewater Expansion	(4,545)	33,020	-	-	-
Regional Wastewater Enterprise	3,623,545	4,380,613	4,527,995	4,728,650	4,856,820
Regional Wastewater Rate Stabilization	-	1,411	4,100	9,000	9,000
Regional Wastewater Replacement	47,916	279,600	279,600	279,600	279,600
Regional Wastewater Expansion	7,999,178	2,897,298	4,313,654	4,310,354	4,311,229
Water Enterprise	15,792,961	18,837,525	18,905,629	19,187,568	20,464,844
Water Rate Stabilization	46,213	57,884	88,800	133,300	140,625
Water Replacement	(10,163)	9,249	178,120	286,120	173,880
Water Expansion	4,781,881	5,477,033	3,755,110	2,719,295	2,699,945
Administrative Cost Center	320,725	1,740,866	570,954	905,221	996,170
Other Post-Employment Benefits	859,824	981,328	1,064,867	931,328	945,553
DV Standby Assessment District	1,804,794	1,415,988	2,052,000	1,799,291	2,004,481
Total	**35,261,799**	**36,287,335**	**36,005,106**	**35,423,743**	**37,047,123**
% Change		**2.91%**	**-0.78%**	**-1.61%**	**4.58%**

Div.	Operating Expenses by Division	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
70	Non-Departmental	35,261,799	36,287,335	36,005,106	35,423,743	37,047,123
	Total	**35,261,799**	**36,287,335**	**36,005,106**	**35,423,743**	**37,047,123**
	% Change		**2.91%**	**-0.78%**	**-1.61%**	**4.58%**

Operating Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Wages and Benefits	865,785	2,201,761.53	2,639,365	1,992,302	2,270,418
Materials	14,213,336	15,590,060.88	16,271,425	16,548,869	17,716,103
Contracts	2,049,357	4,306,585.82	2,761,954	2,891,312	3,192,433
Other Expenses	18,133,321	14,188,927.10	14,332,363	13,991,260	13,868,168
Total	**35,261,799**	**36,287,335.28**	**36,005,106**	**35,423,743**	**37,047,123**
% Change		**2.91%**	**-0.78%**	**-1.61%**	**4.58%**

Other Expenses by Category	FYE19 Actual	FYE20 Actual	FYE21 Estimated	FYE22 Budget	FYE23 Budget
Contribution to JPA - O&M	4,243,810	4,530,621	4,244,465	4,781,298	4,781,298
Contribution to JPA - Capital Expenses	5,365,789	1,107,800	1,509,560	581,820	453,480
Contribution to JPA - Debt Expenses	6,586,531	6,587,794	6,600,825	6,596,405	6,597,578
Debt Expenses	1,878,925	1,875,570	1,880,513	1,880,438	1,877,188
Miscellaneous Expenses	58,266	87,142	97,000	151,300	158,625
Total	**18,133,321**	**14,188,927**	**14,332,363**	**13,991,260**	**13,868,168**
% Change		**-21.75%**	**1.01%**	**-2.38%**	**-0.88%**



Facultative sludge lagoons

Appendix

DISTRICT POLICIES

Financial Policies

District management is responsible for establishing and maintaining an internal control structure that protects the assets of the District from loss, theft, or misuse. Recognizing the critical importance of financial planning and controls, the District has developed comprehensive financial policies based on industry best practices. The policies guide long-term planning and ensure that financial decisions are analyzed and applied in a consistent manner.

Policies are not permanent documents but may be modified or rescinded in whole or in part at any time by the Board. District policies are reviewed on a regular basis and are adopted by resolution at a duly noticed meeting of the Board of Directors. The District has a number of financial policies, some of which are summarized below. The following policies can be found in their entirety on our website at www.dsrsd.com/about-us/district-policies

Auditor Selection and Services

Establishes guidelines to obtain auditing services from a highly-qualified firm, and to ensure that there are no financial incentives that would jeopardize that firm from maintaining their independence. Policy states that the auditor may not perform other consulting services for the District and requires a full-scale competitive bidding process to be conducted at least every five years.

DSRSD prepares and submits its Comprehensive Annual Financial Report (CAFR) to the Governmental Finance Officers Association (GFOA) for inclusion in its awards program. The District has received the association's Certificate of Achievement for Excellence in Financial Reporting each time it has submitted a report. The District's current and past CAFRs available online at www.dsrsd.com/about-us/library/financial-information

Budgeting Accountability

Provides Operations and Capital Improvement Program (CIP) budget controls. The General Manager is accountable to the Board of Directors for meeting the budgetary objectives set by the Board. The Board approves the Operating Budget at the total fund level, ensuring that it maintains control of rates and fees. In addition, the Board approves the maximum number of full time equivalent (FTE) staff positions as well as the number of those FTEs that are limited-term positions.

In adopting the CIP budget, the Board authorizes new projects and programs, and approves total project and program budgets. Expenses are controlled at the project total level and project managers are responsible for their assigned projects. The General Manager is responsible for ensuring that the individual project appropriations and total fund appropriations are not exceeded, except as otherwise permitted by other policies.

DSRSD prepares and submits its Operating Budget to the California Society of Municipal Finance Officers (CSMFO) for inclusion in its awards program. The District has received the association's Operating Budget Excellence Award each time it has submitted a report. The District's current and past Operating and CIP budgets are available online at www.dsrsd.com/Home/ShowDocument?id=298

Capital Financing and Debt Management

Establishes parameters for issuing and managing debt. The District will only use debt financing to purchase or build capital assets that cannot be acquired from either current revenues or replacement reserves and to fund capital improvements and additions; it will not be used for operating and maintenance costs. Lease/Purchase agreements for the purchase of vehicles, equipment and other capital assets shall generally be avoided, particularly if smaller quantities of the asset can be purchased on a pay-as-you-go basis. Visit www.dsrsd.com/Home/ShowDocument?id=300

Consolidated Water Enterprise Fund

Directs potable water and recycled water to be managed as consolidated funds for operations, replacement, and expansion. In support of its mission, the District is committed to planning, designing, constructing, operating and maintaining the District's water system so that it meets all legal and regulatory requirements and contractual obligations. In order to do so, it is imperative that sufficient revenue be collected and appropriate reserves be maintained for both the potable and recycled water systems (collectively the "Water System"). It is equally important that an appropriate financial structure and reporting system be maintained to account for the cost of providing potable and recycled water service (collectively, "Water Service") and the investments made by the District into the Water System. Visit www.dsrsd.com/Home/ShowDocument?id=302

Financial Reserves

Provides guidance for the prudent accumulation and management of designated reserves. Designated reserves are earmarked by the Board of Directors for purposes such as funding new capital facilities, construction, repair, replacement or refurbishment of existing facilities, rate stabilization, emergency and operating reserves. These funds can be utilized at the discretion of the District. The Board can change fund designations at any time. Visit www.dsrsd.com/Home/ShowDocument?id=304

Investment

Directs public funds to be invested in a manner which will provide the highest investment return with the maximum security while meeting the daily cash flow demands of the entity and conforming to all state and local statutes governing the District's investment policy. Visit www.dsrsd.com/Home/ShowDocument?id=306

Project Cost Allocation

Establishes basis for determining how the cost of projects should be allocated between funds. Project costs are to be allocated in proportion to the benefits that accrue to existing and future customers of each enterprise of the District. In carrying out this policy and depending on the nature of the project, allocation of a project cost may be to more than one enterprise and/or to more than one fund within the enterprise. Visit www.dsrsd.com/Home/ShowDocument?id=308

Rate Policies and Guidelines

Provides guidance and consistency in decision-making for developing and adopting rates to establish that rates are developed using a generally-accepted methodology, provide financial stability, achieve rate stability, ensure public well-being and safety, and with consideration of rate impacts. Visit www.dsrsd.com/Home/ShowDocument?id=310

Debt Disclosure

Ensures that the District is in compliance with all applicable federal and state securities laws related to debt issuances. The policy also provides internal control procedures to assure disbursements are issued with appropriate documentation and approval. Additionally, the policy provides guidance on reviewing and approving, Official Statements, filing Continuing Disclosures and management of financial information released to the public. Visit www.dsrsd.com/home/showpublisheddocument/2248/637054461350370000

All current District policies are available online at www.dsrsd.com/about-us/district-policies

GLOSSARY

ACWA	Association of California Water Agencies
CAFR	Comprehensive Annual Financial Report
CalPERS	California Public Employees' Retirement System
CIP	Capital Improvement Projects
CASA	California Association of Sanitation Agencies
CERBT	California Employers' Retiree Benefit Trust
CMMS	Computerized Maintenance Management System
COLA	Cost of Living Adjustment
CPI	Consumer Price Index
CSDA	California Special Districts Association
DERWA	DSRSD-EBMUD Recycled Water Authority
DSRSD	Dublin San Ramon Services District
DVSAD	Dougherty Valley Standby Assessment District
EBMUD	East Bay Municipal Utility District
FSL	Facultative Sludge Lagoon
FTE	Full-Time Equivalent
FYE	Fiscal Year Ending
GIS	Geographic Information System
JPA	Joint Powers Authority
LAVWMA	Livermore-Amador Valley Water Management Agency
MGD	Million Gallons per Day
MOU	Memorandum of Understanding

OPEB	Other Post-Retirement Employment Benefits
PMIA	Pooled Money Investment Account
RPM	Replacement Planning Model
SCADA	Supervisory Control and Data Acquisition
SWP	State Water Project
TIC	Temporary Infrastructure Charge
UWMP	Urban Water Master Plan
WWTP	Wastewater Treatment Plant

CONSOLIDATED DEBT SCHEDULE

	LAVWMA (1) 2011 Sewer Revenue Refunding Bonds (DSRSD & City of Pleasanton Portion)			DERWA State Loan (DSRSD Portion)			2017 Water Revenue Refunding Bonds		
Fiscal Year	**Principal Due**	**Interest Due**	**Total Debt Service**	**Principal Due**	**Interest Due**	**Total Debt Service**	**Principal Due**	**Interest Due**	**Total Debt Service**
2021-22	$3,565,239	$2,208,409	$5,773,648	$758,881	$86,913	$845,794	$455,000	$1,425,438	$1,880,438
2022-23	$3,749,274	$2,025,546	$5,774,820	$777,853	$67,941	$845,794	$475,000	$1,402,188	$1,877,188
2023-24	$3,940,527	$1,862,855	$5,803,382	$797,300	$48,495	$845,794	$500,000	$1,377,813	$1,877,813
2024-25	$4,084,869	$1,691,774	$5,776,643	$817,232	$28,562	$845,794	$525,000	$1,352,188	$1,877,188
2025-26	$4,294,164	$1,482,298	$5,776,462	$325,253	$8,131	$333,384	$550,000	$1,325,313	$1,875,313
2026-27	$4,510,676	$1,284,731	$5,795,407				$1,020,000	$1,286,063	$2,306,063
2027-28	$4,698,321	$1,077,059	$5,775,380				$1,360,000	$1,226,563	$2,586,563
2028-29	$4,940,093	$836,099	$5,776,192				$1,420,000	$1,157,063	$2,577,063
2029-30	$5,192,691	$602,252	$5,794,943				$1,495,000	$1,084,188	$2,579,188
2030-31	$5,420,029	$373,344	$5,793,373				$1,570,000	$1,007,563	$2,577,563
2031-32	$5,661,801	$127,391	$5,789,192				$1,645,000	$927,188	$2,572,188
2032-33							$1,725,000	$842,938	$2,567,938
2033-34							$1,815,000	$754,438	$2,569,438
2034-35							$1,905,000	$661,438	$2,566,438
2035-36							$1,995,000	$563,938	$2,558,938
2036-37							$2,100,000	$461,563	$2,561,563
2037-38							$2,200,000	$354,063	$2,554,063
2038-39							$2,290,000	$263,281	$2,553,281
2039-40							$2,355,000	$190,703	$2,545,703
2040-41							$2,425,000	$116,016	$2,541,016
2041-42							$2,500,000	$39,063	$2,539,063
Total	**$50,057,682**	**$13,571,759**	**$63,629,441**	**$3,476,519**	**$240,042**	**$3,716,561**	**$32,325,000**	**$17,819,000**	**$50,144,000**

Footnote:
DSRSD budgets for both the District's and Pleasanton's share of debt because the District collects the regional sewer service charge and the capacity fee revenues.

NOTES

FYE 2022 OPERATING BUDGET	Local Watewater Enterprise 200	Local Wastewater RSF 205	Local Wastewater Replacement 210	Local Wastewater Expansion 220	Regional Wastewater Enterprise 300	Regional Wastewater RSF 305	Regional Wastewater Replacement 310	Regional Wastewater Expansion 320	Water Enterprise 600	Water RSF 605	Water Replacement 610	Water Expansion 620	Administrative Cost Center 900	OPEB 965	DV Standby District 995	Total
Beginning Working Capital (ESTIMATED)	1,727,693	743,787	4,117,198	7,585,333	9,726,066	11,950,251	32,272,598	42,061,722	11,910,810	15,978,910	26,581,086	41,636,229	-	-	816,458	207,108,140
Revenues:																
Zone 7 Revenue (600.1.150.10)	-	-	-	-	-	-	-	-	*16,294,603*	-	-	-	-	-	-	16,294,603
DSRSD Fixed Charge (600.1.150.10)	-	-	-	-	-	-	-	-	*7,562,632*	-	-	-	-	-	-	7,562,632
DSRSD Potable Revenue (600.1.150.10)	-	-	-	-	-	-	-	-	*5,543,709*	-	-	-	-	-	-	5,543,709
DSRSD Recycled Revenue (600.1.150.30)	-	-	-	-	-	-	-	-	*5,602,658*	-	-	-	-	-	-	5,602,658
Power Charge Revenue (600.1.150.35)	-	-	-	-	-	-	-	-	*829,342*	-	-	-	-	-	-	829,342
Dublin Sewer Service Charge (1.110.10)	*3,446,176*	-	-	-	*9,777,629*	-	-	-	-	-	-	-	-	-	-	13,223,804
San Ramon Sewer Service Charge (1.110.30)	*794,032*	-	-	-	*2,077,578*	-	-	-	-	-	-	-	-	-	-	2,871,610
Pleasanton Sewer Serice Charge (1.110.15)	-	-	-	-	*10,899,061*	-	-	-	-	-	-	-	-	-	-	10,899,061
Miscellaneous Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pretreatment/Lab Tests- DSRSD (1.110.40)	-	-	-	-	*71,994*	-	-	-	-	-	-	-	-	-	-	71,994
Pretreatment/Lab Tests- Pleasanton (1.110.45)	-	-	-	-	*80,391*	-	-	-	-	-	-	-	-	-	-	80,391
Total Service Charges	4,240,208	-	-	-	22,906,653	-	-	-	35,832,945	-	-	-	-	-	-	62,979,805
Capacity Reserve Fees	-	-	1,075,668	32,811	-	-	2,000,231	5,390,728	-	-	2,238,643	4,927,288	-	-	-	15,665,369
Other Revenues	335,001	-	-	-	1,727,900	-	-	-	1,466,475	885,390	-	-	1,490,335	-	1,783,759	7,688,860
Interest	15,111	7,438	41,172	75,853	101,056	108,118	322,726	420,617	120,503	159,789	265,811	416,362	-	-	8,165	2,062,721
Total Revenues	4,590,319	7,438	1,116,840	108,664	24,735,609	108,118	2,322,957	5,811,345	37,419,923	1,045,179	2,504,454	5,343,650	1,490,335.0	-	1,791,924	88,396,756
Transfers In:																
Replacement Allocations	-	-	-	-	-	-	1,800,000	-	-	-	6,169,688	-	-	-	-	7,969,688
Transfers In-Cross Connections	-	-	-	-	-	-	-	-	-	-	110,400	-	-	-	-	110,400
Transfers In-Other	-	-	-	895,833	-	-	-	-	-	-	-	-	-	931,328	-	1,827,161
5th Supplement Agreement (Regional to Water)	-	-	-	-	-	-	-	-	660,000	-	-	-	-	-	-	660,000
Total Transfers In	-	-	-	895,833	-	-	1,800,000	-	660,000	-	6,280,088	-	-	931,328	-	10,567,249
Total Revenue	4,590,319	7,438	1,116,840	1,004,497	24,735,609	108,118	4,122,957	5,811,345	38,079,923	1,045,179	8,784,542	5,343,650	1,490,335	931,328	1,791,924	98,964,005
Operating Expenses:																
Operating																
Wages and Benefits	2,041,072	-	-	-	8,373,636	-	-	-	7,569,050	-	-	-	5,634,661	-	-	23,618,419
Unfunded Actuarial Liability (Pension/OPEB)	123,317	-	-	-	485,447	-	-	-	442,310	-	-	-	1,600	(215,416)	-	837,258
Staff Time Charged to Projects/JPAs	(44,951)	-	-	-	(1,033,758)	-	-	-	(480,395)	-	-	-	(15,869)	-	-	(1,574,973)
Other Personnel Costs	92,852	-	-	-	813,843	-	-	-	660,118	-	-	-	361,943	1,146,744	-	3,075,500
Chemicals, Gas & Electric	6,600	-	-	-	2,001,042	-	-	-	1,125,500	-	-	-	66,000	-	-	3,199,142
Other Materials	83,928	-	-	-	1,140,983	-	-	-	902,539	-	-	-	239,960	-	-	2,367,410
Water Purchase	-	-	-	-	-	-	-	-	16,071,869	-	-	-	-	-	-	16,071,869
Contracts	369,871	-	-	-	1,567,791	-	-	-	2,040,707	-	-	-	2,203,610	-	1,799,291	7,981,270
5th Supplement Agreement (Regional to Pleasanton)	-	-	-	-	123,600	-	-	-	-	-	-	-	-	-	-	123,600
Other	27,120	9,000	-	-	243,894	9,000	-	-	170,954	133,300	-	-	87,145	-	-	680,413
Contribution to JPA	-	-	-	-	2,437,609	-	279,600	-	2,343,689	-	286,120	16,100		-	-	5,363,118
Debt Service	-	-	-	-	1,463,294	-	-	4,310,354	-	-	-	2,703,195	-	-	-	8,476,842
Capital Outlay	-	-	550,900	-	-	-	674,094	-	-	-	477,676	-	-	-	-	1,702,670
Allocated Costs	804,536	-	-	-	3,300,663	-	-	-	2,983,517	-	-	-	(7,088,715)	-	-	-
Total Operating Expenses	3,504,344	9,000	550,900	-	20,918,045	9,000	953,694	4,310,354	33,829,857	133,300	763,796	2,719,295	1,490,335	931,328	1,799,291	71,922,539
Capital Projects - Proposed Fund Limits	-	-	1,654,986		-	-	9,902,013	4,934,286	-	-	11,309,711	8,700,706	-	-	-	36,501,702
Transfers Out:																
Replacement Allocations	-	-	-	-	1,800,000	-	-	-	6,169,688	-	-	-	-	-	-	7,969,688
Transfers Out - Cross Connections	-	-	-	-	-	-	-	-	110,400	-	-	-	-	-	-	110,400
Transfers Out - Other	109,267	-	895,833	-	430,125	-	-	-	391,936	-	-	-	-	-	-	1,827,161
5th Supplement Agreement (Regional to Water)	-	-	-	-	660,000	-	-	-	-	-	-	-	-	-	-	660,000
Total Transfers Out	109,267	-	895,833	-	2,890,125	-	-	-	6,672,024	-	-	-	-	-	-	10,567,249
Total Expenses	3,613,611	9,000	3,101,719	-	23,808,170	9,000	10,855,707	9,244,640	40,501,881	133,300	12,073,507	11,420,001	1,490,335.0	931,328	1,799,291	118,991,490
Net increase (decrease) pre RSF transfers	976,708	(1,562)	(1,984,879)	1,004,497	927,439	99,118	(6,732,750)	(3,433,295)	(2,421,958)	911,879	(3,288,965)	(6,076,350)	-	-	(7,367)	(20,027,485)
Ending Working Capital pre RSF transfers	2,704,402	742,225	2,132,319	8,589,830	10,653,505	12,049,369	25,539,847	38,628,427	9,488,852	16,890,789	23,292,121	35,559,879	-	-	809,091	187,080,654
RSF Transfer In (Out)	(952,230)	952,230	-	-	(194,483)	194,483	-	-	1,787,767	(1,787,767)	-	-	-	-	-	-
Net increase (decrease) post RSF	24,479	950,668	(1,984,879)	1,004,497	732,956	293,601	(6,732,750)	(3,433,295)	(634,191)	(875,888)	(3,288,965)	(6,076,350)	-	-	(7,367)	(20,027,485)
Ending Working Capital June 30, 2022	$ 1,752,172	$ 1,694,455	$ 2,132,319	$ 8,589,830	$ 10,459,022	$ 12,243,851	$ 25,539,847	$ 38,628,427	$ 11,276,619	$ 15,103,022	$ 23,292,121	$ 35,559,879	$ -	$ -	$ 809,091	$ 187,080,654

FYE 2023 OPERATING BUDGET	Local Watewater Enterprise 200	Local Wastewater RSF 205	Local Wastewater Replacement 210	Local Wastewater Expansion 220	Regional Wastewater Enterprise 300	Regional Wastewater RSF 305	Regional Wastewater Replacement 310	Regional Wastewater Expansion 320	Water Enterprise 600	Water RSF 605	Water Replacement 610	Water Expansion 620	Administrative Cost Center 900	OPEB 965	DV Standby District 995	Total
Beginning Working Capital (ESTIMATED)	1,752,172	1,694,455	2,132,319	8,589,830	10,459,022	12,243,851	25,539,847	38,628,427	11,276,619	15,103,022	23,292,121	35,559,879	-	-	809,091	187,080,654
																-
Revenues:																
Zone 7 Revenue (600.1.150.10)	-	-	-	-	-	-	-	-	*17,383,582*	-	-	-	-	-	-	17,383,582
DSRSD Fixed Charge (600.1.150.10)	-	-	-	-	-	-	-	-	*7,929,806*	-	-	-	-	-	-	7,929,806
DSRSD Potable Revenue (600.1.150.10)	-	-	-	-	-	-	-	-	*5,831,497*	-	-	-	-	-	-	5,831,497
DSRSD Recycled Revenue (600.1.150.30)	-	-	-	-	-	-	-	-	*5,772,733*	-	-	-	-	-	-	5,772,733
Power Charge Revenue (600.1.150.35)	-	-	-	-	-	-	-	-	*877,161*	-	-	-	-	-	-	877,161
Dublin Sewer Service Charge (1.110.10)	*3,675,993*	-	-	-	*10,528,862*	-	-	-	-	-	-	-	-	-	-	14,204,855
San Ramon Sewer Service Charge (1.110.30)	*817,876*	-	-	-	*2,139,883*	-	-	-	-	-	-	-	-	-	-	2,957,759
Pleasanton Sewer Serice Charge (1.110.15)	-	-	-	-	*11,243,642*	-	-	-	-	-	-	-	-	-	-	11,243,642
Miscellaneous Revenues	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pretreatment/Lab Tests- DSRSD (1.110.40)	-	-	-	-	*74,081*	-	-	-	-	-	-	-	-	-	-	74,081
Pretreatment/Lab Tests- Pleasanton (1.110.45)	-	-	-	-	*82,721*	-	-	-	-	-	-	-	-	-	-	82,721
Total Service Charges	**4,493,869**	**-**	**-**	**-**	**24,069,190**	**-**	**-**	**-**	**37,794,779**	**-**	**-**	**-**	**-**	**-**	**-**	**66,357,837**
Capacity Reserve Fees	**-**	**-**	**1,422,509**	**43,391**	**-**	**-**	**3,302,790**	**8,746,658**	**-**	**-**	**3,346,116**	**7,274,021**	**-**	**-**	**-**	**24,135,485**
Other Revenues	**81,300**	**-**	**-**	**-**	**1,156,873**	**-**	**-**	**-**	**807,190**	**911,622**	**-**	**-**	**1,515,605**	**-**	**1,999,463**	**6,472,052**
Interest	**17,522**	**13,304**	**21,323**	**85,898**	**103,289**	**112,704**	**255,398**	**386,284**	**112,551**	**147,817**	**233,547**	**355,460**	**-**	**-**	**8,091**	**1,853,188**
Total Revenues	**4,592,691**	**13,304**	**1,443,832**	**129,289**	**25,329,352**	**112,704**	**3,558,188**	**9,132,942**	**38,714,519**	**1,059,439**	**3,579,663**	**7,629,481**	**1,515,605**	**-**	**2,007,554**	**98,818,562**
Transfers In:																
Replacement Allocations	**-**	**-**	**800,000**	**-**	**-**	**-**	**2,100,000**	**-**	**-**	**-**	**6,280,000**	**-**	**-**	**-**	**-**	**9,180,000**
Transfers In-Other	**-**	**-**	**-**	**875,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**945,553**	**-**	**1,820,553**
5th Supplement Agreement (Regional to Water)	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**680,000**	**-**	**-**	**-**	**-**	**-**	**-**	**680,000**
Total Transfers In	**-**	**-**	**800,000**	**875,000**	**-**	**-**	**2,100,000**	**-**	**680,000**	**-**	**6,280,000**	**-**	**-**	**945,553**	**-**	**11,680,553**
Total Revenue	**4,592,691**	**13,304**	**2,243,832**	**1,004,289**	**25,329,352**	**112,704**	**5,658,188**	**9,132,942**	**39,394,519**	**1,059,439**	**9,859,663**	**7,629,481**	**1,515,605**	**945,553**	**2,007,554**	**110,499,115**
Operating Expenses:																
Wages and Benefits	**2,078,140**	**-**	**-**	**-**	**8,530,348**	**-**	**-**	**-**	**7,711,211**	**-**	**-**	**-**	**5,718,599**			**24,038,298**
Unfunded Actuarial Liability (Pension/OPEB)	**154,276**	**-**	**-**	**-**	**607,320**	**-**	**-**	**-**	**553,352**	**-**	**-**	**-**	**1,618**	**(289,427)**	**-**	**1,027,138**
Staff Time Charged to Projects/JPAs	**(45,906)**	**-**	**-**	**-**	**(1,049,400)**	**-**	**-**	**-**	**(489,716)**	**-**	**-**	**-**	**(16,729)**			**(1,601,750)**
Other Personnel Costs	**73,481**	**-**	**-**	**-**	**740,045**	**-**	**-**	**-**	**618,088**	**-**	**-**	**-**	**331,686**	**1,234,980**	**-**	**2,998,280**
Chemicals, Gas & Electric	**6,800**	**-**	**-**	**-**	**2,001,242**	**-**	**-**	**-**	**1,127,100**	**-**	**-**	**-**	**67,000**	**-**	**-**	**3,202,142**
Other Materials	**81,234**	**-**	**-**	**-**	**1,134,623**	**-**	**-**	**-**	**913,936**	**-**	**-**	**-**	**233,780**	**-**	**-**	**2,363,573**
Water Purchase	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**17,238,103**	**-**	**-**	**-**	**-**	**-**	**-**	**17,238,103**
Contracts	**378,938**	**-**	**-**	**-**	**1,436,274**	**-**	**-**	**-**	**1,703,749**	**-**	**-**	**-**	**2,310,486**	**-**	**2,004,481**	**7,833,928**
5th Supplement Agreement (Regional to Pleasanton)	**-**	**-**	**-**	**-**	**123,600**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**123,600**
Other	**27,120**	**9,000**	**-**	**-**	**250,894**	**9,000**	**-**	**-**	**170,534**	**140,625**	**-**	**-**	**87,145**	**-**	**-**	**694,318**
Contribution to JPA	**-**	**-**	**-**	**-**	**2,437,609**	**-**	**279,600**	**-**	**2,343,689**	**-**	**173,880**	**-**	**-**	**-**	**-**	**5,234,778**
Debt Service	**-**	**-**	**-**	**-**	**1,463,591**	**-**	**-**	**4,311,229**	**-**	**-**	**-**	**2,699,945**	**-**	**-**	**-**	**8,474,765**
Capital Outlay	**-**	**-**	**43,000**	**-**	**-**	**-**	**124,000**	**-**	**-**	**-**	**213,000**	**-**	**-**	**-**	**-**	**380,000**
Allocated Costs	**818,789**	**-**	**-**	**-**	**3,360,965**	**-**	**-**	**-**	**3,038,224**	**-**	**-**	**-**	**(7,217,979)**	**-**	**-**	**-**
Total Operating Expenses	**3,572,873**	**9,000**	**43,000**	**-**	**21,037,112**	**9,000**	**403,600**	**4,311,229**	**34,928,271**	**140,625**	**386,880**	**2,699,945**	**1,515,605**	**945,553**	**2,004,481**	**72,007,173**
Capital Projects - Proposed Fund Limits	**-**	**-**	**1,325,400**	**100,000**	**-**	**-**	**6,557,063**	**1,165,640**	**-**	**-**	**13,223,130**	**14,048,725**	**-**	**-**	**-**	**36,419,958**
Transfers Out:																
Replacement Allocations	**800,000**	**-**	**-**	**-**	**2,100,000**	**-**	**-**	**-**	**6,280,000**	**-**	**-**	**-**	**-**	**-**	**-**	**9,180,000**
Transfers Out - Other	**110,936**	**-**	**875,000**	**-**	**436,694**	**-**	**-**	**-**	**397,922**	**-**	**-**	**-**	**-**	**-**	**-**	**1,820,553**
5th Supplement Agreement (Regional to Water)	**-**	**-**	**-**	**-**	**680,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**680,000**
Total Transfers Out	**910,936**	**-**	**875,000**	**-**	**3,216,694**	**-**	**-**	**-**	**6,677,922**	**-**	**-**	**-**	**-**	**-**	**-**	**11,680,553**
Total Expenses	**4,483,809**	**9,000**	**2,243,400**	**100,000**	**24,253,807**	**9,000**	**6,960,663**	**5,476,869**	**41,606,193**	**140,625**	**13,610,010**	**16,748,670**	**1,515,605**	**945,553**	**2,004,481**	**120,107,684**
Net increase (decrease) pre RSF transfers	**108,882**	**4,304**	**432**	**904,289**	**1,075,545**	**103,704**	**(1,302,475)**	**3,656,072**	**(2,211,674)**	**918,814**	**(3,750,347)**	**(9,119,189)**	**-**	**-**	**3,073**	**(9,608,569)**
Ending Working Capital pre RSF transfers	**1,861,054**	**1,698,759**	**2,132,751**	**9,494,119**	**11,534,568**	**12,347,555**	**24,237,373**	**42,284,499**	**9,064,945**	**16,021,836**	**19,541,774**	**26,440,690**	**-**	**-**	**812,164**	**177,472,085**
RSF Transfer In (Out)	**(74,617)**	**74,617**	**-**	**-**	**(1,016,011)**	**1,016,011**	**-**	**-**	**2,577,811**	**(2,577,811)**	**-**	**-**	**-**	**-**	**-**	**-**
Net increase (decrease) post RSF	**34,264**	**78,921**	**432**	**904,289**	**59,534**	**1,119,715**	**(1,302,475)**	**3,656,072**	**366,138**	**(1,658,997)**	**(3,750,347)**	**(9,119,189)**	**-**	**-**	**3,073**	**(9,608,569)**
Ending Working Capital June 30, 2023	**$ 1,786,436**	**$ 1,773,376**	**$ 2,132,751**	**$ 9,494,119**	**$ 10,518,556**	**$ 13,363,567**	**$ 24,237,373**	**$ 42,284,499**	**$ 11,642,757**	**$ 13,444,024**	**$ 19,541,774**	**$ 26,440,690**	**$ -**	**$ -**	**$ 812,164**	**$ 177,472,085**

IN MEMORY OF



Madelyne “Maddi” Misheloff

Director
Dublin San Ramon Services District
Served from 2015 - 2020

Dublin San Ramon Services District
Water, wastewater, recycled water

7051 Dublin Blvd.
Dublin, CA 94568

www.dsrsd.com

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: June 1, 2021

TITLE: Public Hearing: Approve Capital Improvement Program (CIP) Ten-Year Plan for Fiscal Years 2022 through 2031 and Adopt CIP Two-Year Budget for Fiscal Years 2022 and 2023

RECOMMENDATION:

Staff recommends the Board of Directors hold a public hearing related to the Capital Improvement Program (CIP) Two-Year Budget for Fiscal Years 2022 and 2023, and, by Resolution, approve the CIP Ten-Year Plan for Fiscal Years 2022 through 2031 and adopt a CIP Two-Year Budget for Fiscal Years 2022 and 2023.

DISCUSSION:

The Draft Capital Improvement Program Ten-Year Plan for Fiscal Years (FYs) 2022 through 2031 and Two-Year Budget for FYs 2022 and 2023 ("Plan" and "Budget") was presented to the Board on May 18, 2021. The final CIP Plan and Budget incorporates minor revisions to the DSRSD-EBMUD Recycled Water Agency (DERWA) capital projects to reflect the FY 2022 DERWA Capital Budget, adopted by the DERWA Board on May 17, 2021. The revisions were minor and are consistent with the FYs 2022 and 2023 Operating Budget.

The CIP Ten-Year Plan for FYs 2022 through 2031 informs long-range planning and is used to identify, prioritize, and schedule capital projects over the ten-year period. The Plan also projects revenue and expenditures and resultant working capital in the District's capital expansion and replacement funds. In approving the CIP Plan, the Board is approving the relative schedules and approximate funding levels and sources for future capital expenditures. Board approval of this ten-year planning document does not authorize any expenditures.

The CIP Two-Year Budget overlaps the first two years of the CIP Ten-Year Plan. By adopting the CIP Budget, the Board:

1. Establishes maximum CIP expenditures within each capital replacement and expansion fund for FY 2022 and FY 2023 ("Fund Limit")
2. Authorizes total budgets for each CIP project or program
3. Authorizes staff to proceed in either fiscal year with CIP projects

Originating Department: Engineering Services	**Contact: S. Delight**	**Legal Review: Not Required**
Financial Review: Yes	**Cost and Funding Source: $36.5 million for FY 2022 & $36.4 million for FY 2023**	
Attachments: ☐ None ☒ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☐ Other (see list on right)		

RESOLUTION NO. _____

RESOLUTION OF THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT APPROVING CAPITAL IMPROVEMENT PROGRAM (CIP) TEN-YEAR PLAN FOR FISCAL YEARS 2022 THROUGH 2031 AND ADOPTING THE CAPITAL IMPROVEMENT PROGRAM TWO-YEAR BUDGET FOR FISCAL YEARS 2022 AND 2023

WHEREAS, the District is required to adopt a capital budget by September 1; and

WHEREAS, District staff has prepared the "Capital Improvement Program Ten-Year Plan for Fiscal Years 2022 through 2031 and Two-Year Budget for Fiscal Years 2022 and 2023" (CIP Plan and Budget) that includes projects necessary to continue the mission of the District; and

WHEREAS, the CIP Two-Year Budget consists of the first two years of the CIP Ten-Year Plan; and

WHEREAS, in accordance with the requirements of California Government Code Section 61110(c) which govern community services districts, on May 18, 2021, the District Secretary published the notice of public hearing for the biennial Capital Improvement Program Two-Year Budget for Fiscal Years 2022 and 2023, which was more than fourteen (14) days prior to the public hearing for the CIP budget; and

WHEREAS, the Board of Directors held a Public Hearing on June 1, 2021, to consider the adoption of the CIP Two-Year Budget.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF DUBLIN SAN RAMON SERVICES DISTRICT, a public agency located in the Counties of Alameda and Contra Costa, California, as follows:

1. The CIP Ten-Year Plan for Fiscal Years 2022 through 2031 is hereby approved.

2. The CIP Two-Year Budget for Fiscal Years 2022 and 2023 included in the "Capital Improvement Program Ten-Year Plan for Fiscal Years 2022 through 2031 and Two-Year Budget for Fiscal Years 2022 and 2023" attached (Exhibit "A") and by reference incorporated herein, is hereby adopted, and all expenditures made consistent therewith are hereby ratified and approved.

3. Project and Program budgets provided in the CIP Two-Year Budget for Fiscal Years 2022 and 2023 project sheets are hereby established as the project budgets and program budgets, respectively.

4. Unused program budget funds expire at each fiscal year-end.

5. Staff is authorized to proceed in either year with any and all projects and programs that are funded in the CIP Two-Year Budget for Fiscal Years 2022 and 2023, subject to compliance with the California Environmental Quality Act ("CEQA"), and to the conditions that total annual expenditures from the corresponding funds shall not exceed the CIP Plan and Budget fiscal year budget, and that total project expenditures for each project shall not exceed the total project budget.

6. The General Manager, or the General Manager's designated representative, is authorized to file Notices of Exemption for each CEQA exempt project, when appropriate.

ADOPTED by the Board of Directors of the Dublin San Ramon Services District, a public agency in the State of California, Counties of Alameda and Contra Costa, at its regular meeting held on the 1st day of June, 2021, and passed by the following vote:

AYES:

NOES:

ABSENT:

_____
Ann Marie Johnson, President

ATTEST: _____
Nicole Genzale, District Secretary

Dublin San Ramon Services District

Water, wastewater, recycled water









Capital Improvement Program

Ten-Year Plan – Fiscal Years 2022-2031
Two-Year Budget – Fiscal Years 2022-2023

Dublin San Ramon Services District
Water, wastewater, recycled water

Capital Improvement Program

Ten-Year Plan

For Fiscal Years Ending 2022 through 2031

Two-Year Budget

For Fiscal Years Ending 2022 and 2023

Adopted by Board Resolution No. ____ on June 1, 2021

Board of Directors
Ann Marie Johnson, President
Richard Halket, Vice President
Arun Goel, Director
Marisol Rubio, Director
Georgean Vonheeder-Leopold, Director

General Manager
Dan McIntyre

Assistant General Manager
Jan Lee

Engineering Services Director/District Engineer
Judy Zavadil, PE

Administrative Services Director
Carol Atwood, CPA

Operations Director
Jeff Carson

Capital Program Manager
Steve Delight, PE

Document Coordination
Corinne Ferreyra – *Management Analyst II*

Technical Assistance
Mayette Bailey – *Financial Analyst*
Herman Chen – *Financial Services Manager*
Aaron Johnson, *GIS Analyst II*
Roper Macaraeg – *GIS Specialist I*

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Executive Summary

Capital Improvement Program Overview

The Capital Improvement Program (CIP) is a capital investment plan to maintain and enhance the Dublin San Ramon Services District's ("District" or "DSRSD") infrastructure. The CIP serves as a guide for identifying current and future projects in support of the District's mission *to protect public health and the environment by providing reliable and sustainable water, recycled water, and wastewater services in a safe, efficient, and fiscally responsible manner*. The CIP is also the planning instrument used to coordinate the financing and timing of improvements, with the ultimate goal of maximizing the return to customers.

The CIP consists of the Ten-Year Capital Improvement Plan ("Plan") and the Two-Year Capital Improvement Budget ("Budget"). The Capital Improvement Plan serves to identify, prioritize, and schedule capital projects for the ten-year period, and establish a plan for generating the financial resources needed to complete these capital projects. The first two years of expenditures in the Capital Improvement Plan comprise the District's Two-Year Capital Improvement Budget for Fiscal Years 2022 and 2023. By adopting the Capital Improvement Budget, the Board:

- Authorizes total budgets for the individual capital projects.
- Authorizes the initiation of project expenditures in either fiscal year 2022 or 2023.
- Establishes the maximum expenditures from each fund for fiscal years 2022 and 2023.

Capital Improvement Program Process

The development of the CIP is a coordinated process, occurring every two-years, and beginning with District staff identifying projects and preparing related descriptions, schedules, and cost estimates. Projects may be identified in a master plan, study, or the asset management replacement model. Projects are also included to meet an upcoming regulatory requirement, or as a staff recommendation. Project requests are submitted for evaluation by the District Engineer.

Several factors are considered in developing the CIP, including the District's Strategic Plan and established District Policies, the need to meet a regulatory mandate or requirement, the impact to the District's capital fund reserves, and balancing project scheduling with available staffing resources. The recommended CIP is compiled and presented to the General Manager for review and input. The recommended CIP is next reviewed by the Board of Directors ("Board") at a work session, where the public has an opportunity to provide comments before final adoption by the Board at a public hearing in late May or early June.

Capital Improvement Program Projects, Programs, & Capital Outlay

The CIP includes Projects, Programs, and Capital Outlay, each of which are described below:

1. **Projects:** A CIP project is defined as an infrastructure project which is; 1) non-recurring in nature; 2) has a minimum cost of $15,000; 3) results in a new asset that has a useful life of at least three years or extends the useful life of an existing asset by at least three years; and 4) requires project management, typically requiring compliance with the California Public Contract Code. A common example of a CIP project is a water or wastewater collection pipeline replacement.

2. **Programs:** A CIP program sets aside money to fund projects that are anticipated but do not yet have definitive scope and budget. For example, a major water main might need unexpected replacement, and the associated program would fund the creation of a modest-scale replacement project when the need arose. The amounts set aside are based on Asset Management replacement models. The Asset Management models includes assumptions about the useful life of each asset, which identifies when an asset would need to be repaired or replaced and calculates an estimated cost to do so. Once a specific scope of work and budget is developed, a project can be created from the CIP program. An example of an Asset Management model based program is the Regional Wastewater Treatment Facility Replacement and Rehabilitation Program (00-P026). Other programs set aside funding for a particular District initiative which may ultimately fund more than one individual CIP project. An example of a District specific initiative program is the Long-Term Water Resiliency Program (00-W002).

3. **Capital Outlay:** Capital outlay is for replacing or adding an asset that has a minimum total cost of $10,000 and a useful life of at least three years. Capital Outlay is typically the purchase of one item. An example of capital outlay is the replacement of a vehicle. A detailed list of capital outlay in the Two-Year Budget is provided in Appendix A.

Capital Replacement and Expansion Funds

The District has three business enterprises: local wastewater collection, regional wastewater treatment and water. Each business has two capital funds: replacement and expansion. A key distinction is that replacement funds are largely funded by rate revenue from existing customers, while expansion funds are funded by fee revenue from new development.

A CIP project can have more than one funding source depending on the project scope, and as determined by the Board's Project Cost Allocation Policy. The Capital Improvement Program outlines the capital expenditures planned in the replacement and expansion funds. A more detailed discussion of each fund occurs later in Chapter 3.

Local Wastewater Replacement (Fund 210) – The funding source to replace and improve local sewer facilities to handle existing wastewater flows. Facilities include trunk sewer lines, lift stations, and related appurtenances that transfer wastewater from the point of origin to the regional wastewater treatment plant.

Local Wastewater Expansion (Fund 220) – The funding source to expand or add local sewer facilities to accommodate increased wastewater flows from new development.

Regional Wastewater Replacement (Fund 310) – The funding source to replace and improve the regional wastewater treatment plant to process existing wastewater flows before further treatment for recycled water or transit through the LAVWMA pipeline to the San Francisco Bay for disposal.

Regional Wastewater Expansion (Fund 320) – The funding source to expand or add to the regional wastewater treatment plant and related appurtenances that process future wastewater flows.

Water Replacement (Fund 610) – The funding source to replace and improve facilities to treat recycled water, as well as the pipelines, pump stations, reservoirs, and related appurtenances to distribute potable water and recycled water.

Water Expansion (Fund 620) – The funding source to expand or add facilities to treat recycled water and to distribute potable and recycled water.

Fiscal Year 2022-2031 Capital Improvement Program At-A-Glance

The total budget for the Ten-Year Plan for Fiscal Years 2022 through 2031 is $281.2 million and is comprised of 113 projects and programs. The Two-Year Budget for Fiscal Year 2022 and 2023 is $72.9 million and is comprised of 66 projects and programs.

Table 1 – CIP Expenditures by Fund ($1,000's)

Fund	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	10-Year Total
Local Replacement	1,655	1,325	1,172	1,284	1,097	3,572	859	1,569	399	399	**13,329**
Local Expansion	-	100	830	1,300	175	500	-	-	275	2,557	**5,737**
Regional Replacement	9,902	6,557	3,795	10,017	4,624	3,574	6,789	7,674	13,074	14,474	**80,479**
Regional Expansion	4,934	1,166	661	-	2,358	2,525	12,120		6,094	3,000	**32,858**
Water Replacement	11,310	13,233	6,760	8,553	3,393	10,958	9,705	8,743	12,193	21,543	**106,379**
Water Expansion	8,701	14,049	13,087	965	125	720	375	625	625	3,125	**42,397**
Annual Total	**36,502**	**36,420**	**26,305**	**22,119**	**11,772**	**21,849**	**29,848**	**18,610**	**32,659**	**45,097**	**281,179**

Figure 1 – CIP Expenditures by Fund

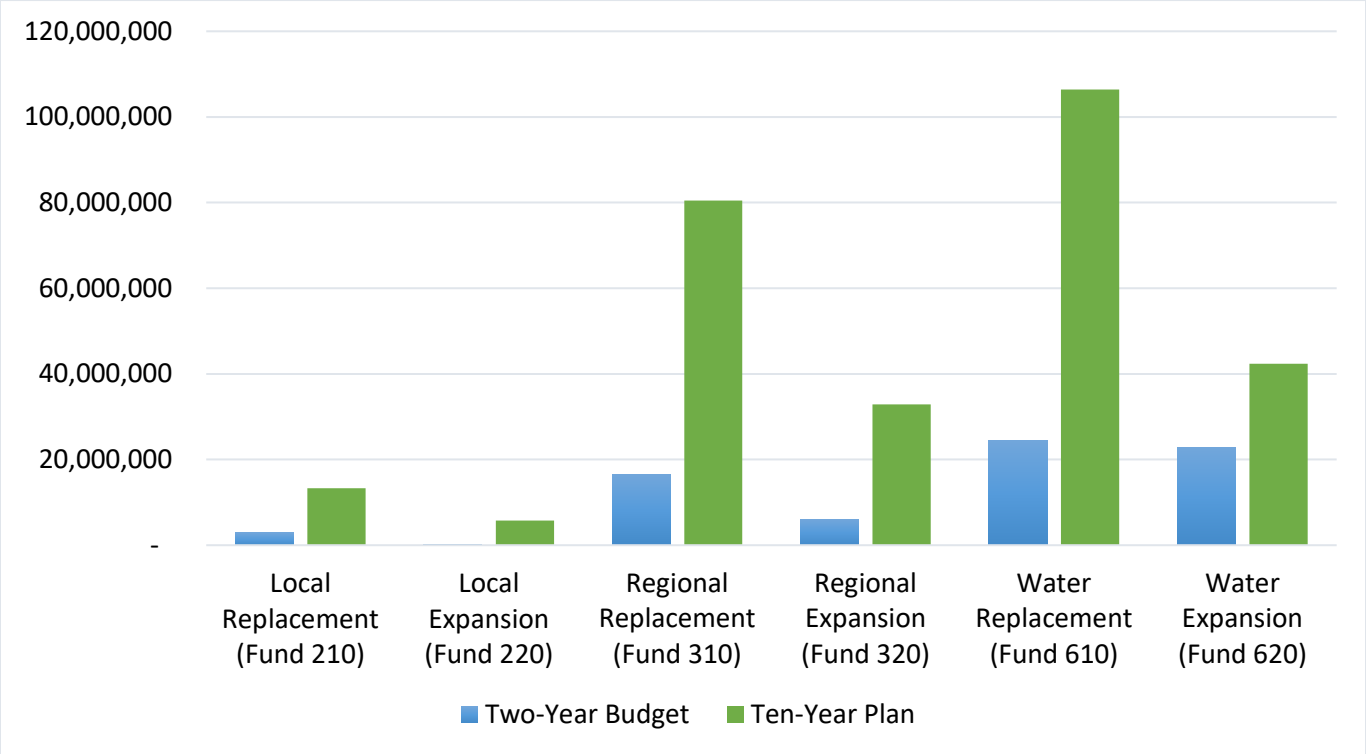
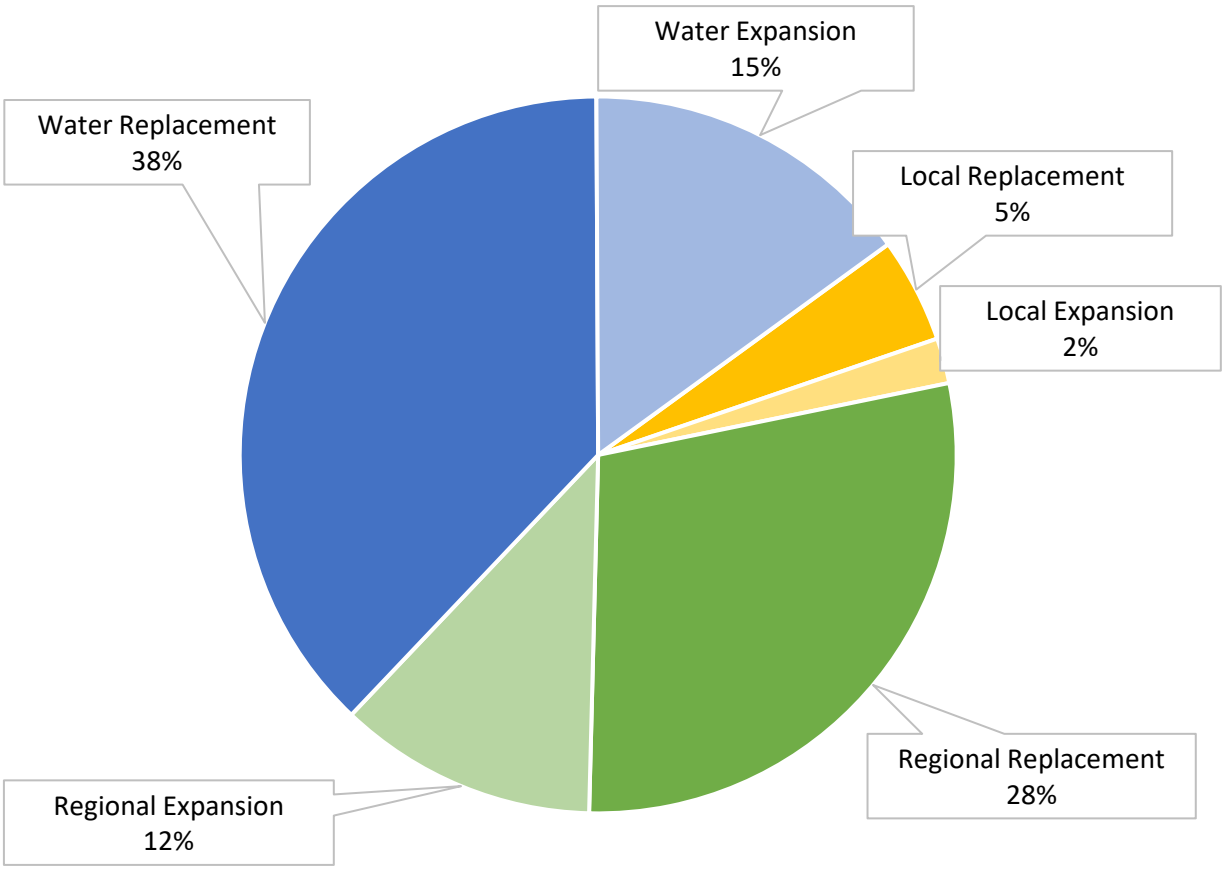


Figure 2 – Ten-Year CIP Expenditures by Fund

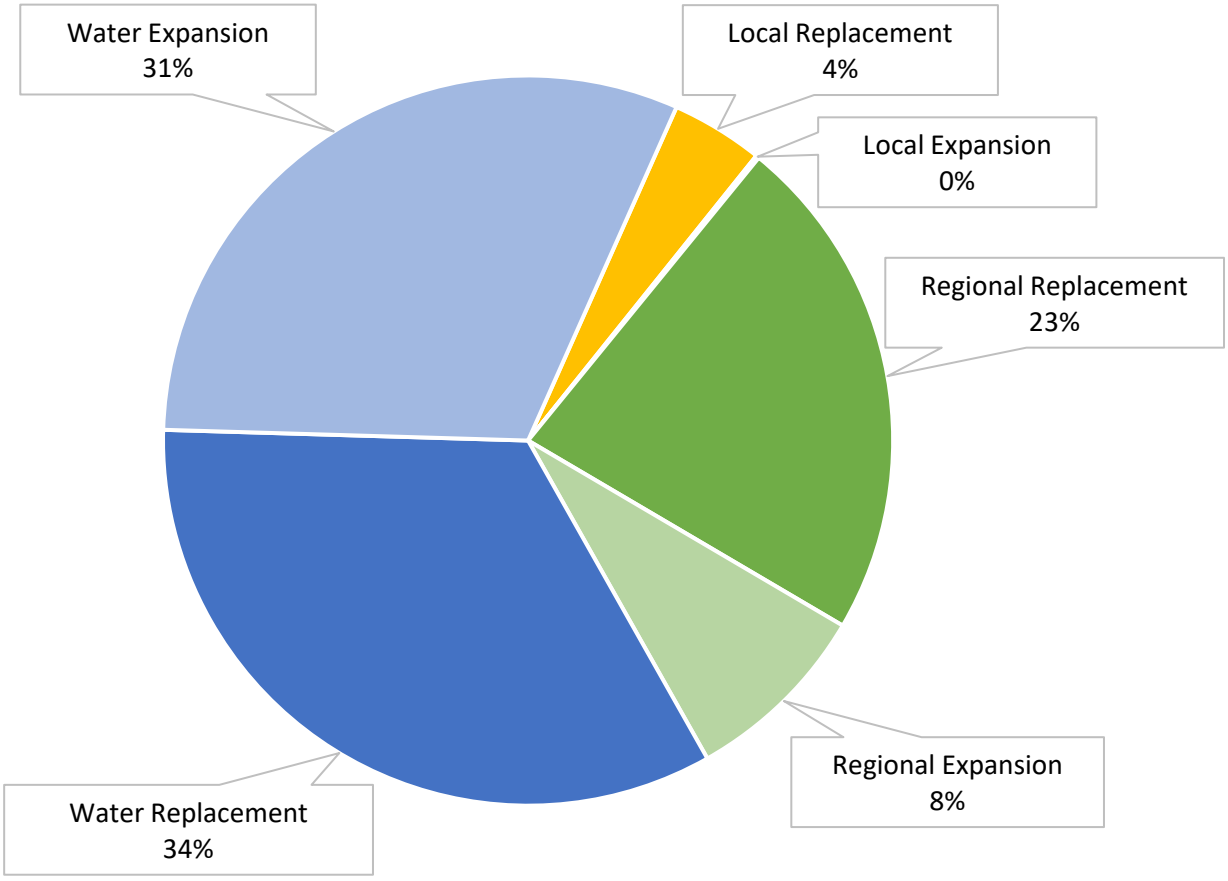


The total budget for the Ten-Year Plan for Fiscal Years 2022 through 2031 is $281.2 million and is comprised of 113 projects and programs. In the Ten-Year Plan, Local wastewater collection projects account for 7 percent of the total expenditures. Regional wastewater treatment projects account for 40 percent of the total Ten-Year Plan expenditures. Water system projects comprise over half of the total expenditures (53 percent) in the Ten-Year Plan.

Replacement projects account for 71 percent of the total Ten-Year Plan expenditures. The share of Local Wastewater Collection, Regional Wastewater Treatment, and Water System replacement projects as a percent of the total Ten-Year Plan is 7 percent (Local), 40 percent (Regional), and 53 percent (Water).

Expansion projects account for 29 percent of the total CIP Ten-Year Plan expenditures. The share of Local Wastewater Collection, Regional Wastewater Treatment, and Water System expansion projects as a percent of the total Ten-Year Plan is 7 percent (Local), 41 percent (Regional), and 52 percent (Water).

Figure 3 – Two-Year CIP Expenditures by Fund



The Two-Year Budget for Fiscal Year 2022 and 2023 is $74.2 million and is comprised of 66 projects and programs. In the Two-Year Budget, Local wastewater collection projects account for 4 percent of the total expenditures. Regional wastewater treatment projects account for 31 percent of the total CIP Two-Year Budget expenditures. Water system projects comprise the majority (65 percent) of the total Two-Year Budget expenditures.

Replacement projects account for 60 percent of the total Two-Year Budget expenditures. The share of Local Wastewater Collection, Regional Wastewater Treatment, and Water System replacement projects as a percent of the total Two-Year Budget is 7 percent (Local), 37 percent (Regional), and 56 percent (Water).

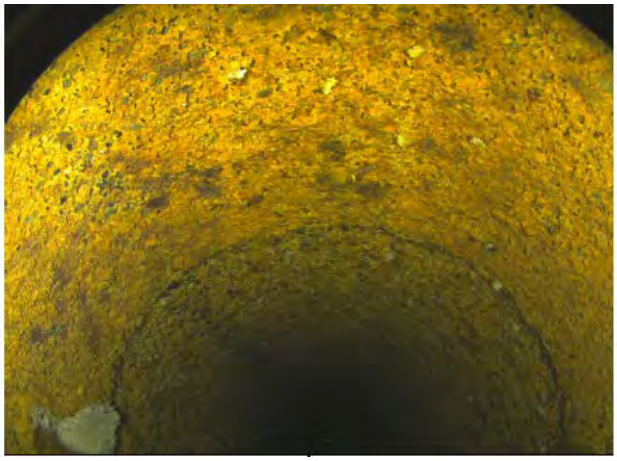
Expansion projects account for 40 percent of the total CIP Two-Year Budget expenditures. The share of Local Wastewater Collection, Regional Wastewater Treatment, and Water System expansion projects as a percent of the total Two-Year Budget is 0.3 percent (Local), 21 percent (Regional), and 79 percent (Water).

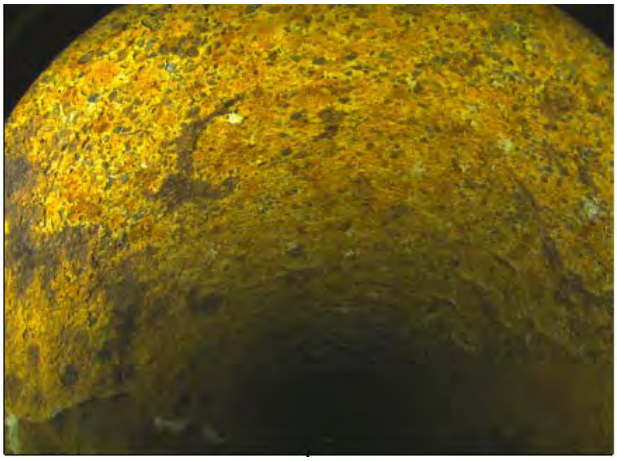
Project Highlights

Below are high priority projects, organized by business enterprise, to provide a sense of the anticipated efforts of the District staff over the next two-years.

Local Wastewater Collection

East Dublin 36" Trunk Sewer Rehabilitation (20-S013). This project will rehabilitate approximately 670 feet of an existing 36-inch reinforced concrete pipe (RCP) of the East Dublin trunk line. The pipe was installed in 1960. As part of the asset management program for the collection system, a large diameter sewer inspection project evaluating the condition of the collection system trunk lines was completed in late 2013. The sewer showed corrosion and significant spalling. The first pipe reach is in an easement that begins just west of Johnson Drive (about 500 feet north of Owens Drive) and continues west almost to Owens Drive. The second pipe section is in an easement just south of I-580 between Owens Court and the Pleasanton BART parking lot (behind Dahlin Group Building). The section between was lined in 1993 and is in fair condition at this time. This project is funded from the Local Replacement fund with a total estimated cost of $1.2 million and is expected to be completed in Fiscal Year 2022.







Regional Wastewater Treatment

WWTP SCADA Improvements (05-3206). This project will upgrade the WWTP Supervisory Control and Data Acquisition (SCADA) communication network, replace and program the programmable logic controllers (PLCS), replace the servers, install a new database repository for historical data and acquire a web portal to view SCADA data over the District's business network, upgrade the alarm notification and reporting software, upgrade the plant's fiber optic communications network and replace the variable frequency drives for 9 pump motors. This project will involve complex construction sequencing to allow for parallel SCADA systems during implementation as the plant processes cannot be interrupted. It will also require thorough testing of the PLC programming and communication system to assure reliable plant operation after implementation to the new system. A design-build project delivery method will be utilized for this project. This project is funded from the Regional Replacement fund with a total estimated cost of $4.66 million and is expected to be completed in Fiscal Year 2023.



Biogas Treatment System Improvements (16-P028) & Biogas Flare Improvements (18-P010). Biosolids in the digesters at the Regional Wastewater Treatment Plant generate biogas. The biogas is scrubbed and pressurized and then conveyed to cogeneration engines which generate electricity to power the plant and create heat that is used to maintain the temperature of the biosolids in the digesters at approximately 98°F. This project will evaluate the existing biogas scrubber and make recommendations to improve the existing scrubber or replace it. Clean biogas improves engine efficiency and assists in meeting Bay Area Air Quality Management District regulations at cogeneration. When the new primaries, and the fats, oils and grease (FOG) station are put into operation, additional solids will be collected for digestion, increasing biogas production. Since the existing biogas scrubber is currently working at capacity. Any additional gas will need to be cleaned prior to sending it to cogeneration. The project is funded 67 percent from the Regional Expansion fund and 33 percent from the Regional Replacement fund with a total estimated cost of $4.43 million and is expected to be completed in Fiscal Year 2023.

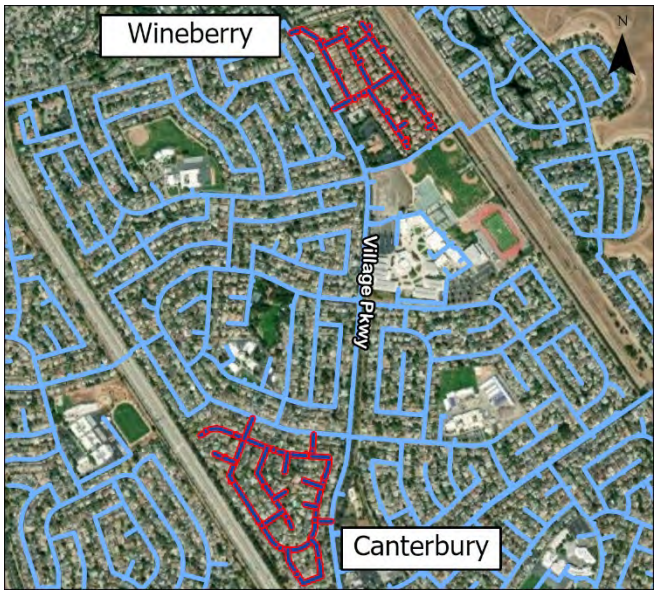


Related to the biogas system improvements is the replacement of the biogas flare. Typically, all biogas is used to power the cogeneration engines after the gas is scrubbed. If the gas scrubber is out of service, or if cogeneration is offline, biogas must be vented to prevent over pressurization of the digesters. The flare cleanly burns the biogas under a Bay Area Air Quality Management District (BAAQMD) permit. The project is funded from the Regional Replacement fund with a total estimated cost of $1.56 million and is expected to be completed in Fiscal Year 2023.

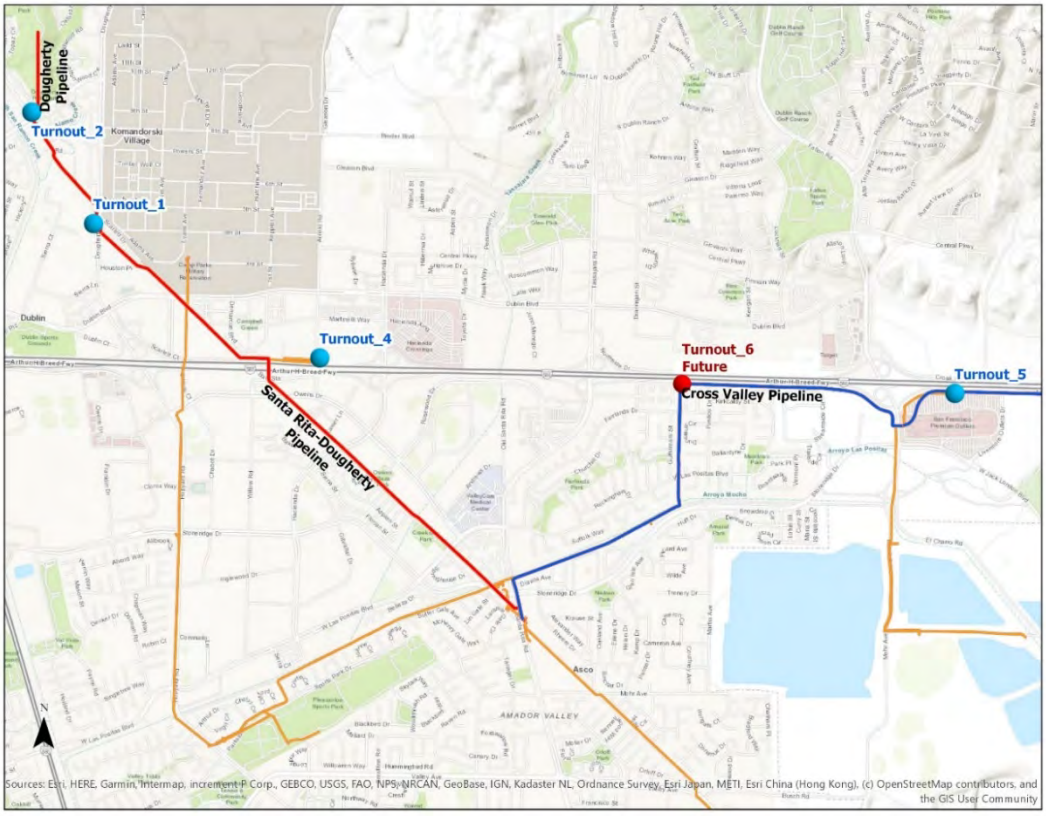
WWTP Energy Master Plan (22-P009). The District's 2021- 2026 Strategic Plan includes a goal to develop a long-term strategy ensure greater energy efficiency and reliability for the district. This Plan will develop energy demands and a strategy to meet those demands through self-generation and PG&E power. More specifically, the plan will install additional power monitoring devices to develop energy use baselines for energy intensive processes and equipment; determine normal and standby power needs for current facilities and anticipated plant upgrades and expansion; evaluate potential process or equipment changes to reduce the energy demand of energy intensive processes including the secondary aeration process and the biosolids thickening process; quantify the impact of DERWA energy demands on the District's energy costs; determine the optimal current cogeneration capacity and develop a facility plan for current and future cogeneration; evaluate the potential for solar energy to complement the cogeneration system; and evaluate the potential of current battery technology to reduce peak energy demands. The project is funded from the Regional Replacement fund with a total estimated cost of $800,000 and is expected to be completed in Fiscal Year 2022.

Water System

Water Line Replacements – Wineberry & Canterbury Area (16-W017). This project will replace approximately 10,900 feet of existing asbestos concrete pipe (ACP) potable water lines, services, and appurtenances on in the Wineberry Way and Canterbury Lane area of central Dublin. The lines were installed in 1961, and there is a history of leaks and water service repairs in the area. Acoustic testing and testing of pipe samples in the area indicate the pipes have lost approximately 25 percent of their structural thickness indicating the lines are near the end of their useful lives and therefore should be replaced. This project is funded from the Water Replacement fund with a total estimated cost of $6.9 million and is expected to be completed by Fiscal Year 2023.



Turnout 6 (20-W015). The District receives its treated water supply from the Zone 7 Water Agency through turnouts on the Zone 7 water transmission system. This project will provide water supply for development in eastern Dublin by constructing a new turnout from Zone 7 Cross Valley Pipeline south of I-580 at Pimlico Drive. Construction of the turnout adds redundancy and improves reliability of the distribution system by having a secondary source turnout to supply eastern Dublin should there be a failure of Zone 7 Water Agency's Santa Rita Pipeline. This project is funded from the Water Expansion fund with a total estimated cost of $9.5 million and is expected to be completed by Fiscal Year 2023.



Pump Station 1A Rehabilitation (20-W025). This project will upgrade or replace Pump Station 1A. Pump Station 1A pumps water from the Zone 7 water system to the District's Zone 1 distribution system on the west side. The suction and discharge manifolds configurations are inefficient and cause and pump cavitation. The project will evaluate upgrading or replacing the pump station at the existing location versus relocating it at the Turnout 1 site. Fluoride storage and injection equipment housed at the facility will also be upgraded. This project is funded from the Water Replacement fund with a total estimated cost of $6.7 million and is expected to be completed by Fiscal Year 2024.



Chapter 1: Long-Term Capital Planning

CIP and Strategic Plan Nexus

The Capital Improvement Program (CIP) is integral to the achievement of the District's mission and implementation of the strategic plan. Development, approval, and implementation of the CIP accomplishes several District's Strategic Plan goals by providing specific projects and planned funding towards meeting the goals. Specifically, the CIP Plan and Budget supports the District strategic goals to maintain financial stability and sustainability and develop a fully integrated Asset Management Program to guide all the District's business decisions. The District's Asset Management Program identifies projects for the CIP Plan and Budget. In addition, it provides an overall estimate of expected expenditures over the CIP Plan timeframe and beyond to guide future rate operating budget and rate studies. Further information on the Asset Management Program is provide below.

The Strategic Plan goal to enhance the District's ability to respond to emergencies is advanced with the Potable Water Pump Station Standby Generators/Emergency Response project (16-W012) which will increase the reliability of the water distribution system in a power outage and the WWTP SCADA Improvements project (05-3206) which will provide robust and redundant communication between the WWTP processes.

The CIP also meets several of the action items under the Strategic Plan goal to develop and implement an integrated potable and recycled water program. Two programs, Capital Improvements to Increase Water Supply, Phases I and II, support the existing recycled water program and provide the funding for a future potable reuse project.

The Strategic Plan goal to develop a long-term strategy to ensure greater energy efficiency and reliability for the District will be evaluated with the addition of two new projects. The WWTP Energy Master Plan (22-P009) and Field Operations and District Facilities Energy Plan (T22-19) will evaluate current and future energy demands and develop strategies to increase energy efficiency while meeting energy demands.

Master Plans

The District develops master plans every five to ten years for each of its enterprises, Local Wastewater, Regional Wastewater and Water. The District also develops master plans for particular business needs, such as the Information Technology Master Plan and the Facilities Security Master Plan. The master plan planning horizons are typically 20 years. The proposed projects from these master plans are incorporated into the CIP. A summary of the studies and plans that have informed the CIP Plan and Budget include:

- Local Collection System Master Plan (2019)
- Wastewater Treatment and Biosolids Master Plan (2017)
- Water Master Plan (2016)
- Joint Tri-Valley Potable Reuse Technical Feasibility Study (2018)
- Long-term Alternative Water Supply Plan Update (2021)
- Information Technology Master Plan (2017)

Asset Management Program/Replacement Projects

The District has developed asset management models that estimate the rehabilitation and replacement year and cost for each asset based on the age and type of the asset. The renewal and replacement needs identified by the asset management models during the Ten-Year Plan are reflected in individual capital projects and programs. Using the models, staff identifies specific capital projects and funding to be included in the CIP Plan and Budget. Expenditures to account for projects that will be identified over the time frame of the plan are included in the rehabilitation and replacement programs.

To capture the expenditures beyond the Ten-Year Plan and assure that funding is available, the average estimated expenditures over the Ten-Year Plan plus the expenditures for the five years beyond the plan are averaged to create a fifteen-year expected annual average replacement expenditure estimate. This fifteen-year average is used to set the minimum capital replacement fund levels (see Financial Reserves section). Thus, the Capital Improvement Program reflects not only intermediate term capital projects, but also longer-term estimates of asset replacement needs.

The expected annual expenditures for the local collection, regional wastewater and water replacement funds for the next 30 years are shown in Figures 4 through 6. There is significant variability in the estimated expenditures from year to year. In the figures this variability has been normalized over several years to 1) reflect the variability in asset life (i.e. some pipes or equipment will fail earlier and some will fail later than its expected life), 2) better visualize the trend in expenditures, and 3) reflect a more realistic project implementation schedule.

Local Wastewater Collection - Replacement

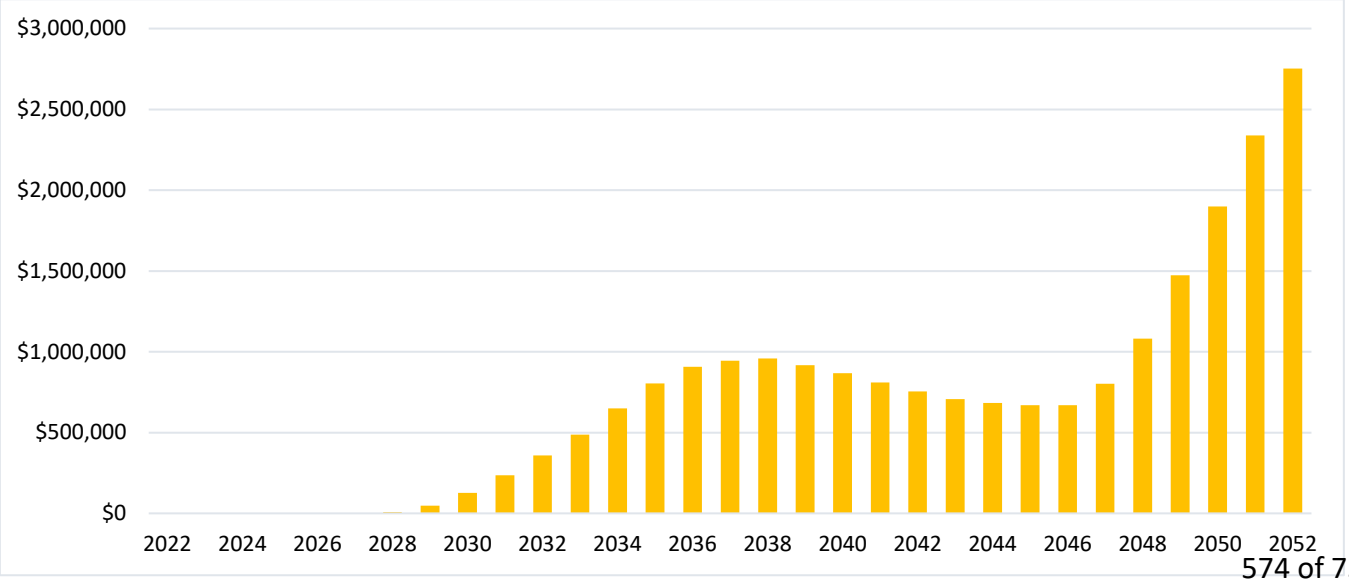
The asset management model for the local collection system estimates the remaining life of a sewer pipeline based on the installation date of the pipeline and the material used. The remaining life of a sewer pipeline may also be revised based on inspection data. If inspection data shows the pipeline to be in good condition, the life may be extended. Conversely, when inspections reveal cracking or degradation of sewer pipelines, the remaining life is shortened based on the severity of the damage and the rehabilitation or replacement of that pipeline is accelerated.

Figure 4 shows the anticipated expenditures for sewer pipeline and replacements for the next 30 years. The replacement costs used in the model are based on rehabilitating the pipes through a combination of cast in-place lining and pipe replacement. In developing the current CIP, the model replacement costs were updated based on recent Bay Area construction bid data. In addition, the algorithm altering the remaining useful life was refined. The previous algorithm reduced the remaining life based on the pipeline condition too aggressively resulting in more anticipated pipeline replacements within the next ten to twenty years, with the refinement the anticipated pipeline replacement costs were shifted further into the future.

Peaks in replacement expenditures are largely driven by past surges in development, where large portions of the system were installed at a similar time, using similar pipe material. Given that many of the District's local collection assets were installed during a period of initial growth in the 1960s, those initial assets begin to reach the end of their useful life around 2050. Most of the pipe material of the original wastewater collection system is vitrified clay pipe.

Figure 4 shows a gradual increase in replacement costs starting in the latter half of the current Ten-Year Plan. These anticipated replacement costs are associated with pipelines that, based on inspection data, have cracking that may necessitate repair sooner than anticipated. However, the magnitude of damage is not significant enough to prompt a rehabilitation project in the near term. Some of the defects may be able to be fixed with a "spot repair" which can extend the pipeline useful life back to the original life expectancy. Staff will continue to monitor inspection data and update the model to address pipeline rehabilitation needs.

Figure 4 – Local Wastewater Collection Long-Term Replacement Costs

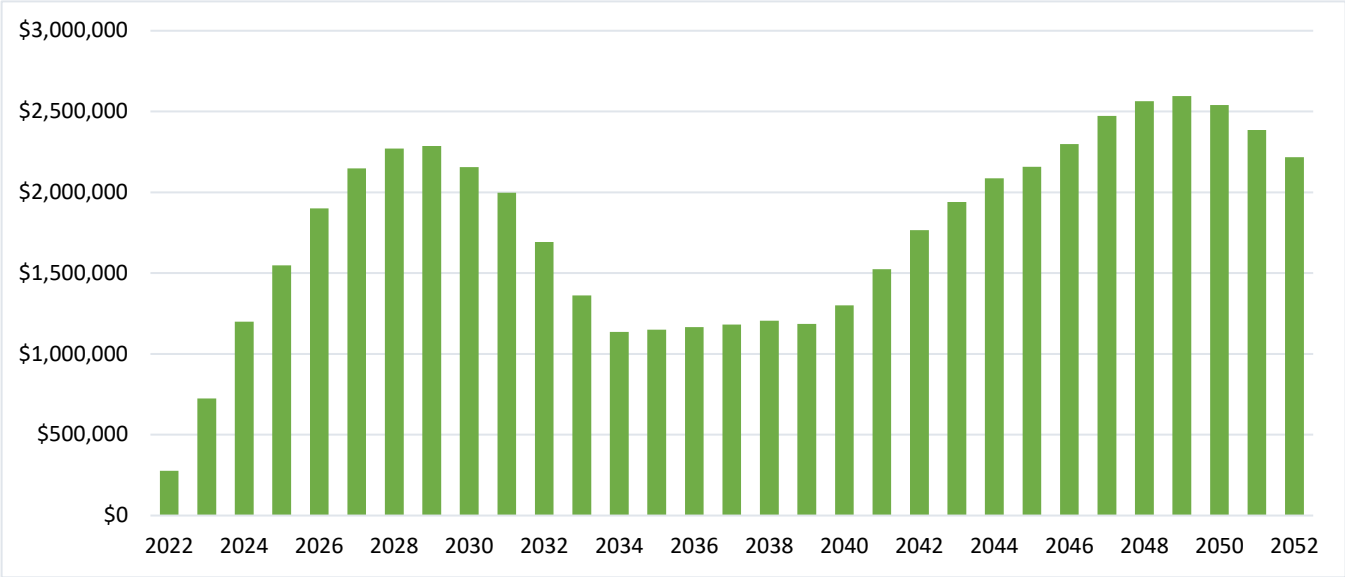


Regional Wastewater Treatment - Replacement

The regional wastewater treatment asset management model includes the structures, and equipment at the Regional Wastewater Treatment Plant. The anticipated Regional Wastewater replacement expenditures, shown in Figure 5, increase annually until approximately 2030, which is the 30-year anniversary of the Stage 4 Wastewater Treatment Plant Expansion Project. Beyond that timeframe, the expenditures drop somewhat and flatten out until 2039 but begin to increase thereafter through 2050.

Compared to previous versions of the model, the peak annual replacement costs have significantly decreased. One reason for this decrease is that the equipment associated with the primary sedimentation basins and grit tanks have been removed from the planning period since the majority of the equipment will be replaced with the current Primary Sedimentation Expansion and Improvements project (17-P004). Also, while refining the model, staff excluded an inflation assumption on the replacement costs, which was built into the previous model, given the Capital Improvement Program Two-Year Budget and Ten-Year Plan are based on the present value replacement costs.

Figure 5– Regional Wastewater Long-Term Replacement Costs



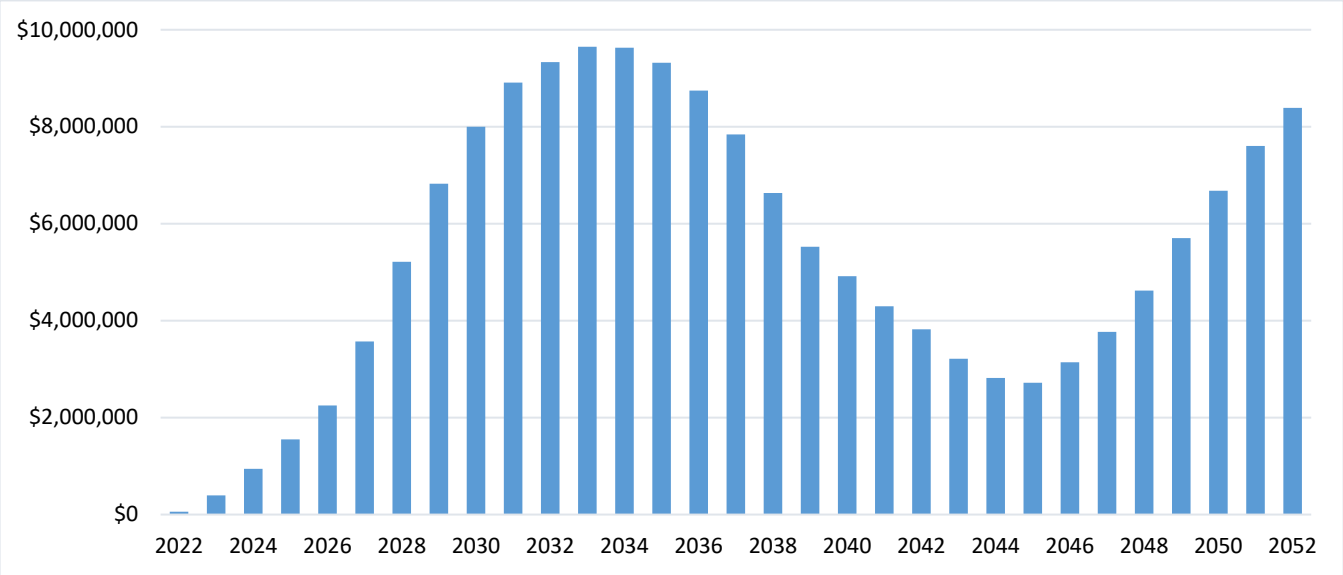
Water System- Replacement

The asset management model for the water system estimates the remaining life of a pipeline based on the installation date of the pipeline and the pipeline material. In developing the current CIP, the model replacement costs were updated based on recent Bay Area construction bid data. The replacement cost per linear foot was significantly increased in the model for the water distribution system. Compared to the previous versions of the model, the peak annual replacement costs have significantly increased from $6 million annually to $10 million annually. This revised replacement cost is reflected in replacement project budgets and program funding.

The average annual water replacement expenditures, shown in Figure 6, increase annually and peak in 2033, just outside the Ten-Year Plan horizon. The replacement costs decrease until 2045, and from there they begin to increase again. This is due to various spikes in past development throughout the service area.

The oldest pipelines in the water system, namely cast iron pipes located in Camp Parks and asbestos cement (AC) pipes in Central Dublin, are at or near the end of their useful life. There are several projects included in the CIP Two-year Budget and Ten-year Plan to replace pipelines in these areas in the next ten years. The costs shown in Figure 6 exclude the cost of these replacement projects. The anticipated replacement costs that are not captured in a specific project are reflected in the Water Replacement and Rehabilitation Program.

Figure 6 – Water Long-Term Replacement Costs



Chapter 2: Budget Process

Capital Improvement Program Process

The development of the CIP is a coordinated process, occurring every two-years, and beginning with District staff identifying projects and preparing related descriptions, schedules, and cost estimates. Projects may be identified in a master plan, study, or the asset management replacement model. Projects are also included to meet an upcoming regulatory requirement, or as a staff recommendation. Project requests are submitted for evaluation by the District Engineer. Several factors are considered in developing the CIP, including the District's Strategic Plan and established District Policies, the need to meet a regulatory mandate or requirement, the impact to the District's capital fund reserves, and balancing project scheduling with available staffing resources. The recommended CIP is compiled and presented to the General Manager for review and input. The recommended CIP is next reviewed by the Board of Directors ("Board") at a work session, where the public has an opportunity to provide comments before final adoption by the Board at a public hearing in late May or early June.

Capital Planning Policies

Development and implementation of the CIP is directed by the District policies listed below and available on the District's website. http://www.dsrsd.com/about-us/district-policies

1. **Project Cost Allocation:** Basis for determining how the cost of projects should be allocated between funds.

2. Infrastructure Responsibilities and Funding: Defines responsibility for major and non-major infrastructure planning design and construction. Establishes use of connection fees as primary source of funding for major infrastructure.

3. Financial Reserves: Provides guidance for the prudent accumulation and management of designated reserves.

4. Budget Accountability: Operations and Capital Improvement Program budget controls.

Budget Controls

Two-Year Project Budget

By Board adoption of the CIP Two-Year Budget, each project and program and their corresponding budget listed in the first two years (Fiscal Years 2022 and 2022) of the CIP Ten-Year Plan is authorized and may be fully expended with the following conditions:

- The total expenditures for each individual project shall not exceed the project total.
- The total allocated expenditures for the Two-Year Budget may be initiated in either Fiscal Year 2022 or 2023.

Additional project budget approval conditions are discussed in the following sections.

Project Approval from a Program

Approval authority for projects created from a program are consistent with the approval authority limits outlined in the District purchasing procedures:

- The General Manager may approve a project of $175,000 or less created from a program.
- The General Manager may approve an increase in the budget of a project created from a program provided adequate program funds are available up to the General Manager's authority of $175,000.
- A project created from a program in excess of $175,000 or a budget increase that is greater than the general manager's authority requires Board approval.

Program Budgets

Upon completion of a project created from a program, any unused funds are returned to the program provided it is in the same fiscal year. Funding allocated to program budgets are not cumulative from year to year. Program budgets that do not fund specific projects by the end of the fiscal period do not carry forward. Thus, the program's total expenditures shall not exceed the total program budget for each fiscal year. The Board must approve increases in a program budget.

CIP Budget Implementation

The general manager may authorize staff to complete the implementation process or use consultant and construction contracts in standard District form, task orders and purchase orders for services, equipment, materials and supplies up to the authority of $175,000 per the District Code. In addition, the general manager has the authority to adjust contracts that were previously approved by the Board, up to the purchasing authority of $175,000. All work authorized by the general manager or submitted to the Board for authorization shall be procured and managed in accordance with District Code and purchasing procedures.

Actions Requiring Board Approval

The following is a summary of project and budget actions requiring Board approval:

- Addition of a new project not created from a program
- Addition of a new project created from a program in excess of $175,000
- Acceleration of a future project that had to unexpectedly start early in either Fiscal Year 2022 or 2023
- Increase in a project budget in excess of $175,000
- Increase in a program budget
- Increase in a project budget where the revised project budget is in excess of $175,000
- Authorization of contracts, task orders, purchases or construction contracts in excess of $175,000

Chapter 3: Fund Overview

Overview of District Funds

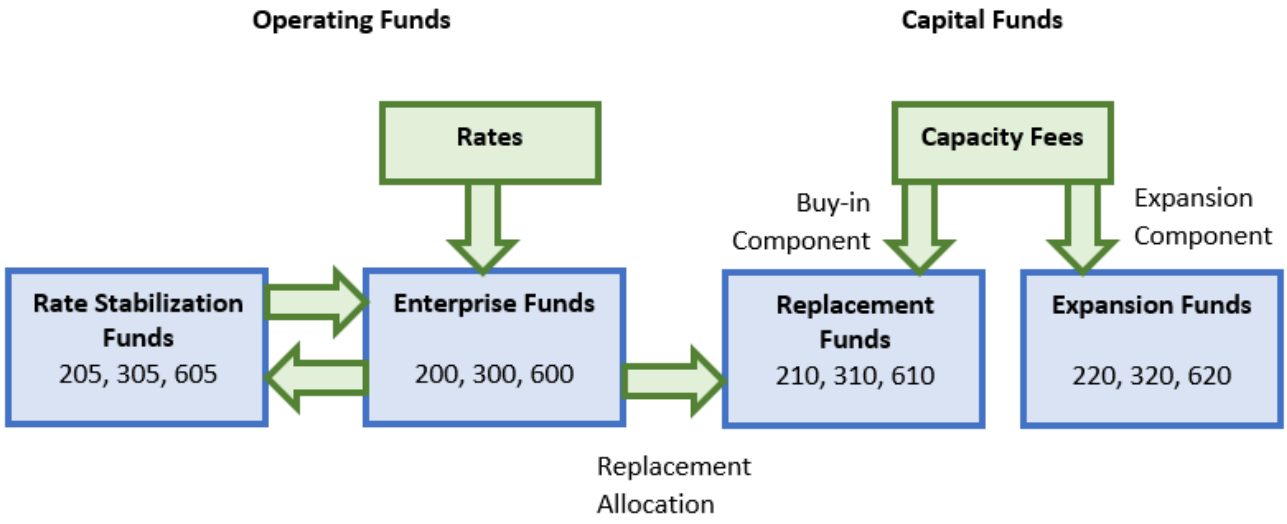
The District has three business enterprises: local wastewater collection, regional wastewater treatment and water. Each business enterprise has four funds: Enterprise, Rate Stabilization, Replacement, and Expansion. The funds have two main sources of revenue: rates and fees. Each fund also has interest revenue derived from the capital in the fund.

The rates paid by the District's customers go into the Enterprise Funds and are used to pay the normal operating costs. A portion of the rates is transferred to the Replacement Funds (replacement allocations) to pay for capital projects that replace or improve facilities that benefit existing customers. When there is a financial surplus in the Enterprise Fund the surplus is transferred to the Rate Stabilization Fund and is drawn upon to fund unexpected events.

Capacity reserve fees collected from development projects go into the Expansion Funds and are used to pay to pay for new projects that serve future customers or for debt related to facilities that were built to add capacity for future customers. The District will often build a facility that is sized to meet capacity needs into the distant future. An existing infrastructure buy-in component of the fee is collected for new development to pay for the use of existing excess capacity. The existing infrastructure buy-in component goes to the Replacement Fund.

The revenue from fees is estimated based on the number of future water and wastewater connections anticipated with planned development provided by the cities of Dublin, Pleasanton, and San Ramon. Because each connection to the system may use have different water or sewer use, the connections are converted to Dwelling Unit Equivalents (DUEs) which are based on usage relative to that of a single-family residential home. The number of connections in the first two years are based on the planned development slated for those years. The number of projected connections over the remaining eight years of the plan are averaged over those years as the actual timing of development in the latter years is difficult to predict.

Figure 7 – Capital Funding



Financial Reserves

The District's Financial Reserves Policy designates financial reserves in order to protect the District's investment in various assets, satisfy its commitments under its numerous financial, regulatory and contractual obligations and to stabilize long-term rates for its customers.

For capital replacement funds (210, 310, 610), the minimum reserve is twice the average annual expenditures in the fund based on the next 15 years of planned expenditure which includes the Ten-Year Plan plus an estimate of asset replacement needs for the subsequent five years.

For the expansion funds (220, 320, and 620), minimum reserve is the greater of two years debt service or the next two years of project expenditures. This methodology ensures sufficient financial reserves to complete projects in progress and pay debt service obligations should development not materialize as projected. An alternate spending plan for capital expenditures would then be addressed in the next two-year budget cycle.

As the local sewer, water, and regional wastewater treatment systems age, the replacement costs will increase. Concurrently development in the service area will be approaching build out and capacity reserve fees will diminish. This will result in a decline in existing infrastructure buy-in component of the capacity reserve fee revenue to the replacement funds from the various capacity reserve fees, creating a conundrum where infrastructure begins to accelerate its depreciation at almost the same time that a major revenue source begins a significant decline.

The policy of setting capital replacement reserve levels at twice the fifteen-year average of planned capital projects plus known asset management replacement needs will help to mitigate the problem of increasing costs and decreasing capacity reserve revenue. The average annual replacement cost will increase, leading to an increase in replacement reserve requirements, which will gradually signal the need for additional capital funding. Within each two-year budget period, the District can assess the need for growth in utility rates to make up the difference. Thus, the District will be able to capitalize on its growing Asset Management Program to plan a sensible long-term ramp-up of rehabilitation and replacement funding through user fees.

Financial Summary by Fund

To assure the District has sufficient funds to maintain existing assets and to construct the facilities to meet the needs of new customers, the District projects the revenues and expenditures in the capital replacement and expansion funds over the ten-year CIP plan period and verifies the fund working capital is greater than the minimum financial reserve level as defined in the Financial Reserve Policy. A summary of the revenues and expenditures and working capital trends in each replacement and expansion fund is provided in the following sections.

Local Wastewater Collection Replacement (Fund 210)

The Local Wastewater Replacement fund (Fund 210) funds projects which replace and improve local sewer facilities that transfer wastewater from the point of origin to the regional wastewater treatment facility. The fund minimum reserve is twice the average annual expense of the fifteen-year CIP.

Revenue & Expenditures

The fund's revenue includes the existing infrastructure buy-in component of capacity reserve fees, interest, and the replacement allocation from the Local Enterprise fund. In the Two-Year Budget, roughly 74 percent of the fund's revenue comes from capacity reserve fees, while 24 percent comes from replacement allocation. Interest accounts for 2 percent of the fund's total revenue. Of note, is the continued elimination of the replacement allocation in the first year of the planning period, due to insufficient rate revenue in the Local Enterprise fund. The replacement allocation is shown as returning in Fiscal Year 2023, at $800,000 annually through Fiscal Year 2027, which is increased from the previous $675,000 annual replacement allocation. In Fiscal Year 2028, the replacement allocation is increased to $1.2 million for the remainder of the planning period. Capacity reserve fee revenue projections are based on the most recent development projections and the current fee increased 3 percent annually.

The fund's expenditures include CIP expenditures, interfund loan repayment, and capital outlay. The CIP expenditures are shown in more detail in Table 8 in the following section. In Fiscal Year 2018, the Local Expansion fund loaned the Local Replacement fund $5 million to cover the cost of a large critical project, to be repaid over six years (ending in Fiscal Year 2024). A closed-circuit television (CCTV) truck is requested in Fiscal Year 2022, deferred from the previous two-year budget, at a cost of $500,000.

Working Capital

The estimated beginning working capital for Fiscal Year 2022 is $4.12 million. With no replacement allocation in the first year, $4.2 million in CIP expenditures and $2.6 million in loan repayment expenses over the next three years, the fund's working capital hovers at or just below the minimum reserve target through Fiscal Year 2025. The increased replacement allocation provides a buffer for the fund's working capital in the event of an economic downturn. In Fiscal Years 2026 and 2027, several pipeline replacement and rehabilitation projects are planned, causing a decrease in working capital until Fiscal Year 2028. Thereafter, working capital climbs steadily to over $9 million in Fiscal Year 2031. With an anticipated increase in inspection activity and a planned condition assessment of large diameter sewer lines in Fiscal Year 2024, new projects will likely be identified which will reduce that peak.

Table 2 – Local Wastewater Replacement Revenue, Expenditures, & Working Capital ($1,000's)

Fiscal Year	DUEs	Capacity Reserve Fees	Interest	Replacement Allocation	CIP Expenditures	Debt Service	Capital Outlay	Working Capital
2022	479	$ 1,076	$ 41		$ 1,655	$ 896	$ 551	$ 2,132
2023	615	$ 1,423	$ 21	$ 800	$ 1,325	$ 875	$ 43	$ 2,133
2024	431	$ 1,027	$ 19	$ 800	$ 1,172	$ 854		$ 1,953
2025	229	$ 562	$ 20	$ 800	$ 1,284			$ 2,052
2026	540	$ 1,365	$ 31	$ 800	$ 1,097			$ 3,151
2027	540	$ 1,406	$ 17	$ 800	$ 3,572			$ 1,802
2028	540	$ 1,448	$ 36	$ 1,200	$ 859			$ 3,627
2029	540	$ 1,491	$ 47	$ 1,200	$ 1,569			$ 4,798
2030	540	$ 1,536	$ 71	$ 1,200	$ 399			$ 7,207
2031	540	$ 1,582	$ 96	$ 1,200	$ 399			$ 9,686

Figure 8 – Local Wastewater Replacement Fund Working Capital

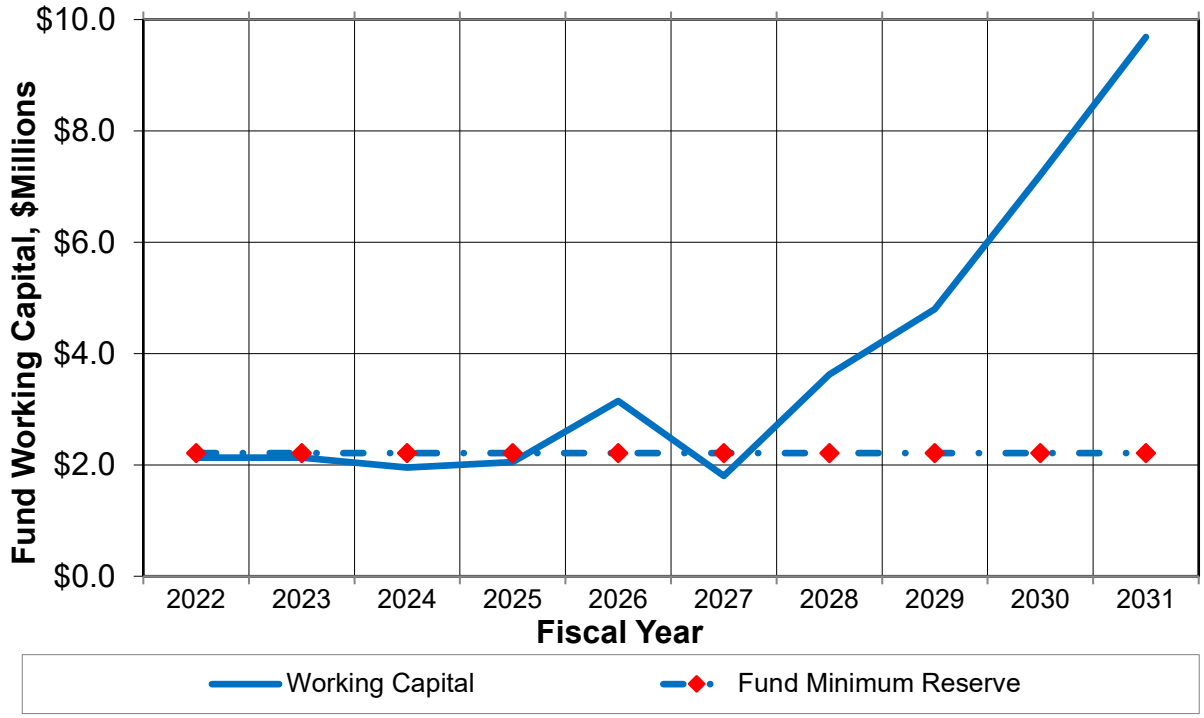
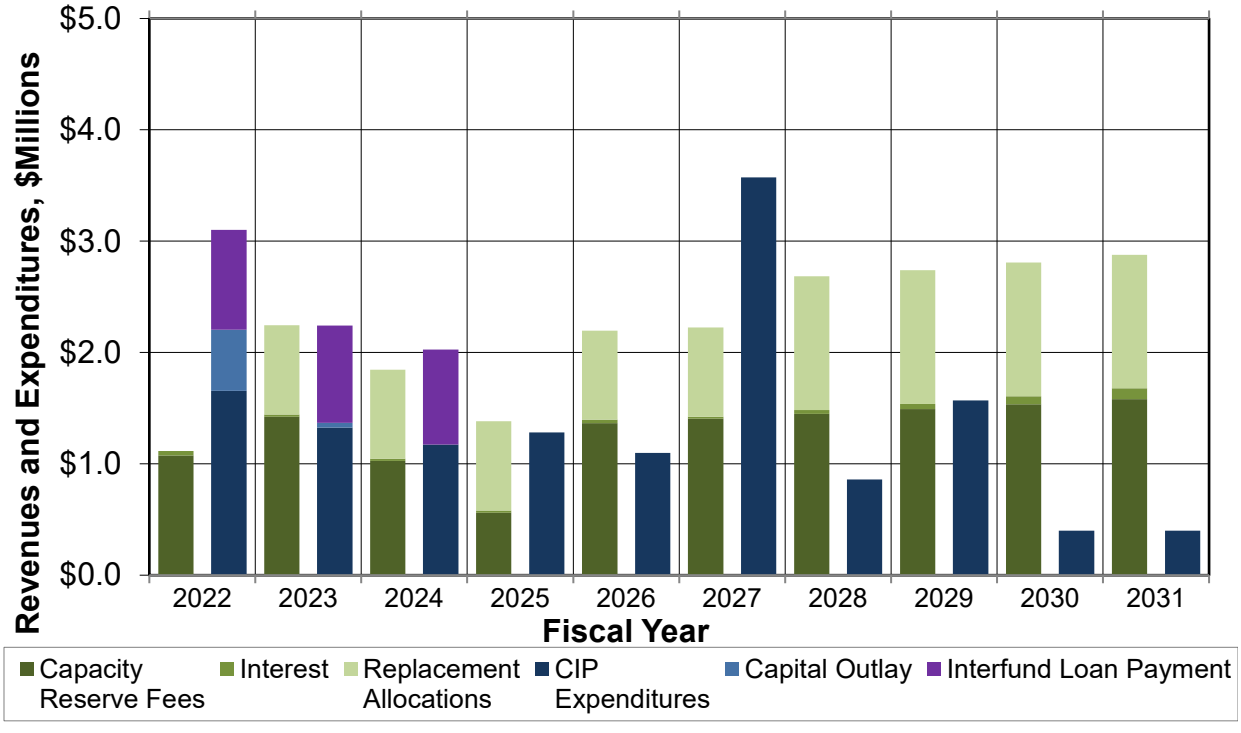


Figure 9 – Local Wastewater Replacement Fund Revenue & Expenditures



Local Wastewater Expansion (Fund 220)

The Local Wastewater Expansion fund (Fund 220) funds projects which expand or add local sewer facilities to accommodate increased wastewater flows from new development. The fund minimum reserve is the greater of two years debt service or the next two years of project expenditures.

Revenue & Expenditures

The fund's revenue includes capacity reserve fees, interest, and interfund loan repayment revenue. In the Two-Year Budget, the capacity reserve fee revenue represents 5 percent of the total revenue, while interest (10 percent) and interfund loan repayment revenue (85 percent) make up the remainder. Capacity Reserve Fee revenue is based on the most recent development projections and the current fee increased 3 percent annually.

CIP expenditures are the sole expenditure for the fund, which are shown in more detail in Table 9 in the following section. Project expenditures include various pipeline projects identified by the 2019 Sewer Collection System Master Plan to upsize pipelines as a result of development. The primary project in the near-term is the Dublin Boulevard – Amador Plaza Road to Village Parkway (20-S014) in Fiscal Year 2023.

Working Capital

The estimated beginning working capital for Fiscal Year 2022 is $7.59 million. This fund is well established, remaining above the fund minimum target for the entire planning period. Note the fund minimum reserve level is zero in 2028 as there are no CIP expenditures in Fiscal Years 2028 and 2029. The reduction in working capital after Fiscal Year 2030 is due to the Village Parkway – South of Dublin Boulevard (T20-06) project, estimated to cost $2,832,000.

Table 3 – Local Wastewater Collection Expansion Revenue, Expenditures, & Working Capital ($1,000's)

Fiscal Year	DUEs	Capacity Reserve Fees	Interest	Interfund Loan Repayment Revenue	CIP Expenditures	Working Capital
2022	479	$ 33	$ 76	$ 896		$ 8,590
2023	615	$ 43	$ 86	$ 875	$ 100	$ 9,494
2024	431	$ 31	$ 96	$ 854	$ 830	$ 9,645
2025	229	$ 17	$ 84		$ 1,300	$ 8,446
2026	540	$ 42	$ 83		$ 175	$ 8,396
2027	540	$ 43	$ 79		$ 500	$ 8, 018
2028	540	$ 44	$ 81			$ 8,143
2029	540	$ 46	$ 82			$ 8,270
2030	540	$ 47	$ 80		$ 275	$ 8,122
2031	540	$ 48	$ 56		$ 2,557	$ 5,670

Figure 10 – Local Wastewater Expansion Fund Working Capital

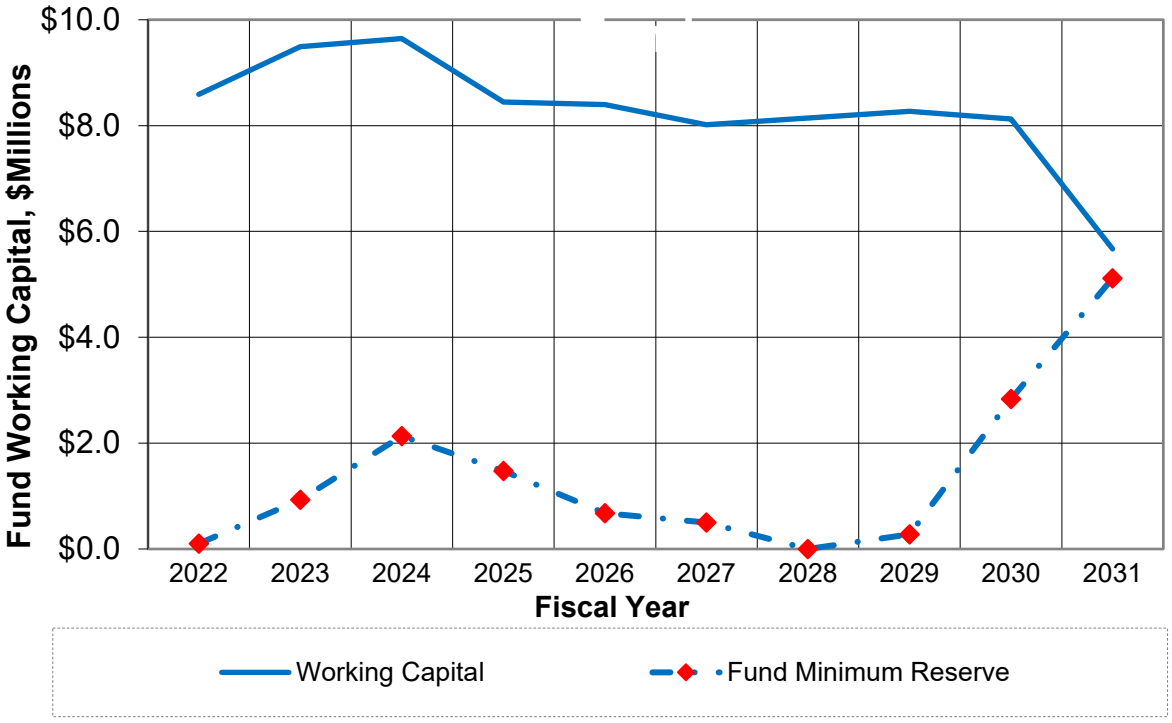
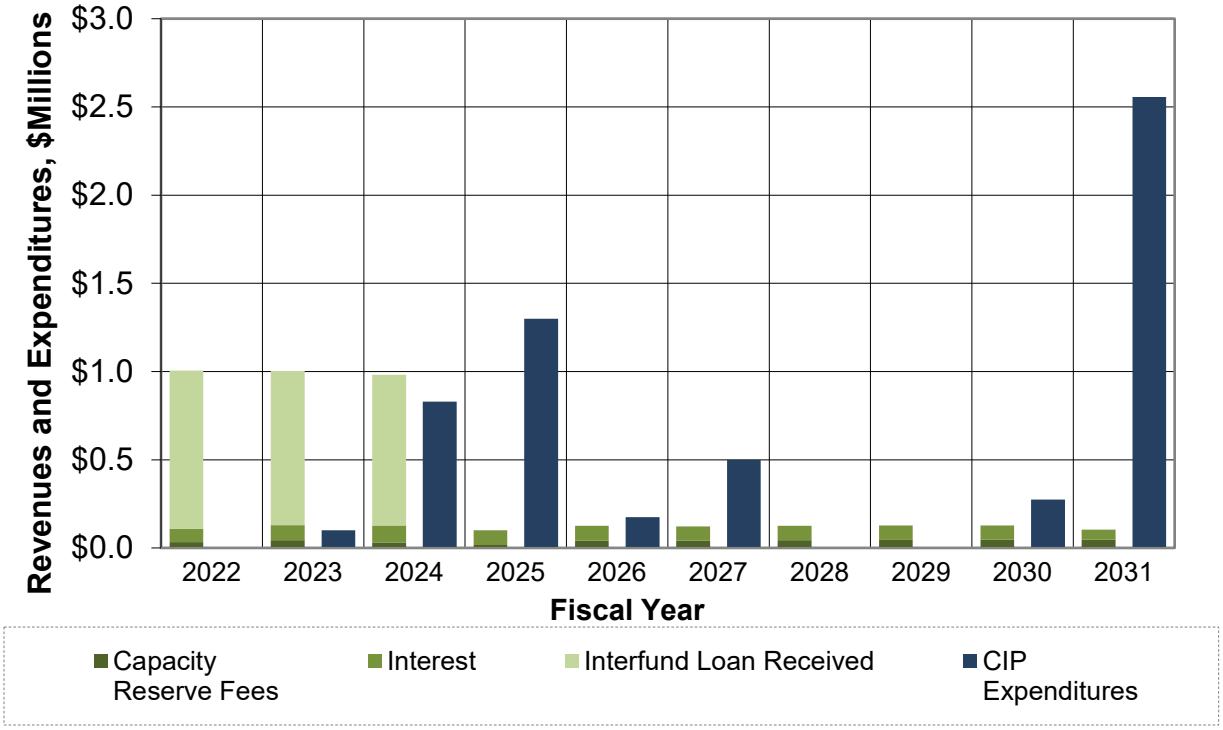


Figure 11 – Local Wastewater Expansion Fund Revenue & Expenditures



Regional Wastewater Treatment Replacement (Fund 310)

The Regional Wastewater Replacement fund (Fund 310) funds projects which replace and improve the existing Regional Wastewater Treatment Plant processes and facilities. It also funds projects to meet regulatory requirements. The plant treats the wastewater collected from the DSRSD local collection system as well as the wastewater flows from the City of Pleasanton before further treatment for recycled water or conveyance through the Livermore-Amador Valley Water Management Agency (LAVWMA) pipeline to the San Francisco Bay for disposal. The fund minimum reserve is twice the average annual expense of the fifteen-year CIP.

Revenue & Expenditures

The fund's revenue includes the existing infrastructure buy-in component of capacity reserve fees, interest, and the replacement allocation from the Regional Enterprise fund. In the Two-Year Budget, just over half of the fund's revenue comes from capacity reserve fees (54 percent), while 40 percent comes from replacement allocation. Interest is 6 percent of the fund's total revenue. The revenue from the Capacity Reserve Fee buy is based on the most recent development projections and the current fee increased 3 percent annually.

All CIP expenditures in the fund are shown in more detail in Table 10 in the following section. The other expenses in the fund are mainly capital outlay which includes replacement of aging equipment at the Wastewater Treatment Plant.

The CIP near-term expenditures are primarily the fund's contribution to the Primary Sedimentation and Expansion, Biogas Treatment System Improvements, Biogas Flare Improvements, and SCADA Improvements projects. The WWTP Replacement and Rehabilitation Program represents considerable expenditures in this fund increasing from $500,000 in 2022 to $2,300,000 in 2028. There is a spike in the expenditures and a related reduction of working capital in the last year of the ten-year plan to account for potential process improvements required to meet the San Francisco Bay Nutrients Watershed Permit. The projects conservatively assume there will be effluents limits on both nitrogen and phosphorus requiring three aeration basins, a secondary clarifier and improvements to the chlorine contact tank. The required projects will likely change based on a new watershed permit issued by the San Francisco Bay Regional Water Quality Control Board in 2024.

Working Capital

The estimated beginning working capital for Fiscal Year 2022 is $32.27 million. The working capital in this fund slowly increases over time in anticipation of rehabilitation and replacement costs projected beyond the ten-year plan horizon based on the asset management replacement model.

Table 4 – Regional Wastewater Replacement Revenue, Expenditures, & Working Capital ($1,000's)

Fiscal Year	DUEs	Capacity Reserve Fees	Interest	Replacement Allocation	CIP Expenditures	Other Expenses	Working Capital
2022	529	$ 2,000	$ 323	$ 1,800	$ 9,902	$ 794	$ 25,540
2023	850	$ 3,303	$ 255	$ 2,100	$ 6,557	$ 954	$ 24,237
2024	576	$ 2,297	$ 248	$ 2,400	$ 3,795	$ 404	$ 25,109
2025	374	$ 1,536	$ 190	$ 2,700	$ 10,017	$ 280	$ 19,239
2026	685	$ 2,898	$ 202	$ 3,000	$ 4,624	$ 280	$ 20,436
2027	685	$ 2,985	$ 229	$ 3,300	$ 3,574	$ 280	$ 23,096
2028	685	$ 3,075	$ 228	$ 3,700	$ 6,789	$ 280	$ 23,030
2029	685	$ 3,167	$ 223	$ 4,100	$ 7,674	$ 280	$ 22,567
2030	685	$ 3,262	$ 170	$ 4,500	$ 13,074	$ 280	$ 17,146
2031	685	$ 3,360	$ 103	$ 4,500	$ 14,474	$ 280	$ 10,355

Figure 12 – Regional Wastewater Treatment Replacement Fund Working Capital

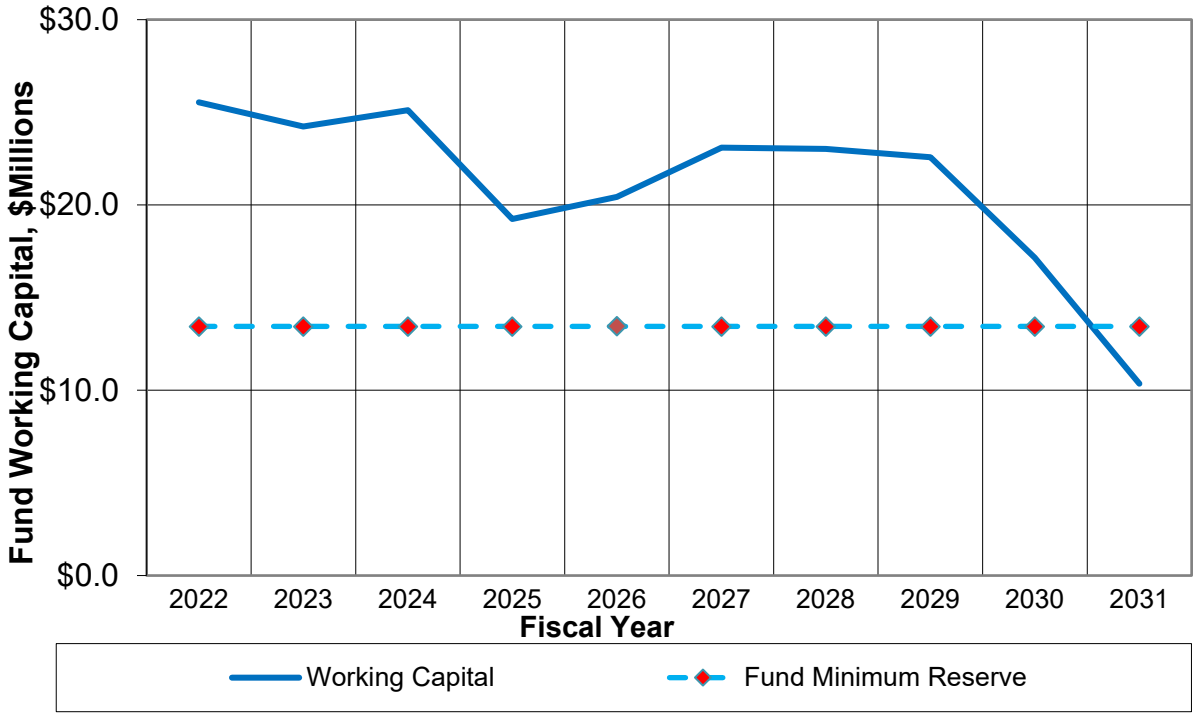
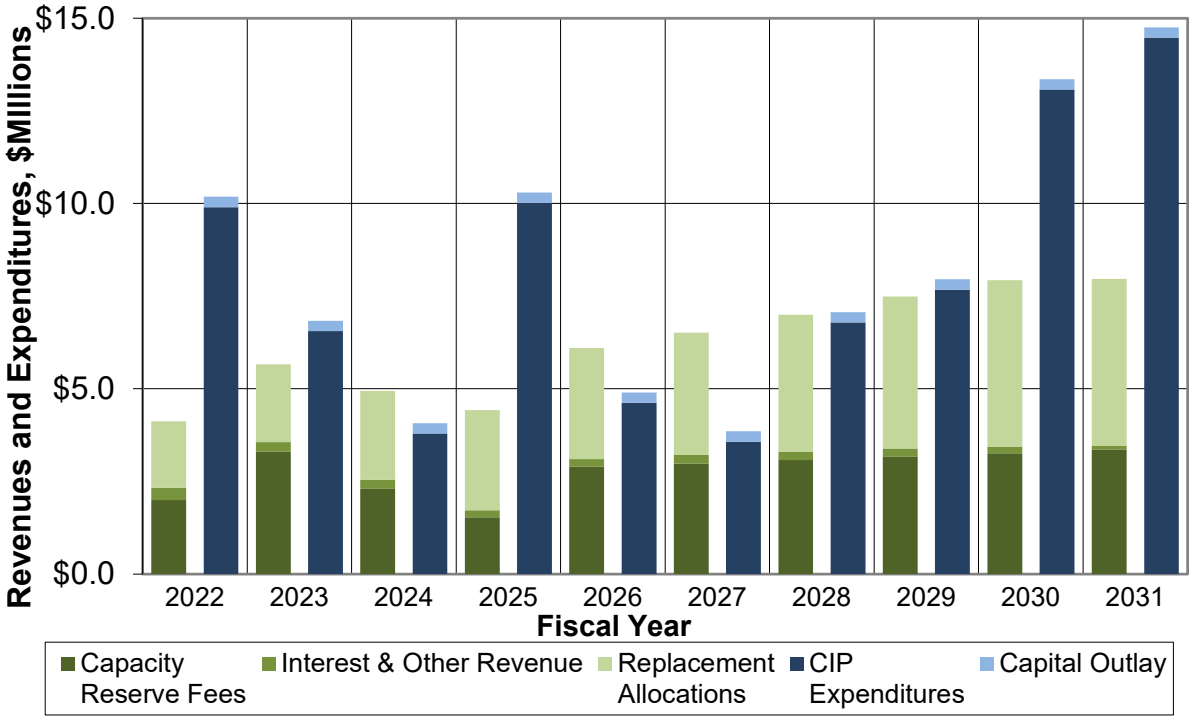


Figure 13 – Regional Wastewater Treatment Replacement Fund Revenue & Expenditures



Regional Wastewater Expansion (Fund 320)

The Regional Wastewater Replacement fund (Fund 320) funds projects which expand or add to the wastewater treatment process to accommodate future wastewater flows, ultimately conveyed through the LAVWMA pipeline to the San Francisco Bay for disposal. The fund minimum reserve is the greater of two years debt service or the next two years of project expenditures.

Revenue & Expenditures

The fund's revenue sources include capacity reserve fees and interest. In the Two-Year Budget, the capacity reserve fee revenue comprises 95 percent of the revenue for the fund. The revenue from the Capacity Reserve Fee is based on the most recent development projections and the current fee increased 3 percent annually.

The two expenditure types for the fund include CIP expenditures and debt service. The CIP near-term expenditures include the fund's contribution to the Primary Sedimentation and Expansion (17-P004) and Biogas Treatment System Improvements (16-P028) projects. The other significant project is the first phase of the Biosolids Dewatering (18-P013) project which includes $14.3 million in expenditures from 2027 to 2028. All CIP expenditures are shown in more detail in Table 11 in the following section. The LAVWMA debt service for this fund is approximately $4.3 million annually, ending in fiscal year 2032.

Working Capital

The estimated beginning working capital for Fiscal Year 2022 is $42.06 million. The projected working capital in Fiscal Year 2031, approximately $39 million, will be needed to fund future anticipated projects, including the second phase of the Biosolids Dewatering project. The working capital will also need to cover the remaining LAVWMA debt payment.

Table 5 – Regional Wastewater Treatment Expansion Revenue, Expenditures, & Working Capital ($1,000's)

Fiscal Year	DUEs	Capacity Reserve Fees	Interest	CIP Expenditures	Debt Service	Working Capital
2022	529	$ 5,391	$ 421	$ 4,934	$ 4,310	$ 38,628
2023	850	$ 8,747	$ 386	$ 1,166	$ 4,311	$ 42,285
2024	576	$ 5,978	$ 433	$ 661	$ 4,333	$ 43,702
2025	374	$ 3,930	$ 433		$ 4,313	$ 43,752
2026	685	$ 7,291	$ 444	$ 2,358	$ 4,312	$ 44,817
2027	685	$ 7,386	$ 454	$ 2,525	$ 4,327	$ 45,804
2028	685	$ 7,483	$ 369	$ 12,120	$ 4,312	$ 37,225
2029	685	$ 7,584	$ 405		$ 4,312	$ 40,901
2030	685	$ 7,688	$ 382	$ 6,094	$ 4,326	$ 38,551
2031	685	$ 7,795	$ 390	$ 3,000	$ 4,325	$ 39,410

Figure 14 – Regional Wastewater Treatment Expansion Fund Working Capital

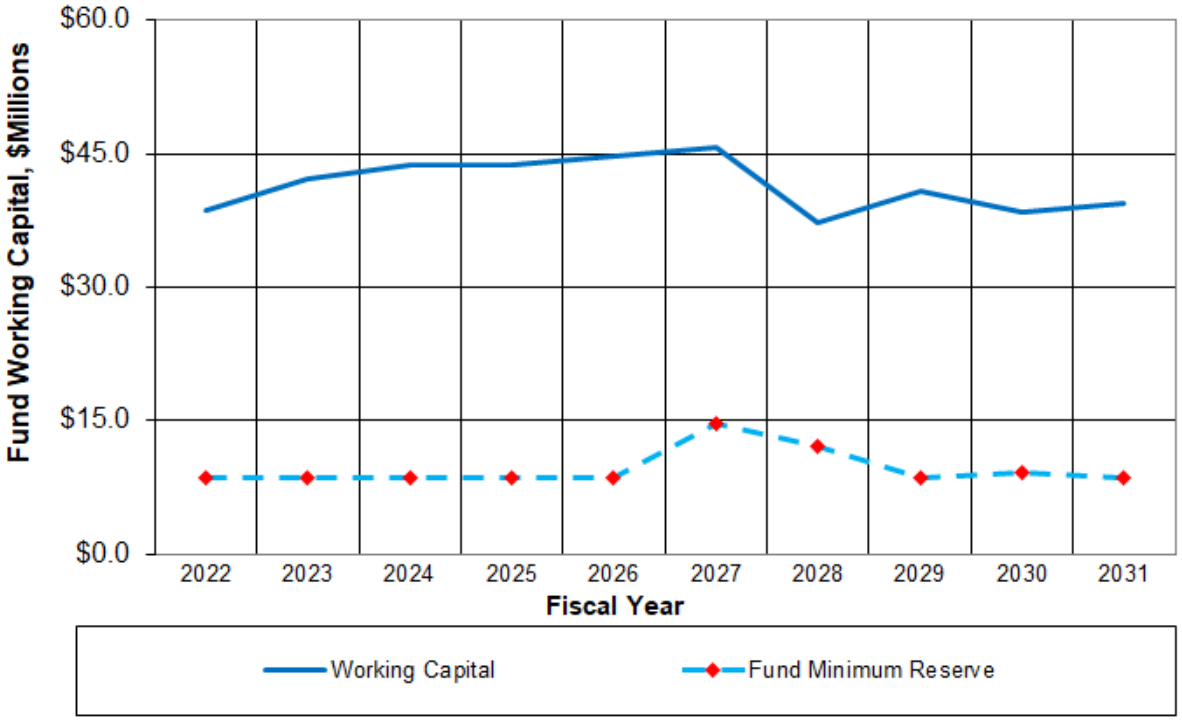
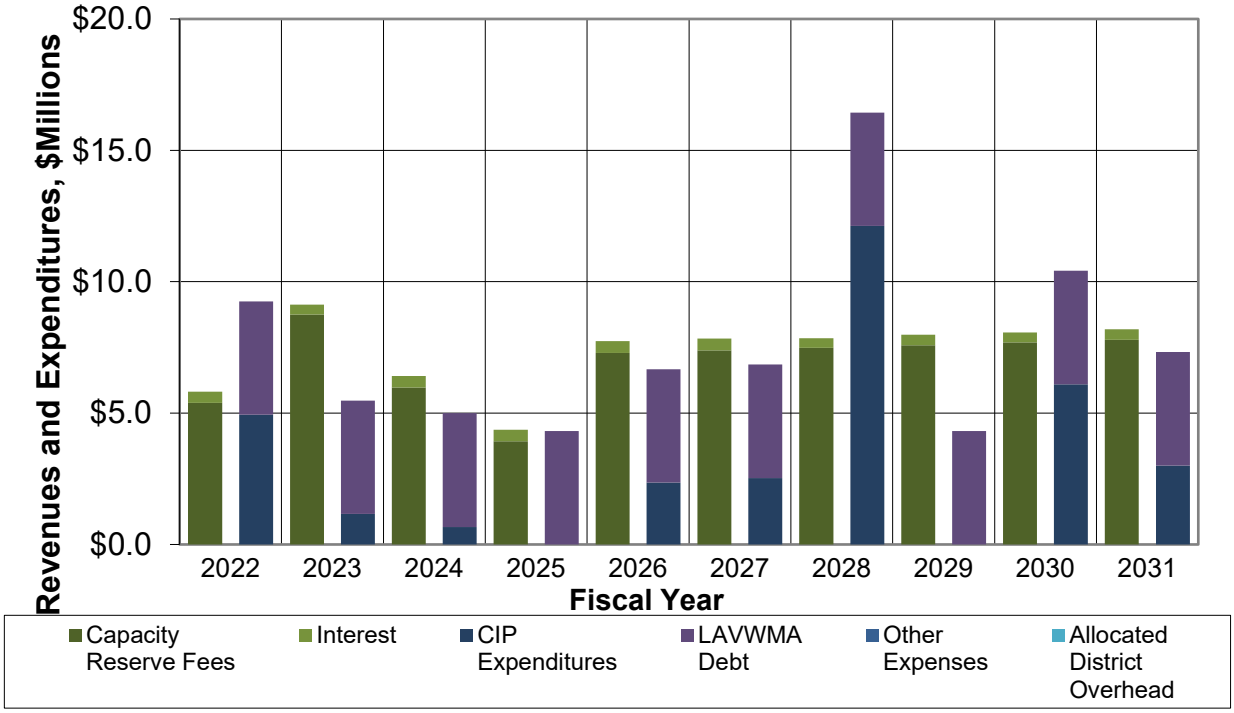


Figure 15 – Regional Wastewater Treatment Expansion Fund Revenue & Expenditures



Water Replacement (Fund 610)

The Water Replacement fund (Fund 610) funds projects which replace and improve facilities to treat recycled water, as well as the pipelines, pump stations, reservoirs, and related appurtenances to distribute water potable water (from the Zone 7 turnouts to the customers) and recycled water (from the Dublin San Ramon Services District East Bay Municipal Utility District Recycled Water Agency (DERWA) transmission system to recycled customers). The fund minimum reserve is twice the average annual expense of the fifteen-year CIP.

Revenue & Expenditures

The fund's revenue includes the existing infrastructure buy-in component of capacity reserve fees, interest, and the replacement allocation from the Water Enterprise fund. In the Two-Year Budget, two-thirds of the fund's revenue comes from replacement allocation, while the remaining third comes from the existing infrastructure buy-in component. Interest in the fund is about 2% of the total revenue. The revenue from the Capacity Reserve Fee is based on the most recent development projections and the current fee increased 3 percent annually. The replacement allocation has been increased annually in anticipation of rehabilitation and replacement costs projected beyond the ten-year plan horizon based on the asset management replacement model.

CIP expenditures, capital outlay, and contributions to DERWA are the three expenditure types for the fund. In the way of pipeline replacement, there are two large projects which will occur in the two-year budget: 1) Water Lines Replacement – Wineberry and Canterbury Area (16-W017) and 2) Camp Parks Water Main – Cromwell Avenue, 12th Street, and Mitchell Drive (20-W024). The Capital Improvements to Increase Water Supply Program – Phase 2 (00-W002), budgeted at $30 million in this fund, comprises a large share of the total CIP expenditures, as well as the Water System Replacement and Rehabilitation Program (00-W011). All CIP expenditures are shown in more detail in Table 12 in the following section.

Working Capital

The estimated beginning working capital for Fiscal Year 2022 is $26.58 million. While this fund is projected to spend $30 million on alternative water supplies over Fiscal Year 2026 through 2035, per recent discussions with the Board of Directors, this project may be debt funded. The working capital in this fund is well established to address future expenditures, but due to several large projects in the next two years, is just below the reserve target before recovering in Fiscal Year 2024. This fund was impacted by a Board of Directors on May 4, 2021 approval of a net payment of $11 million to the Water Expansion Fund to pay the remaining share of loan payments from water ratepayers.

Table 6 – Water System Replacement Revenue, Expenditures, & Working Capital ($1,000's)

Fiscal Year	DUEs	Capacity Reserve Fees	Replacement Allocation	Interest	CIP Expenditures	Capital Outlay	Contribution to JPA	Working Capital
2022	512	$ 2,239	$ 6,170	$ 266	$ 11,310	$ 478	$286	$ 23,292
2023	743	$ 3,346	$ 6,280	$ 234	$ 13,223	$ 213	$174	$ 19,542
2024	632	$ 2,932	$ 6,390	$ 221	$ 6,760			$ 22,324
2025	337	$ 1,610	$ 6,500	$ 295	$ 965			$ 29,764
2026	659	$ 3,243	$ 6,610	$ 363	$ 3,393			$ 36,587
2027	659	$ 3,340	$ 6,720	$ 357	$ 10,958			$ 36,046
2028	659	$ 3,441	$ 6,830	$ 366	$ 9,705			$ 36,978
2029	659	$ 3,544	$ 6,940	$ 387	$ 8,743			$ 39,106
2030	659	$ 3,650	$ 7,050	$ 376	$ 12,193			$ 37,990
2031	659	$ 3,760	$ 7,160	$ 274	$ 21,543			$ 27,640

Figure 16 – Water Replacement Fund Working Capital

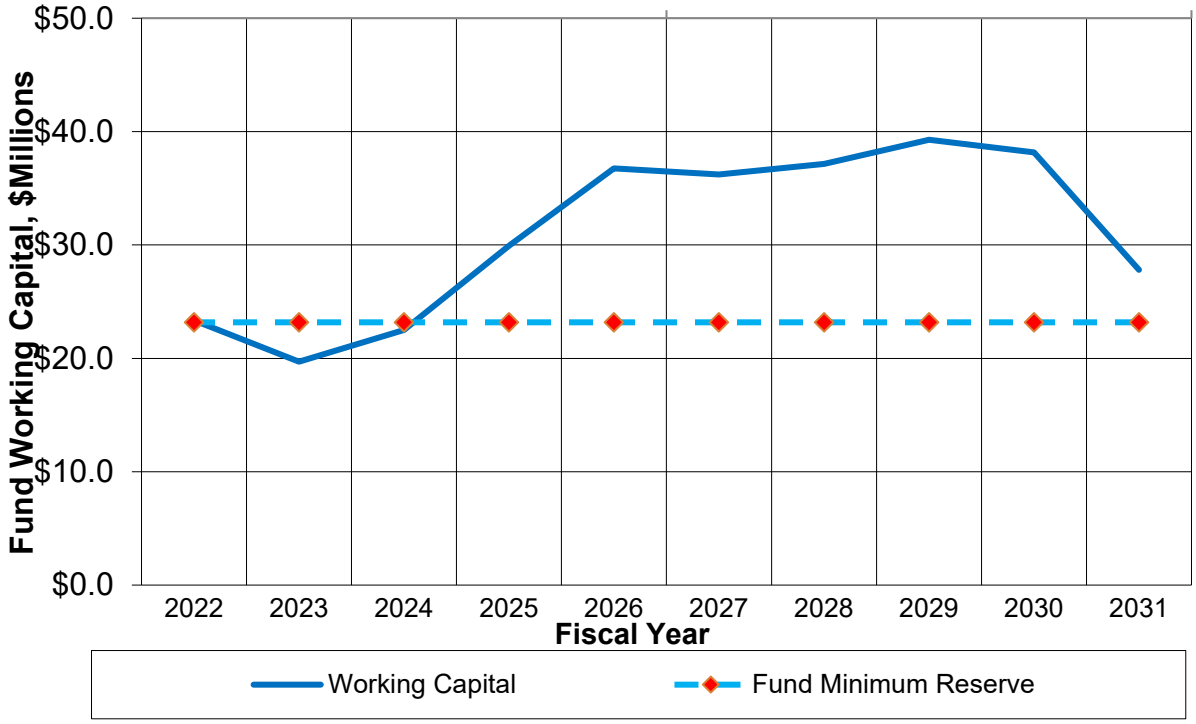
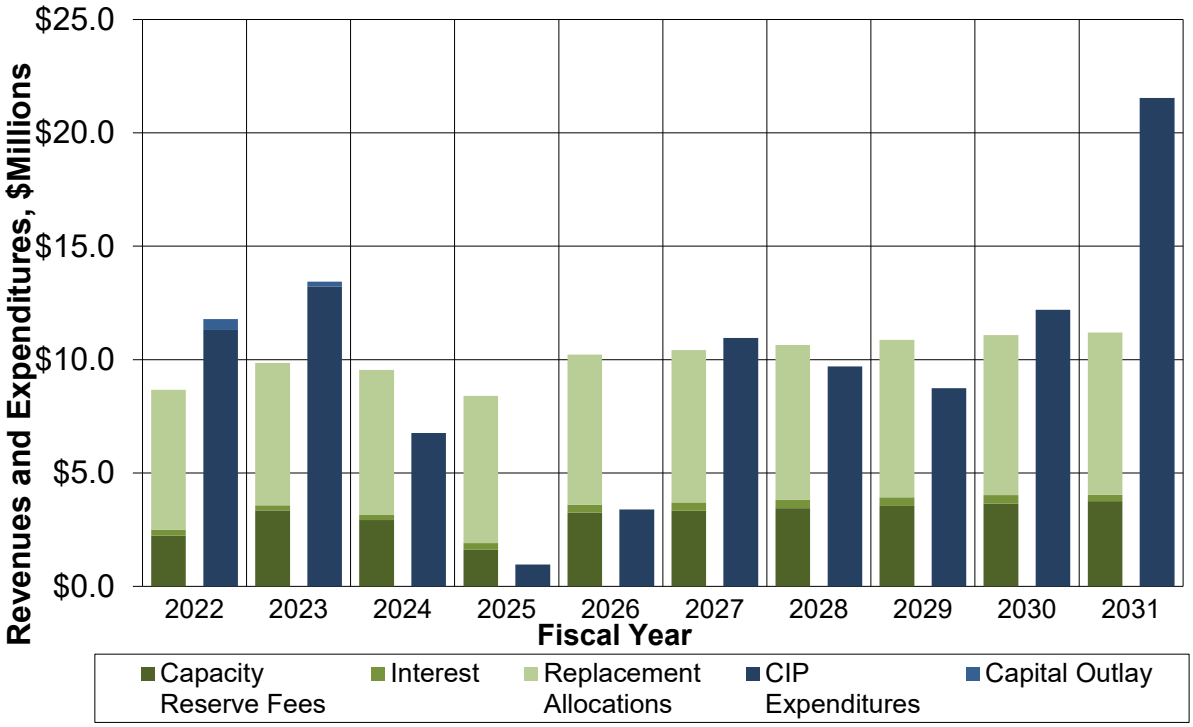


Figure 17 – Water Replacement Fund Revenue & Expenditures



Water Expansion (Fund 620)

The Water Expansion fund (Fund 620) funds projects which expand or add facilities to treat recycled water and to distribute potable and recycled water. The fund minimum reserve is the greater of two years debt service or the next two years of project expenditures.

Revenue & Expenditures

The fund's revenue sources include capacity reserve fees and interest. In the Two-Year Budget, the capacity reserve fee revenue comprises 95 percent of the revenue for the fund. The revenue from the Capacity Reserve Fee is based on the most recent development projections and the current fee increased 3 percent annually.

CIP expenditures and debt service are the primary expense types in the fund. The primary, near-term CIP expenditures include the construction of Reservoir 10A (17-W003) and Reservoir 20B (14-W008) for a combined total project cost of over $25 million. Other large projects include the construction of Turnout 6 (17-W003), and the fund's share of the Capital Improvements to Increase Water Supply Program – Phase 2 (00-W002). All CIP expenditures are shown in more detail in Table 13 in the following section. The fund is also responsible for the debt service for 2018 refinanced water bond repayment, through 2042 and the DERWA Loan, through 2027.

Working Capital

The estimated beginning working capital for Fiscal Year 2022 is $41.64 million. The fund's beginning working capital reflects the transfers into the fund for the ratepayer share of debt and the Temporary Infrastructure Charge repayment approved by the Board of Directors on May 4, 2021. The most significant CIP expenditure change from the last review is an increase in the Turnout 6 project (20-W015) budget to $8.9 million due to the complexity of the project and the locations available to connect to the Zone 7 Cross Valley Pipeline. This fund is reliant upon development related fees, and in the event of a downturn in the economy, all projects will be evaluated and deferred if necessary. Staff is closely monitoring the development revenue to ensure a healthy fund balance in the fund. Staff will also undertake a Water Capacity Reserve Fee in Fiscal Year 2022, assessing the increased costs mentioned above to generate appropriate revenue for the projects and debt service funded from Water Expansion. Working capital in the fund is below the fund minimum in Fiscal Year 2023 due to the anticipated construction costs of Reservoir 10A and Reservoir 20B. For the remainder of the ten-year period, the working capital remains above fund minimum reserve target.

Table 7 – Water System Expansion Revenue, Expenditures, & Working Capital ($1,000's)

Fiscal Year	DUEs	Capacity Reserve Fees	Interest	CIP Expenditures	Contribution to JPA	Debt Service	DERWA Debt	Working Capital
2022	512	$ 4,927	$ 416	$ 8,701	$ 16	$ 1,880	$ 823	$ 35,560
2023	743	$ 7,274	$ 355	$ 14,049		$ 1,877	$ 823	$ 26,441
2024	632	$ 6,296	$ 169	$ 13,087		$ 1,878	$ 846	$ 17,095
2025	337	$ 3,417	$ 168	$ 965		$ 1,877	$ 846	$ 16,992
2026	659	$ 6,801	$ 209	$ 125		$ 1,875	$ 333	$ 21,669
2027	659	$ 6,924	$ 252	$ 720		$ 2,306		$ 25,818
2028	659	$ 6,924	$ 302	$ 375		$ 2,587		$ 30,083
2029	659	$ 6,924	$ 341	$ 625		$ 2,577		$ 34,146
2030	659	$ 6,924	$ 379	$ 625		$ 2,579		$ 38,245
2031	659	$ 6,924	$ 395	$ 3,125		$ 5,578		$ 39,861

Figure 18 – Water Expansion Fund Working Capital

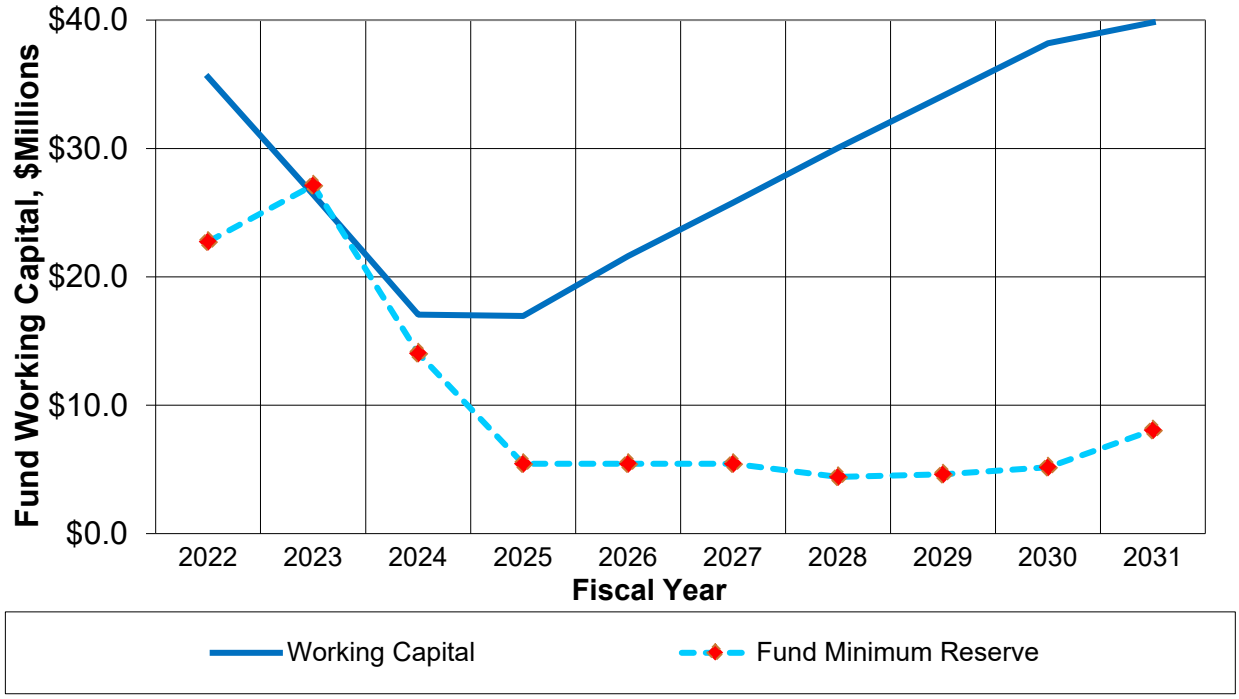
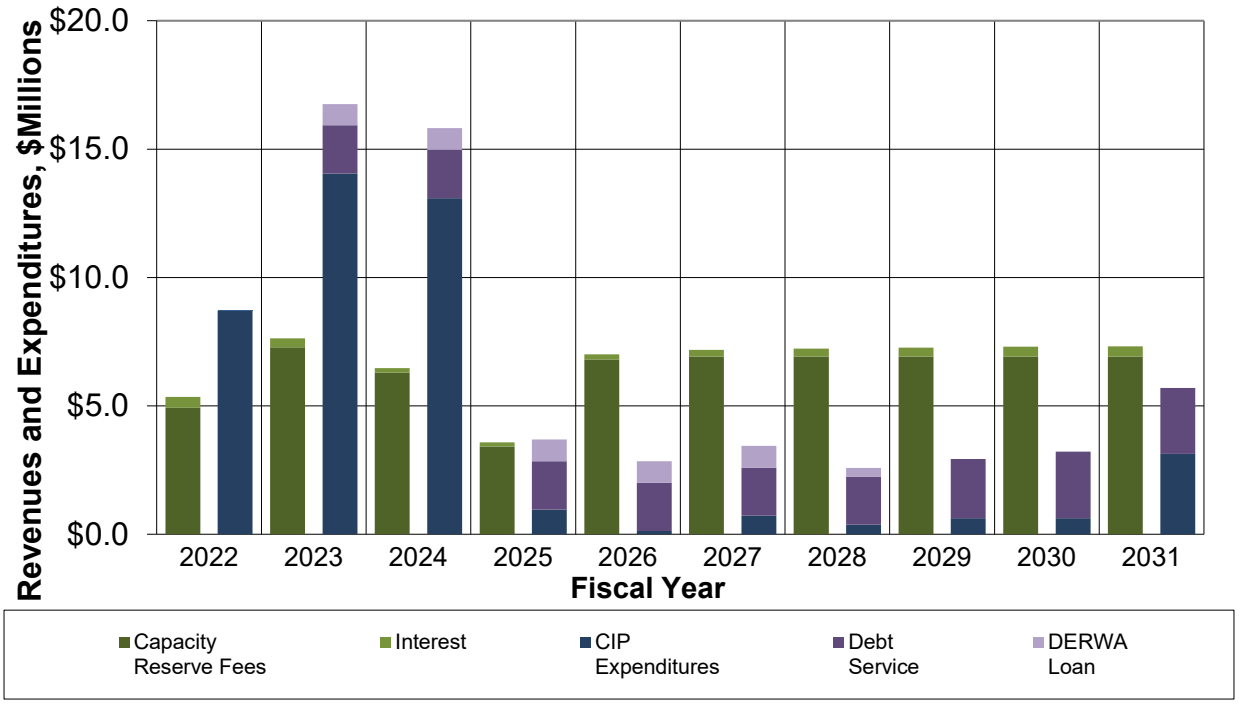


Figure 19 – Water Expansion Fund Revenue & Expenditures



Project Expenditures by Fund

The following tables present CIP Project expenditures by fund. The amounts shown are the District's costs, net of any grants or other funding. The tables illustrate the portion of estimated cash flow allocated to each fund. When a project is funded by multiple funds, it will appear multiple times, at the appropriate allocated percentage. Expenditures in the "Future" columns include the estimate of expenditures for the next five years beyond the ten-year planning period.

Table 8 – Local Replacement (Fund 210)

Table 9 – Local Expansion (Fund 220)

Table 10 – Regional Replacement (Fund 310)

Table 11 – Regional Expansion (Fund 320)

Table 12 – Water Replacement (Fund 610)

Table 13 – Water Expansion (Fund 610)

CIP 10-Year Plan for Fiscal Years Ending 2022 through 2031

Portion of Estimated Cashflow Allocated to Local Wastewater Replacement (Fund 210)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	210 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
General														
20-A024	Field Operations Facility - Skylight Replacements	15%	12,000	0	0	0	0	0	0	0	0	0	0	12,000
20-A029	District Office Accessibility Improvements	10%	0	0	0	0	0	0	50,000	0	0	0	0	50,000
22-A002	Field Operations Facility Warehouse Storage Improvements	15%	0	15,000	0	0	0	0	0	0	0	0	0	15,000
22-A005	District Office Backup Generator Replacement	12%	0	114,000	0	0	0	0	0	0	0	0	0	114,000
18-P008	Industrial Control Network Security Essentials	11%	29,426	0	0	0	0	0	0	0	0	0	0	29,426
20-A002	Enterprise Resource Program System Conversion	12%	90,000	0	0	0	0	0	0	0	0	0	0	90,000
22-A006	District Office Roof Repair	12%	8,400	0	0	0	0	0	0	0	0	0	0	8,400
00-A003	Street Overlay Modification PROGRAM	50%	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	400,000	1,200,000
T20-13	Gleason Drive Property Planning Study	10%	0	0	0	0	0	0	0	0	0	0	20,000	20,000
20-A001	Computing Infrastructure Replacement	12%	19,200	14,400	0	0	0	0	0	0	0	0	0	33,600
17-A007	Wide Area Network Communications Phase 2	10%	13,560	0	0	0	0	0	0	0	0	0	0	13,560
T18-23	Fleet Replacement PROGRAM	20%	0	0	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	300,000	780,000
T18-24	Facilities Asset Replacement PROGRAM	2%	0	0	8,600	8,600	8,600	8,600	8,600	8,600	8,600	8,600	43,000	111,800
T18-02	Network Infrastructure and Security	12%	0	12,000	18,000	30,000	0	60,000	0	0	0	0	0	120,000
Wastewater Collection														
21-S008	Lift Station 2 Upgrades	100%	64,500	0	0	0	0	0	0	0	0	0	0	64,500
T20-05	Dublin Court and Dublin Boulevard Sewer Replacement	100%	0	0	0	0	200,000	550,000	0	0	0	0	0	750,000
T22-20	Large Diameter Sewer Condition Assessment	100%	0	0	150,000	0	0	0	0	0	0	0	0	150,000
20-S013	East Dublin 36" Trunk Sewer Rehabilitation	100%	1,004,000	0	0	0	0	0	0	0	0	0	0	1,004,000
00-S020	Wastewater Collection System Replacement and Rehabilitation PROGRAM	100%	150,000	150,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	4,800,000
18-S006	San Ramon Golf Course 24" Trunk Sewer Rehabilitation	100%	0	0	557,500	0	0	0	0	0	0	0	0	557,500

Table 8 - Project Expenditures By Fund (Local Replacement)

**Amounts shown are District costs net of grants and other fundings*

Portion of Estimated Cashflow Allocated to Local Wastewater Replacement (Fund 210)

CIP No.	Project Name	210 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
18-S007	Alcosta Blvd Sewer Replacement	100%	0	0	0	0	63,500	583,775	0	0	0	0	0	647,275
22-S008	Sewer Collection System Evaluation and Spot Repair	100%	50,000	250,000	0	0	0	0	0	0	0	0	0	300,000
14-S001	Camp Parks Sewer Rehabilitation Project - Goodfellow Ave North of 8th Street	100%	100,000	690,000	0	0	0	0	0	0	0	0	0	790,000
T14-02	Camp Parks Sewer Rehabilitation Project - Davis and Cromwell, 8th to 10 Streets	100%	0	0	0	0	260,000	1,380,000	0	0	0	0	0	1,640,000
14-S002	Camp Parks Sewer Rehabilitation Project - Adams 8th to 10th Streets	100%	0	0	0	0	175,000	600,000	0	0	0	0	0	775,000
T16-50	Iron Horse Trail Sewer Replacement	100%	0	0	0	855,000	0	0	0	0	0	0	0	855,000
08-2101	Donahue Dr./Vomac Rd. Relief Sewer	100%	0	0	0	0	0	0	410,000	1,170,000	0	0	0	1,580,000
Water System														
T22-19	Field Operations and District Facilities Energy Plan	5%	0	0	32,500	0	0	0	0	0	0	0	0	32,500
22-A004	Fiscal Year 2022 Manhole and Valve Adjustments - City of Dublin	15%	33,900	0	0	0	0	0	0	0	0	0	0	33,900
16-A016	District Facilities Security Project - Phase 2	10%	0	0	15,000	0	0	0	0	0	0	0	0	15,000
			1,654,986	1,325,400	1,171,600	1,283,600	1,097,100	3,572,375	858,600	1,568,600	398,600	398,600	3,263,000	16,592,461

CIP 10-Year Plan for Fiscal Years Ending 2022 through 2031

Portion of Estimated Cashflow Allocated to Local Wastewater Expansion (Fund 220)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	220 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
General														
T20-13	Gleason Drive Property Planning Study	5%	0	0	0	0	0	0	0	0	0	0	10,000	10,000
Wastewater Collection														
T20-04	Dublin Boulevard - Clark Avenue to Sierra Court	100%	0	0	0	0	175,000	500,000	0	0	0	0	0	675,000
T20-06	Village Parkway - South of Dublin Boulevard	100%	0	0	0	0	0	0	0	0	275,000	2,557,000	0	2,832,000
20-S028	Dublin Boulevard Extension Sewer Facilities	100%	0	50,000	655,000	655,000	0	0	0	0	0	0	0	1,360,000
20-S014	Dublin Boulevard - Amador Plaza Road to Village Parkway	100%	0	50,000	175,000	645,000	0	0	0	0	0	0	0	870,000
T00-76	Dublin Trunk Relief Sewer	100%	0	0	0	0	0	0	0	0	0	0	6,945,000	6,945,000
			0	100,000	830,000	1,300,000	175,000	500,000	0	0	275,000	2,557,000	6,955,000	12,692,000

CIP 10-Year Plan for Fiscal Years Ending 2022 through 2031

Portion of Estimated Cashflow Allocated to Regional Wastewater Replacement (Fund 310)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	310 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
General														
20-A029	District Office Accessibility Improvements	53%	0	0	0	0	0	0	265,000	0	0	0	0	265,000
22-A005	District Office Backup Generator Replacement	50%	0	475,000	0	0	0	0	0	0	0	0	0	475,000
18-P008	Industrial Control Network Security Essentials	52%	139,104	0	0	0	0	0	0	0	0	0	0	139,104
20-A002	Enterprise Resource Program System Conversion	50%	375,000	0	0	0	0	0	0	0	0	0	0	375,000
22-A006	District Office Roof Repair	50%	35,000	0	0	0	0	0	0	0	0	0	0	35,000
20-A001	Computing Infrastructure Replacement	50%	80,000	60,000	0	0	0	0	0	0	0	0	0	140,000
17-A007	Wide Area Network Communications Phase 2	46%	62,378	0	0	0	0	0	0	0	0	0	0	62,378
T18-23	Fleet Replacement PROGRAM	30%	0	0	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	450,000	1,170,000
T18-24	Facilities Asset Replacement PROGRAM	66%	0	0	283,800	283,800	283,800	283,800	283,800	283,800	283,800	283,800	1,419,000	3,689,400
T18-02	Network Infrastructure and Security	50%	0	50,000	75,000	125,000	0	250,000	0	0	0	0	0	500,000
Regional Wastewater Treatment														
21-P004	Cogeneration Room Cooling	100%	111,000	0	0	0	0	0	0	0	0	0	0	111,000
21-P009	East Amador Lift Station Rehabilitation	100%	1,350,000	0	0	0	0	0	0	0	0	0	0	1,350,000
20-P010	Cogeneration Engine #4	100%	0	0	1,000,000	7,000,000	0	0	0	0	0	0	0	8,000,000
20-P012	WWTP Security Improvements	100%	0	0	0	454,574	0	0	0	0	0	0	0	454,574
T20-14	WWTP/Biosolids Master Plan	15%	0	0	97,500	0	0	0	0	0	0	0	0	97,500
T20-15	Flocculation Baffles in Secondary Clarifiers	100%	0	0	0	80,000	0	0	0	0	0	0	0	80,000
T22-09	Recoating and Rehabilitation of Digester 3, 2, and 1	100%	0	0	0	0	350,000	350,000	500,000	0	0	0	0	1,200,000
T22-18	Inner Sewer Flow Metering	100%	0	0	0	0	0	500,000	0	0	0	0	0	500,000
T22-21	Backup Power at Laboratory	80%	0	0	72,000	0	0	0	0	0	0	0	0	72,000
T22-28	Laboratory Cabinetry Replacement	80%	0	0	160,000	0	0	0	0	0	0	0	0	160,000
22-P009	WWTP Energy Master Plan	80%	640,000	0	0	0	0	0	0	0	0	0	0	640,000
22-P010	WWTP HVAC Replacements	100%	60,000	150,000	0	0	0	0	0	0	0	0	0	210,000
22-P011	WWTP Roof Replacements	100%	0	300,000	0	0	0	0	0	0	0	0	0	300,000

Table 10 - Project Expenditures By Fund (Regional Replacement)

Portion of Estimated Cashflow Allocated to Regional Wastewater Replacement (Fund 310)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	310 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
22-P012	Cogen Catalyst Housings Replacement	100%	310,000	0	0	0	0	0	0	0	0	0	0	310,000
22-P013	WWTP Process Assessment	100%	100,000	175,000	0	0	0	0	0	0	0	0	0	275,000
22-P022	WWTP Administration Building (Building A) Remodel/Renovation	100%	0	100,000	0	0	0	0	0	0	0	0	0	100,000
16-P024	WWTP Fire Alarm System Upgrades	100%	143,120	0	0	0	0	0	0	0	0	0	0	143,120
16-P028	Biogas Treatment System Improvements	33%	747,450	426,360	0	0	0	0	0	0	0	0	0	1,173,810
16-P030	EPS1 and EPS2 Pump Modifications	100%	0	100,703	0	0	0	0	0	0	0	0	0	100,703
17-P004	Primary Sedimentation Expansion and Improvements	15%	507,395	0	0	0	0	0	0	0	0	0	0	507,395
18-P010	Biogas Flare Improvements	100%	340,000	920,000	0	0	0	0	0	0	0	0	0	1,260,000
00-P026	RWTF Replacement and Rehabilitation PROGRAM	100%	500,000	500,000	1,200,000	1,600,000	1,900,000	2,100,000	2,300,000	2,300,000	2,100,000	2,100,000	6,500,000	23,100,000
05-3206	WWTP SCADA Improvements	100%	3,030,000	1,000,000	0	0	0	0	0	0	0	0	0	4,030,000
18-P002	WWTP Electrical System Master Plan	100%	0	500,000	0	0	0	0	0	0	0	0	0	500,000
18-P016	Alum Addition	75%	1,144,500	0	0	0	0	0	0	0	0	0	0	1,144,500
14-P005	Wet Weather Flow Capacity and Chlorine Contact Tank Dewatering	85%	0	0	616,250	0	0	0	0	0	0	0	0	616,250
18-P014	WWTP Recycled and Potable Water Systems	100%	0	0	200,000	184,000	0	0	0	0	0	0	0	384,000
18-P017	Public Outreach Signage at WWTP	100%	0	100,000	0	0	0	0	0	0	0	0	0	100,000
20-P006	Recoating of Digester Interior Covers 3, 2, and 1	100%	227,066	0	0	0	0	0	0	0	0	0	0	227,066
22-P021	Hypochlorite Building Rehabilitation	100%	0	490,000	0	0	0	0	0	0	0	0	0	490,000
T16-11	WWTP Motor Control Center and Distribution Panel "A" Improvements	100%	0	0	0	0	0	0	1,350,600	0	0	0	0	1,350,600
T16-40	WWTP Pavement Repair	100%	0	0	0	200,000	0	0	0	0	0	0	0	200,000
19-P003	WWTP Fencing and Security - Phase 2	100%	0	1,210,000	0	0	0	0	0	0	0	0	0	1,210,000
T16-54	Odor Reduction Tower Replacement	100%	0	0	0	0	2,000,000	0	0	0	0	0	0	2,000,000
T18-15	Cogeneration Engine Replacement	100%	0	0	0	0	0	0	2,000,000	5,000,000	5,000,000	0	0	12,000,000
T16-42	Nutrient Removal	80%	0	0	0	0	0	0	0	0	5,600,000	12,000,000	12,000,000	29,600,000
			9,902,013	6,557,063	3,794,550	10,017,374	4,623,800	3,573,800	6,789,400	7,673,800	13,073,800	14,473,800	20,369,000	100,848,400

CIP 10-Year Plan for Fiscal Years Ending 2022 through 2031

Portion of Estimated Cashflow Allocated to Regional Wastewater Expansion (Fund 320)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	320 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
Regional Wastewater Treatment														
T20-14	WWTP/Biosolids Master Plan	85%	0	0	552,500	0	0	0	0	0	0	0	0	552,500
22-P009	WWTP Energy Master Plan	20%	160,000	0	0	0	0	0	0	0	0	0	0	160,000
16-P028	Biogas Treatment System Improvements	67%	1,517,550	865,640	0	0	0	0	0	0	0	0	0	2,383,190
17-P004	Primary Sedimentation Expansion and Improvements	85%	2,875,236	0	0	0	0	0	0	0	0	0	0	2,875,236
18-P016	Alum Addition	25%	381,500	0	0	0	0	0	0	0	0	0	0	381,500
14-P005	Wet Weather Flow Capacity and Chlorine Contact Tank Dewatering	15%	0	0	108,750	0	0	0	0	0	0	0	0	108,750
18-P013	Biosolids Dewatering Facility	100%	0	300,000	0	0	0	2,525,000	12,120,000	0	0	0	11,900,000	26,845,000
T10-62	Emergency Power for Distribution Panel-D	100%	0	0	0	0	0	0	0	0	0	0	5,560,000	5,560,000
T10-83	Cover Primary Clarifiers	100%	0	0	0	0	0	0	0	0	4,694,000	0	0	4,694,000
T12-08	Cover Settled Sewage Channel and Selector	100%	0	0	0	0	2,358,000	0	0	0	0	0	0	2,358,000
T16-42	Nutrient Removal	20%	0	0	0	0	0	0	0	0	1,400,000	3,000,000	3,000,000	7,400,000
			4,934,286	1,165,640	661,250	0	2,358,000	2,525,000	12,120,000	0	6,094,000	3,000,000	20,460,000	53,318,176

CIP 10-Year Plan for Fiscal Years Ending 2022 through 2031

Portion of Estimated Cashflow Allocated to Water Replacement (Fund 610)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	610 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
General														
20-A024	Field Operations Facility - Skylight Replacements	85%	68,000	0	0	0	0	0	0	0	0	0	0	68,000
20-A029	District Office Accessibility Improvements	37%	0	0	0	0	0	0	185,000	0	0	0	0	185,000
22-A001	FOF and WWTP Flag Poles	25%	0	12,500	0	0	0	0	0	0	0	0	0	12,500
22-A002	Field Operations Facility Warehouse Storage Improvements	85%	0	85,000	0	0	0	0	0	0	0	0	0	85,000
22-A005	District Office Backup Generator Replacement	38%	0	361,000	0	0	0	0	0	0	0	0	0	361,000
18-P008	Industrial Control Network Security Essentials	37%	98,978	0	0	0	0	0	0	0	0	0	0	98,978
20-A002	Enterprise Resource Program System Conversion	38%	285,000	0	0	0	0	0	0	0	0	0	0	285,000
22-A006	District Office Roof Repair	38%	26,600	0	0	0	0	0	0	0	0	0	0	26,600
00-A003	Street Overlay Modification PROGRAM	50%	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	400,000	1,200,000
T20-13	Gleason Drive Property Planning Study	55%	0	0	0	0	0	0	0	0	0	0	110,000	110,000
20-A001	Computing Infrastructure Replacement	38%	60,800	45,600	0	0	0	0	0	0	0	0	0	106,400
17-A007	Wide Area Network Communications Phase 2	44%	59,666	0	0	0	0	0	0	0	0	0	0	59,666
T18-23	Fleet Replacement PROGRAM	50%	0	0	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	750,000	1,950,000
T18-24	Facilities Asset Replacement PROGRAM	32%	0	0	137,600	137,600	137,600	137,600	137,600	137,600	137,600	137,600	688,000	1,788,800
T18-02	Network Infrastructure and Security	38%	0	38,000	57,000	95,000	0	190,000	0	0	0	0	0	380,000
Joint Powers Authority														
22-R014	DERWA HVAC Replacements	100%	0	0	0	0	0	0	0	0	0	0	0	0
22-R015	DERWA UV Lamp Electrical Connectors	100%	0	0	0	0	0	0	0	0	0	0	0	0
22-R016	DERWA Sand Filtration Ultra Violet System Cable Harness Replacement	100%	0	0	0	0	0	0	0	0	0	0	0	0
22-R017	DERWA Chlorine Mixer Replacement	100%	0	0	0	0	0	0	0	0	0	0	0	0
22-R018	DERWA Sand Filtration Ultra Violet and Microfiltration System Operational Analysis	100%	0	0	0	0	0	0	0	0	0	0	0	0

Portion of Estimated Cashflow Allocated to Water Replacement (Fund 610)

Table 12 - Project Expenditures by Fund (Water Replacement)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	610 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
22-R019	DERWA Air Relief Valve Rehabilitation/Replacements	100%	0	0	0	0	0	0	0	0	0	0	0	0
20-W021	DERWA TIPS VFD Upgrades	100%	0	0	0	0	0	0	0	0	0	0	0	0
T16-37	DERWA Microfiltration Rack and Membrane Replacement	100%	0	0	0	0	0	0	997,500	0	0	0	0	997,500
Regional Wastewater Treatment														
T22-21	Backup Power at Laboratory	20%	0	0	18,000	0	0	0	0	0	0	0	0	18,000
T22-28	Laboratory Cabinetry Replacement	20%	0	0	40,000	0	0	0	0	0	0	0	0	40,000
Water System														
19-W004	Valve and Blow-Off Replacement	100%	1,211,000	1,211,000	0	0	0	0	0	0	0	0	0	2,422,000
20-W019	Automated Water Quality Monitoring	100%	250,000	630,000	0	0	0	0	0	0	0	0	0	880,000
T22-03	Water Line Replacements - Camp Parks North of 8th Street	100%	0	0	0	0	405,000	4,595,000	0	0	0	0	0	5,000,000
T22-04	Water Line Replacement - Camp Parks South of 8th Street	100%	0	0	510,000	5,770,000	0	0	0	0	0	0	0	6,280,000
T22-05	Reservoir 1A Chloramination System Upgrade	100%	0	0	100,000	0	0	0	0	0	0	0	0	100,000
T22-19	Field Operations and District Facilities Energy Plan	95%	0	0	617,500	0	0	0	0	0	0	0	0	617,500
22-A003	Hydro-Excavation Spoils Storage Pad	100%	0	150,000	0	0	0	0	0	0	0	0	0	150,000
22-A004	Fiscal Year 2022 Manhole and Valve Adjustments - City of Dublin	85%	192,100	0	0	0	0	0	0	0	0	0	0	192,100
22-W007	Reservoir 1B Mixing System Replacement	100%	0	260,000	0	0	0	0	0	0	0	0	0	260,000
22-W020	2021 Alternative Water Supply Study – Phase 2	75%	187,500	187,500	750,000	0	0	0	0	0	0	0	0	1,125,000
16-W012	Potable Water Pump Station Standby Generators/Emergency Response	100%	2,760,905	0	0	0	0	0	0	0	0	0	0	2,760,905
18-W003	Reservoir 2 Recoating	100%	1,085,000	0	0	0	0	0	0	0	0	0	0	1,085,000
18-W021	Recycled Water Fire Hydrant Upgrades	100%	50,000	0	0	0	0	0	0	0	0	0	0	50,000
16-A016	District Facilities Security Project - Phase 2	90%	0	0	135,000	0	0	0	0	0	0	0	0	135,000
00-W011	Water System Replacement and Rehabilitation PROGRAM	100%	300,000	300,000	950,000	1,500,000	2,000,000	3,500,000	5,000,000	6,500,000	8,000,000	9,000,000	40,000,000	77,050,000
00-W002	Long-Term Water Resiliency PROGRAM	75%	0	0	0	0	375,000	750,000	1,125,000	1,875,000	1,875,000	9,375,000	14,625,000	30,000,000
12-W016	Reservoir 1B Recoating	100%	150,000	0	0	0	0	0	0	0	0	0	0	150,000

Table 12 - Project Expenditures by Fund (Water Replacement)

Portion of Estimated Cashflow Allocated to Water Replacement (Fund 610)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	610 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
16-W017	Water Lines Replacement - Wineberry and Canterbury Area	100%	811,162	5,780,400	0	0	0	0	0	0	0	0	0	6,591,562
17-A006	Field Operations Pavement Rehabilitation	100%	0	324,630	250,000	200,000	40,000	200,000	200,000	0	0	0	0	1,214,630
18-W004	Pump Station 3A MCC Improvements	100%	575,000	0	0	0	0	0	0	0	0	0	0	575,000
20-W023	Camp Parks Water Main - 5th Street, Adams to Davis Street	100%	0	550,000	0	0	0	0	0	0	0	0	0	550,000
20-W025	Pump Station 1A Rehabilitation	100%	330,000	3,220,000	2,965,000	0	0	0	0	0	0	0	0	6,515,000
T16-28	Water Lines Replacement - Tamarack Drive - Village Pkwy to Firethorn Way	100%	0	0	0	0	205,000	1,355,000	0	0	0	0	0	1,560,000
20-W024	Camp Parks Water Main - 12th Street, Mitchell Drive, Evans Avenue	100%	2,328,000	0	0	0	0	0	0	0	0	0	0	2,328,000
20-W017	Water System Master Plan and Operations Plan Update	80%	400,000	0	0	0	0	0	0	0	0	0	0	400,000
T16-31	Water Line Replacement - Ironwood Drive	100%	0	0	0	0	0	0	1,830,000	0	0	0	0	1,830,000
T16-67	Reservoir Recoating PROGRAM	100%	0	0	0	620,000	0	0	0	0	1,950,000	2,800,000	9,370,000	14,740,000
			11,309,711	13,235,630	6,760,100	8,552,600	3,392,600	10,957,600	9,705,100	8,742,600	12,192,600	21,542,600	65,943,000	172,334,141

CIP 10-Year Plan for Fiscal Years Ending 2022 through 2031

Portion of Estimated Cashflow Allocated to Water Expansion (Fund 620)

**Amounts shown are District costs net of grants and other fundings*

CIP No.	Project Name	620 Split	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Future	Total
General														
T20-13	Gleason Drive Property Planning Study	30%	0	0	0	0	0	0	0	0	0	0	60,000	60,000
Joint Powers Authority														
16-R014	DERWA Recycled Water Plant - Phase 2	100%	0	0	0	0	0	0	0	0	0	0	0	0
Water System														
20-W027	Dublin Boulevard Extension Water Facilities	100%	0	50,000	965,000	965,000	0	0	0	0	0	0	0	1,980,000
22-W020	2021 Alternative Water Supply Study – Phase 2	25%	62,500	62,500	250,000	0	0	0	0	0	0	0	0	375,000
17-W003	Reservoir 10A	100%	845,000	8,076,225	9,550,000	0	0	0	0	0	0	0	0	18,471,225
00-W002	Long-Term Water Resiliency PROGRAM	25%	0	0	0	0	125,000	250,000	375,000	625,000	625,000	3,125,000	4,875,000	10,000,000
14-W008	Reservoir 20B	100%	505,000	4,132,000	2,322,269	0	0	0	0	0	0	0	0	6,959,269
20-W017	Water System Master Plan and Operations Plan Update	20%	100,000	0	0	0	0	0	0	0	0	0	0	100,000
20-W015	Turnout 6	100%	7,188,206	1,728,000	0	0	0	0	0	0	0	0	0	8,916,206
08-6202	Pump Station 20A Improvements	100%	0	0	0	0	0	470,000	0	0	0	0	0	470,000
			8,700,706	14,048,725	13,087,269	965,000	125,000	720,000	375,000	625,000	625,000	3,125,000	4,935,000	47,331,700

Chapter 4: Project Worksheets

This Chapter provides a more detailed look at individual CIP projects and programs. Each project or program has a worksheet that presents the following fields:

1. Project Category
2. CIP Number and Project Title
3. Funding Allocation and Allocation Basis
4. Project Manager
5. Status
6. Project Summary
7. CEQA & Reference Documents
8. Ten-Year Cash Flow and Estimated Project Cost

The worksheets are grouped by the categories described below and arranged in the order of project timing. An index sheet listing the projects contained within each category is provided prior to the worksheets in that category.

1. **General:** Projects in the "general" category include those which are all-purpose, and typically affect District-wide assets that are not specific to one business enterprise. An example of a general project is the District Office Accessibility Improvements (20-A029), and the Enterprise Resource Program Conversion project (20-A002).

2. **Joint Powers Authority:** Projects in the "joint powers authority," (JPA) category are Dublin San Ramon Services District and East Bay Municipal Utility District Recycled Water Authority (DERWA) projects, which the District may manage, but only contributes a defined portion to, per the associated agreement. An example of a project in this category is the DERWA Air Relief Valve Rehabilitation/Replacement project (22-R019).

3. **Water System:** Projects in the "water system" category are those which are related to the water system business enterprise. An example of a water system project is the Water Lines Replacement – Wineberry and Canterbury Area project (16-W017).

4. **Wastewater Collection:** Projects in the "wastewater collection system" category are those which are related to the local wastewater collection system business enterprise. An example of a wastewater collection system project is the East Dublin 36" Trunk Sewer Rehabilitation project (20-S013).

5. **Regional Wastewater Treatment:** Projects in the "regional wastewater treatment" category are those which are related to the regional wastewater treatment business enterprise. An example of a regional wastewater treatment project is the Bio-Gas Treatment System Improvements project (16-P028).

CIP 10-YEAR PLAN FYEs 2022 through 2031

** Listed according to project timing from earliest to latest*

CATEGORY: GENERAL

CIP No.	Project Name	Page
2-Year Projects		
20-A024	Field Operations Facility - Skylight Replacements	44
22-A001	FOF and WWTP Flag Poles	
22-A002	Field Operations Facility Warehouse Storage Improvements	45
22-A005	District Office Backup Generator Replacement	46
18-P008	Industrial Control Network Security Essentials	47
20-A002	Enterprise Resource Program System Conversion	48
20-A001	Computing Infrastructure Replacement	49
17-A007	Wide Area Network Communications Phase 2	50
00-A003	Street Overlay Modification PROGRAM	51
Future Projects		
20-A029	District Office Accessibility Improvements	52
22-A006	District Office Roof Repair	53
T20-13	Gleason Drive Property Planning Study	54
T18-02	Network Infrastructure and Security	55
T18-23	Fleet Replacement PROGRAM	56
T18-24	Facilities Asset Replacement PROGRAM	57

CATEGORY: GENERAL **Water Replacement (Fund 610)**

CIP No. 20-A024 Field Operations Facility - Skylight Replacements

Funding Allocation: 85% **610** 15% **210**

Project Manager: Shawn Quinlan **Status:** Continuing Project

Project Summary:

This project will replace all skylights at the Field Operations Facility (FOF). The building was constructed in 1997. The District acquired the property in March 2016, and completed renovations in the spring and summer of 2016. The renovations did not include replacement of the original skylights, many of which are now leaking.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Based on Field Operations staff allocation between water and local wastewater collection.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	80,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$80,000**
Current Adopted Budget	$80,000
Increase/(Decrease)	$0

CATEGORY: GENERAL **Water Replacement (Fund 610)**

CIP No. 22-A002 Field Operations Facility Warehouse Storage Improvements

Funding Allocation: 85% **610** 15% **210**

Project Manager: Sean O'Reilly **Status:** New Project

Project Summary:

In 2016, the District acquired a commercial building and warehouse at 7035 Commerce Circle in Pleasanton for our Field Operations Division. Infrastructure including building security, HVAC improvements and control systems, new materials bins, a backup generator, business and SCADA networks, and fencing and parking improvements have been completed. The warehouse is used for storing materials but lacks appropriate shelving to fully utilize the space. This project will add taller industrial shelving units to the warehouse to increase indoor storage capacity. The new shelving units will be engineered to meet current seismic codes.

CEQA:

Reference:

Fund Allocation Basis: Based on Field Operations staff allocation between water and local wastewater collection.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	100,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$100,000**
Current Adopted Budget	$0
Increase/(Decrease)	$100,000

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-A005 District Office Backup Generator Replacement

Funding Allocation: 50% **310** 38% **610** 12% **210**

Project Manager: Sean O'Reilly **Status:** New Project

Project Summary:

This project will replace the exisiting backup generator at the District Office. The existing generator is a 1991 model, which makes it very difficult to find replacement parts. The project will study the load needs of the District Office, which may result in a larger generator, to power more of the facility in the event of a power outage.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	950,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$950,000**
Current Adopted Budget	$0
Increase/(Decrease)	$950,000

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 18-P008 Industrial Control Network Security Essentials

Funding Allocation: 52% **310** 37% **610** 11% **210**

Project Manager: Aomar Bahloul **Status:** Continuing Project

Project Summary:

This project will improve network infrastructure at the wastewater treatment plant by implementing a tighter security schema and standardizing network switching. Much of the current industrial control switching is legacy equipment which is consumer grade, rather than the more secure industrial grade. The legacy equipment is also past end-of-life and no longer supported by the manufacturer. Additional security also allows for more wireless connections to provide denser connectivity from mobile devices. This project benefits the entire SCADA network, including water system and local collection system facilities, and is split funded based on the number of facilities in each enterprise.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: Staff Recommendations.

Fund Allocation Basis: Project will benefit entire SCADA network including treatment plant and field operations facilities.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
132,492	267,508	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$400,000**
Current Adopted Budget	$400,000
Increase/(Decrease)	$0

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 20-A002 Enterprise Resource Program System Conversion

Funding Allocation: 50% **310** 38% **610** 12% **210**

Project Manager: Carol Atwood **Status:** Continuing Project

Project Summary:

This project will include procurement and implementation of a new Enterprise Resource Program (ERP). The current ERP is over fifteen years old and the vendor has indicated they it may end support for the product in the coming years. This ERP is used to managed all financial data for the District, including accounting, budget preparation, payroll, purchasing, and utility billing. The project includes system configuration, data migration, data exchange testing, conversion validation, forms and reports planning, end-user training, parallel testing and final transition with technical support. The cost also includes post-conversion legacy system data access.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: Information Technology Services Master Plan (2017)

Fund Allocation Basis: Based on employee allocation

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
750,000	750,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,500,000**
Current Adopted Budget	$1,510,000
Increase/(Decrease)	($10,000)

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 20-A001 Computing Infrastructure Replacement

Funding Allocation: 50% **310** 38% **610** 12% **210**

Project Manager: Information Technology **Status:** New Project

Project Summary:

This project will modernize and replace the computing infrastructure for the processing of multiple database applications including our Enterprise Resource Planning (ERP), Geographic Information System (GIS), Laboratory Information Management System (LIMS) and Computerized Maintenance Management System (CMMS). Blade servers and storage area networks were originally purchased in 2011. By 2022, the equipment will be at least ten years old, three years past best practice replacement schedule of seven years.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: Best practice for network technology replacement.

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	160,000	120,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$280,000**
Current Adopted Budget	$280,000
Increase/(Decrease)	$0

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 17-A007 Wide Area Network Communications Phase 2

Funding Allocation: 46% **310** 44% **610** 10% **210**

Project Manager: Steven Delight **Status:** Continuing Project

Project Summary:

This project will allow for increased access speed and bandwidth at remote sites. Increases in application demands and database systems cause delays in data transmissions and production slowdowns. This project will remove current AT&T leased data lines and install District-owned, multi-strand fiber lines or wireless networks for communications in data and phone systems for faster and bigger-piped communication links. This project will upgrade the existing communication links for the Wastewater Treatment Plant (WWTP) and Field Operations Facility (FOF) in areas of data and phone communications. These upgrades will also allow for future bandwidth requirements in areas of audio and video transmission. Through FYE 2019, the project has completed 1) the fiber connection between the District Office and WWTP, 2) the wireless connection between the District Office and FOF, 3) wireless connection between FOF and RWTP, and 4) purchase and installation of wide area network security appliances to support these connections, and 5) the installation of fiber between RWTP and the new FOF on Commerce Circle and the LAVWMA site. The remaining funds will install fiber between the District Office and the new City of Dublin data center (currently under construction).

CEQA: Categorical Exemption [CEQA Guideline 15303]

Reference: 2002 Information Technology Master Plan

Fund Allocation Basis: Project is replacement-oriented and will use the standard "general capital asset" allocation

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
479,396	135,604	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$615,000**
Current Adopted Budget	$615,000
Increase/(Decrease)	$0

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 00-A003 Street Overlay Modification PROGRAM

Funding Allocation: 50% **210** 50% **610**

Project Manager: Rudy Portugal **Status:** Continuing Program

Project Summary:

The District is required to adjust infrastructure access to any increases in street grades. This project will raise manholes and valve boxes annually in conjunction with overlay projects conducted by the City of Dublin and City of San Ramon using the Tri-Valley Intergovernmental Reciprocal Services Agreement.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference: Coordination meetings with City staff.

Fund Allocation Basis: Fund split is based upon the number of valve boxes and manholes in the system. There are twice as many valve boxes as manholes, however, manholes cost twice as much to raise. Each project created will be based upon the actual work included.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	800,000

Total Estimated Project Cost	**$2,400,000**
Current Adopted Budget	$2,400,000
Increase/(Decrease)	$0

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 20-A029 District Office Accessibility Improvements

Funding Allocation: 53% **310** 37% **610** 10% **210**

Project Manager: Jason Ching **Status:** Future Project

Project Summary:

The project will incorporate accessibility improvements and path of travel upgrades for the District Office. The scope of work will be in accordance with the recommendations specified in the accessibility inspection survey report dated January 20, 2020 (Cal Accessibility). The scope of work includes accessibility improvements for the east parking lot (ADA accessible stalls, ramps), path of travel upgrades within the drought garden, path of travel upgrades for the pathway leading from the bus stop to the Main Lobby, path of travel upgrades for pathway leading from the north parking lot to the engineering area, and accessibility improvements for the patio area immediately outside the kitchen/lunch room.

CEQA:	Categorical Exemption [CEQA Guideline 15301, 15302, 15304]
Reference:	Cal Accessibility Inspection Report - January 20, 2020
Fund Allocation Basis:	Fund split is based on the same allocation as employee costs, as the building is used by employees to conduct District business

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	500,000	0	0	0	0

Total Estimated Project Cost	**$500,000**
Current Adopted Budget	$350,000
Increase/(Decrease)	$150,000

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-A006 District Office Roof Repair

Funding Allocation: 50% **310** 38% **610** 12% **210**

Project Manager: Jason Ching **Status:** Future Project

Project Summary:

This District Office was constructed in 1992, and over time, the roof has developed several leaks. This project will rehabilitate the flat roof portion only. The underling flat roof membrane (i.e plastic sheeting) will be removed and then rehabilitated/resealed. Flashing between the flash roof and the existing parapet sections may also need to be repaired.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: n/a

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	70,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$70,000**
Current Adopted Budget	$0
Increase/(Decrease)	$70,000

CATEGORY: GENERAL **Water Replacement (Fund 610)**

CIP No. T20-13 Gleason Drive Property Planning Study

Funding Allocation: 55% **610** 30% **620** 10% **210** 5% **220**

Project Manager: TBD **Status:** Future Project

Project Summary:

In May 2007, the District purchased an undeveloped 12.8 acre property on Gleason Drive in Dublin, with the intention of locating a future District facilities on the site. The site is adjacent to other public and light industrial uses. This project will evaluate the use of the site for future district needs such as well facilities, a corporation yard, or office space and include site planning, grading, infrastructure improvements, and construction costs.

CEQA: Categorical Exemption [CEQA Guideline 15306].

Reference: Field Operations Division Corporation Yard Study, January 2009, HKIT Architects (CIP 95CN040)

Fund Allocation Basis: Based upon Field Operation cost between potable water, recycled water, and sewer activities.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	0	0	0	0	200,000

Total Estimated Project Cost	**$200,000**
Current Adopted Budget	$0
Increase/(Decrease)	$200,000

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. T18-02 Network Infrastructure and Security

Funding Allocation: 50% **310** 38% **610** 12% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

Most "best practices" call for network technology replacement every seven years. This is often the product life-cycle for network switching, communications, and includes the regular faster cycling review for network security. This project will address replacements needed for the business network in years 2023 through 2025, and the Field Operations Facility SCADA network in 2027.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: Best practice for network technology replacement.

Fund Allocation Basis: Based on employee allocation.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	100,000	150,000	250,000	0	500,000	0	0	0	0	0

Total Estimated Project Cost	**$1,000,000**
Current Adopted Budget	$0
Increase/(Decrease)	$1,000,000



CATEGORY: GENERAL **Water Replacement (Fund 610)**

CIP No. T18-23 Fleet Replacement PROGRAM

Funding Allocation: 50% **610** 30% **310** 20% **210**

Project Manager: **Status:** Future Program

Project Summary:

This program will set aside annual capital outlay funding to meet the District's vehicle asset replacement requirements in future years. The District will use a comprehensive approach and follow best practice fleet operations to implement a cost effective fleet replacement program. Although not a capital project, this program is included in the CIP planning to make sure that capital outlay cashflow is incorporated to support future rate studies.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: Current vehicle asset inventory.

Fund Allocation Basis: Ratio based on department/function associated with each vehicle.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	1,500,000

Total Estimated Project Cost	**$3,900,000**
Current Adopted Budget	$0
Increase/(Decrease)	$3,900,000

CATEGORY: GENERAL **Regional Wastewater Replacement (Fund 310)**

CIP No. T18-24 Facilities Asset Replacement PROGRAM

Funding Allocation: 66% **310** 32% **610** 2% **210**

Project Manager: **Status:** Future Program

Project Summary:

This program will set aside funding to meet the District's facilities asset replacement requirements in future years. The District will use a comprehensive approach and follow best practice to implement a cost effective facilities asset replacement program. This program is included in the CIP planning to assure funding for future repair or replacement of facility related assets, such as roof, HVAC, components, and lighting. The estimated annual replacement cost is based on 1% of the District's total real property value per California Sanitation Risk Management Authority (CSRMA) report dated January 2016.

CEQA: CEQA requirement will be evaluated for individual projects at the time of inception.

Reference:

Fund Allocation Basis: Ratio based on department/function associated with each facility.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	430,000	430,000	430,000	430,000	430,000	430,000	430,000	430,000	2,150,000

Total Estimated Project Cost	**$5,590,000**
Current Adopted Budget	$0
Increase/(Decrease)	$5,590,000

CIP 10-YEAR PLAN FYEs 2022 through 2031

** Listed according to project timing from earliest to latest*

CATEGORY: JOINT POWERS AUTHORITY

CIP No.	Project Name	Page
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22-R015	DERWA UV Lamp Electrical Connectors	59
22-R016	DERWA Sand Filtration Ultra Violet System Cable Harness Replacement	60
22-R017	DERWA Chlorine Mixer Replacement	61
22-R018	DERWA Sand Filtration Ultra Violet and Microfiltration System Operational Analysis	62
22-R019	DERWA Air Relief Valve Rehabilitation/Replacements	63
16-R014	DERWA Recycled Water Plant - Phase 2	64
20-W021	DERWA TIPS VFD Upgrades	65
Future Projects		
T16-37	DERWA Microfiltration Rack and Membrane Replacement	66

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 22-R014 DERWA HVAC Replacements

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** New Project

Project Summary:

This project will replace the HVAC systems in Building M, and Building O, Building R. The systems at each location have reached their useful life.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	76,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$76,000**	**DSRSD Net Cost: $34,960**
Current Adopted Budget	$0	Other Funding: DERWA Project (DSRSD 46%, EBMUD 27%, Pleasanton 27%)
Increase/(Decrease)	$76,000	

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 22-R015 DERWA UV Lamp Electrical Connectors

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** New Project

Project Summary:

The project will replace the electrical connectors to the UV lamps due to water intrusion. There are 1,200 connectors in the UV system. The replacement will be phased over two years.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
	50,000	50,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost

Current Adopted Budget

Increase/(Decrease)

DSRSD Net Cost: $46,000

Other Funding: DERWA Project (DSRSD 46%, EBMUD 27%, Pleasanton 27%)

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 22-R016 DERWA Sand Filtration Ultra Violet System Cable Harness Replacement

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** New Project

Project Summary:

This project will replace cable harnesses in forty-sixty modules of the SFUV system over the next two years.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	75,000	75,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$150,000**	**DSRSD Net Cost: $69,000**
Current Adopted Budget	$0	Other Funding: DERWA Project (DSRSD 46%, EBMUD 27%, Pleasanton 27%)
Increase/(Decrease)	$150,000	

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 22-R017 DERWA Chlorine Mixer Replacement

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** New Project

Project Summary:

This project will replace the existing chlorine mixer in the wet well with a mixer designed for use with liquid chlorine to improve chlorine mixing in the system.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	55,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$55,000**	**DSRSD Net Cost: $25,300**
Current Adopted Budget	$0	Other Funding: DERWA Project (DSRSD 46%, EBMUD 27%, Pleasanton 27%)
Increase/(Decrease)	$55,000	

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 22-R018 DERWA Sand Filtration Ultraviolet and Microfiltration System Operational Analysis

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** New Project

Project Summary:

This project is an operational analysis of the sand filtration ultraviolet (SFUV) and microfiltration (MF) systems. The project will fund a third-party study to identify operational strategies and potential improvements for operational efficiency. In discussing DERWA operations, maintenance, and capital needs with District staff as a part of the budget development process, several SFUV and MF projects were proposed which warranted a high-level review of total system operation. DERWA currently operates the MF system during low demand periods and as a backup during maintenance of the SFUV system. Prior to the Recycled Water Treatment Plan Expansion project, it was also used to provide treatment during peak demand periods. While the MF system provides redundancy and flexibility in operations it also increases operation and maintenance costs. This analysis will review the cost and benefits in operating the two systems and determine operational strategies to potentially operate only the SFUV system to meet demands.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: N/A

Fund Allocation Basis: This project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	50,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$50,000**	**DSRSD Net Cost (Contribution to JPA): $23,000**
Current Adopted Budget	$0	Other Funding: DERWA Project (DSRSD 46%, EBMUD 27%, Pleasanton 27%)
Increase/(Decrease)	$50,000	

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 22-R019 DERWA Air Relief Valve Rehabilitation/Replacements

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** New Project

Project Summary:

There are sixty-eight air relief valves in the DERWA system. This project will rehabilitate or replace the air relief valves over the course of three years. This project will also repair ancillary valve pots in the vicinity of the air relief valves as needed.

CEQA: Categorical Exemption [CEQA Guideline 15302

Reference: N/A

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	45,000	45,000	45,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$135,000**
Current Adopted Budget	$0
Increase/(Decrease)	$135,000

DSRSD Net Cost (Contribution to JPA): $62,100

Other Funding: DERWA Project (46% DSRSD, 27% EBMUD, 27% Pleasanton)

CATEGORY: JOINT POWERS AUTHORITY **Water Expansion (Fund 620)**

CIP No. 16-R014 DERWA Recycled Water Plant - Phase 2

Funding Allocation: 100% **620**

Project Manager: Kevin Randeni **Status:** Continuing Project

Project Summary:

This DERWA project expanded the DERWA Water Recycling Plant from its design capacity of 9.7 mgd to 16.2 mgd. The project added a new band screen and ballasted flocculating clarifier and additional tertiary influent pumps, ultraviolet disinfection modules, and Pump Station R1 pumps. The project also included the replacement of VDFs at Pump Station R1. DSRSD is responsible for the design and construction of the facility expansion. Per the Agreement for the Sale of Recycled Water by DERWA to DSRSD and EBMUD and the DERWA Pleasanton Agreement, cost of the project will be funded in the same proportion as allocation of future incremental capacity rights.

CEQA:	CEQA Addendum to 1996 Dublin San Ramon Valley Recycled Water Program EIR
Reference:	San Ramon Valley Recycled Water Facilities, July 1996; Dublin Recycled Water Expansion Project, Title XVI Feasibility Study, Draft DERWA Reycled Water Treatment Facilites Plan, July 2015.
Fund Allocation Basis:	Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
19,311,000	35,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$19,346,000**
Current Adopted Budget	$19,346,000
Increase/(Decrease)	$0

DSRSD Net Cost: $9,145,700

Other Funding: $10,576,300. DERWA project; cost share based on facility capacity allocation. For RWTP: DSRSD 46%, EBMUD 27%, Pleasanton 27% ;For VFD Replacement at PSR1: DSRSD 59%, EBMUD 25%, Pleasanton 16%.



CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. 20-W021 DERWA TIPS VFD Upgrades

Funding Allocation: 100% **610**

Project Manager: DERWA Manager **Status:** New Project

Project Summary:

The existing VFDs for the three original TIPS pumps are 15+ years old and have become obsolete. The scope of this project is to upgrade the three VFDs to a current make and model. While performing the VFD upgrade, the industrial control network will also be upgraded to Ethernet to allow for ease of maintenance and faster recoveries from breakdowns. The project includes installation, PLC programming, SCADA configuration, testing, and startup.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: DERWA Fiscal Year 2020 Budget (March 2019)

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	63,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$63,000**	**DSRSD Net Cost: $ 28,980**
Current Adopted Budget	$63,000	Other Funding: DERWA Project; DSRSD 46%, EBMUD 27%, Pleasanton 27%
Increase/(Decrease)	$0	

CATEGORY: JOINT POWERS AUTHORITY **Water Replacement (Fund 610)**

CIP No. T16-37 DERWA Microfiltration Rack and Membrane Replacement

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will replace the microfiltration/ultraviolet (MF/UV) facility membrane racks with an open platform membrane system designed for membrane module interchangeability for more competitive membrane pricing. The membranes, last replaced in 2017, will also be replaced as part of this project. The MF/UV system was constructed in 1998 and the membrane racks will be at the end of their useful life by 2025.

CEQA: Categorical Exemption [CEQA Guidelines 15301, 15303].

Reference: Microfiltration Membrane Replacement Evaluation, Carollo Engineers, October 2014.

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	3,500,000	0	0	0	0

Total Estimated Project Cost	**$3,500,000**	**DSRSD Net Cost: $997,500**
Current Adopted Budget	$0	Other Funding: Pleasanton/DERWA share of cost $2,502,500 based on DERWA Agreement for Sale of RW Water to EBMUD and DSRSD, July 2003.
Increase/(Decrease)	$3,500,000	



CIP 10-YEAR PLAN FYEs 2022 through 2031

** Listed according to project timing from earliest to latest*

CATEGORY: WATER SYSTEM

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** Listed according to project timing from earliest to latest*

CATEGORY: WATER SYSTEM

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CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 19-W004 Valve and Blow-Off Replacement

Funding Allocation: 100% **610**

Project Manager: Sean O'Reilly **Status:** Continuing Project

Project Summary:

This project will repair/replace line and blow off valves throughout the water distribution system. Many of the line valves have broken over time and are located in the older parts of the service area. Repairing or replacing the valves is essential for system operation and minimizes the area for shutdowns. Blow off valves will also be strategically replaced within the water distribution system. The blow off valves will be replaced with larger valves that will improve flushing velocity and efficiency, which will improve water quality.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: Field Operations Request

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
2,073,293	1,211,000	1,211,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$4,495,293**
Current Adopted Budget	$3,250,000
Increase/(Decrease)	$1,245,293



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 20-W019 Automated Water Quality Monitoring

Funding Allocation: 100% **610**

Project Manager: Irene Suroso **Status:** Continuing Project

Project Summary:

This project will install water quality monitors at all District potable and recycled water reservoirs, pump stations and turnouts. Analyzers will focus on key water quality indicators such as chlorine, fluoride and ammonia as well as other useful parameters. Data collected from analyzers will be used to track water quality effects resulting from operational strategy improvements and facilities upgrades.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to improve existing system water quality.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
20,000	250,000	630,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$900,000**
Current Adopted Budget	$900,000
Increase/(Decrease)	$0

CATEGORY: WATER SYSTEM **Water Expansion (Fund 620)**

CIP No. 20-W027 Dublin Boulevard Extension Water Facilities

Funding Allocation: 100% **620**

Project Manager: Ryan Pendergraft **Status:** Continuing Project

Project Summary:

The Alameda County Transportation Commission, Alameda County, and the cities of Dublin and Livermore have partnered on the Dublin Boulevard Extension Project (Extension Project), a 1.5-mile extension of Dublin Boulevard from Fallon Road in Dublin to North Canyons Parkway at Doolan Road in Livermore. To accommodate future development based on the City of Dublin's General Plan, this project will construct 5150 feet of 12 inch potable water pipeline and associated appurtenances in coordination with the Extension Project.

CEQA: Final EIR – Dublin Blvd. – North Canyons Parkway Extension Project (City of Dublin) – August 2019

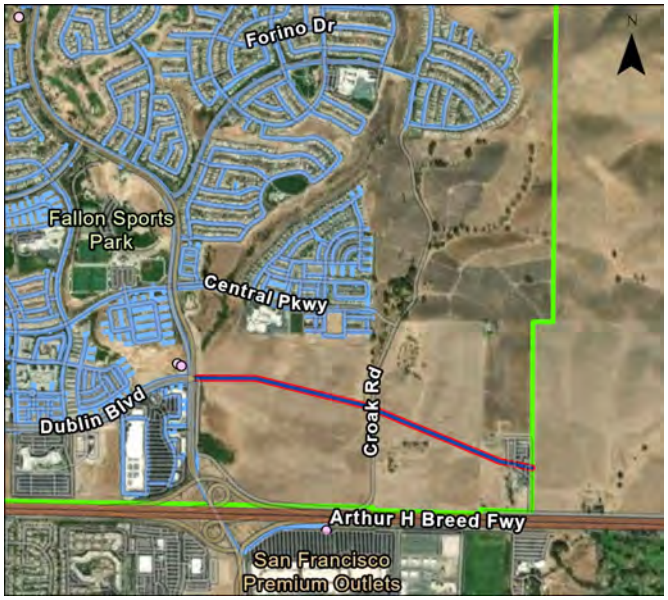
Reference: DSRSD 2016 Water Master Plan.

Fund Allocation Basis: Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	50,000	965,000	965,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,980,000**
Current Adopted Budget	$1,980,000
Increase/(Decrease)	$0



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 22-A003 Hydro-Excavation Spoils Storage Pad

Funding Allocation: 100% **610**

Project Manager: Rudy Portugal **Status:** New Project

Project Summary:

Most routine and emergency repairs use hydro-excavation to not only pothole utilities, but also safely dig through existing buried infrastructure, reducing the likelihood of damage. The spoils from hydro-excavation are very wet and must be dried out prior to being disposed offsite. This project will install a concrete surface at the Field Operations Facility to decant wet hydro-excavation spoils from routine and emergency repairs. The concrete surface will be approximately 75 feet by 25 feet with a gentle slope and rounded curbs along the edge to allow water to flow by gravity away from the spoils pile to a drain. Pad locations will be evaluated as part of the planning process for the project to determine the best site.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: To be determined.

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	150,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$150,000**
Current Adopted Budget	$0
Increase/(Decrease)	$150,000

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 22-A004 Fiscal Year 2022 Manhole and Valve Adjustments - City of Dublin

Funding Allocation: 85% **610** 15% **210**

Project Manager: Rudy Portugal **Status:** New Project

Project Summary:

The District is required to adjust infrastructure access to any increases in street grades. This project will raise manholes and valve boxes in City of Dublin on Dublin Boulevard between Scarlett Drive and Hibernia Drive for Fiscal Year 2022.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: City of Dublin Capital Improvement Program

Fund Allocation Basis: Fund split is based upon the number of valve boxes and manholes in the project.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	226,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$226,000**
Current Adopted Budget	$0
Increase/(Decrease)	$226,000

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 22-W007 Reservoir 1B Mixing System Replacement

Funding Allocation: 100% **610**

Project Manager: Steven Delight **Status:** New Project

Project Summary:

This project will install new mixing equipment at Reservoir 1B to improve chlorine residual and maintain water quality. The project will also include a new/upgraded PG&E service to adequately serve additional power loads generated from the new mixing equipment. Reservoir 1B is a four million gallon (MG) shared facility with 2.35 MG owned by DSRSD and 1.65 MG owned by Zone 7 Water Agency. Per Basic Agreement for Construction and Joint Use of 4MG Dougherty Reservoir and Appurtenant Facilities dated April 19, 1983, DSRSD pays for 50% of operations and maintenance costs.

CEQA: Categorical Exemption [CEQA Guideline 15302].

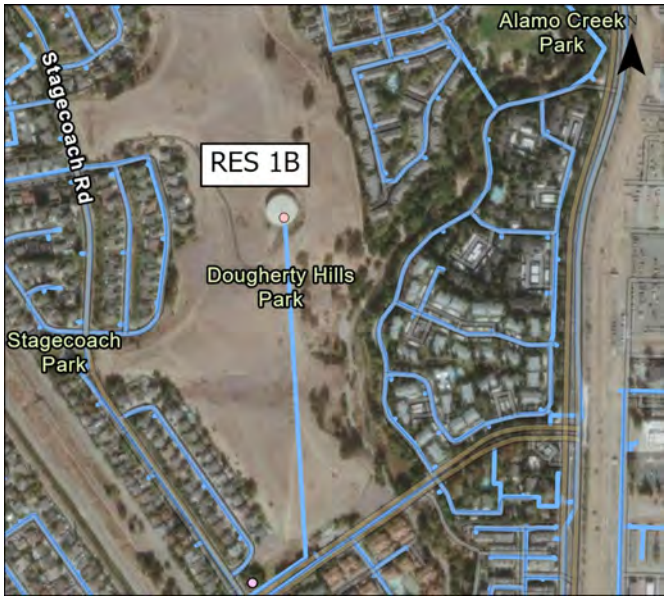
Reference: N/A

Fund Allocation Basis: Project is required to replace existing water fund asset.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	260,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$260,000**
Current Adopted Budget	$0
Increase/(Decrease)	$260,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 22-W020 2021 Alternative Water Supply Study – Phase 2

Funding Allocation: 75% **610** 25% **620**

Project Manager: Jan Lee **Status:** New Project

Project Summary:

This project will fund collaborative efforts with regional partners to further explore potential near-term pilot projects that were identified in the 2021 Alternative Water Supply Study: A Framework for a Resilient and Sustainable Water Future. Efforts may include investigating Hopyard 7 and more productive portions of the fringe groundwater basins for supplementing the recycled water program; conceptual planning for a potential regional potable reuse demonstration project; and evaluating a pilot water transfer between EBMUD and Zone 7 utilizing existing DSRSD-EBMUD emergency interties. This project may also fund efforts to identify and pursue grant funding for both near-term pilot projects and long-term regional water resiliency efforts.

CEQA: Statutory Exemption [CEQA Guideline 15262 Feasibility and Planning Studies]

Reference: 2021 Alternative Water Supply Study: A Framework for a Resilient and Sustainable Water Future

Fund Allocation Basis: Based on the ratio of current water demands to projected build-out demands.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	250,000	250,000	1,000,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,500,000**
Current Adopted Budget	$0
Increase/(Decrease)	$1,500,000

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 16-W012 Potable Water Pump Station Standby Generators/Emergency Response

Funding Allocation: 100% **610**

Project Manager: Sean O'Reilly **Status:** Continuing Project

Project Summary:

The 2016 Water Master Plan evaluated the overall potable water system to meet recommended planning and design criteria. Pumping criteria is met under normal operating conditions. However in the event of power outages, pumping criteria will not be met, eventually leading to a loss of fire protection. A power outage can be caused by several factors - storms, extreme heat, seismic event, localized issues with the power grid, etc. At this time, there is only one pump station in the water distribution system with a permanent standby generator. The Master Plan recommended adding permanent standby generators at PS 2C, 3A, 20B, 200A, and 300B . It was later confirmed that two permanent standby diesel generators will be installed at Pump Stations 4B and 200A. Permanent standby generators will allow water system operators to move water up to each of the distribution zones, increasing system reliability. The project will also install new receptacles at six (6) critical pump station sites for mobile generators and will upgrade existing uninterruptable power supply (UPS) battery backup systems at eight (8) potable and recycled water reservoirs (Reservoirs 1A, 1B, 3A, 4A, 10A, 10B, R20A, 300B) to provide data for pump station operation. These newer models will offer 24 hours of power supply. Finally, the project will install new 120V receptacles at the parking location of the District's mobile diesel generator fleet near the Regional Wastewater Treatment Facility's Fleet Maintenance Building. These new receptacles will power the mobile diesel generator starter batteries and ensure the generators are ready to deploy when required.

CEQA: Categorical Exemption [CEQA Guideline 15303].

Reference: 2016 Water System Master Plan

Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
659,095	2,760,905	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$3,420,000**
Current Adopted Budget	$3,420,000
Increase/(Decrease)	$0

CATEGORY: WATER SYSTEM **Water Expansion (Fund 620)**

CIP No. 17-W003 Reservoir 10A

Funding Allocation: 100% **620**

Project Manager: Sean O'Reilly **Status:** Continuing Project

Project Summary:

This project will replace the existing 3.0 million gallon reservoir with a new 4.1 million gallon reservoir. Existing Reservoir 10A was constructed in the 1940s as an open cut reservoir as part of the Camp Parks water system. It currently serves Zone 1 in central Dublin, however, the bottom elevation is about 15 feet above the rest of the zone's hydraulic grade line, creating operational difficulties. The 2016 Water System Master Plan identified a storage deficiency of 1.1 million gallons within Zone 1. The master plan reviewed potential sites to construct a new tank to fill the deficiency. The master plan recommended that the most economical course of action to mitigate the storage deficiency would be to demolish the existing reservoir and replace it with a larger reservoir that is at the correct elevation. This will gain additional storage, set the tank at the correct elevation, eliminate operational difficulties, and replace a 70 year old asset.

CEQA: CEQA Mitigated Negative Declaration/EIR

Reference: 2016 Water System Master Plan

Fund Allocation Basis: Project is required to provide water storage capacity for future development.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
628,725	845,000	8,076,225	9,550,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$19,099,950**
Current Adopted Budget	$19,099,950
Increase/(Decrease)	$0



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 18-W003 Reservoir 2 Recoating

Funding Allocation: 100% **610**

Project Manager: Jose Oropeza **Status:** Continuing Project

Project Summary:

This project will recoat the exterior and interior of Reservoir 2, which was constructed in 1964. The reservoir was cleaned and inspected in 2016. The inspection report indicated that there are multiple coating blisters on the interior surfaces and areas of corrosion on the roof. The interior and exterior coatings are original. The project will also recoat all tank and piping appurtenances including the roof hatch and vents, interior and exterior ladders, manways, inlet, outlet, and overflow pipes. A new cathodic protection system will also be installed to replace the original system.

CEQA: Categorical Exemption [CEQA Guideline 15301].

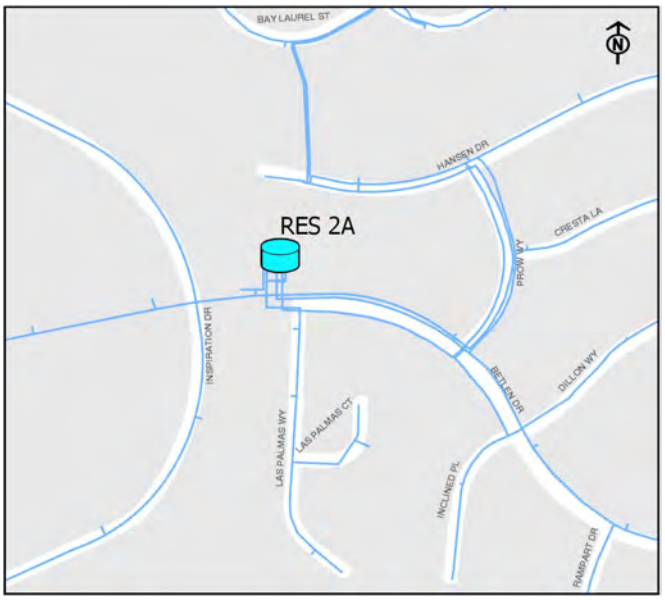
Reference: 2016 Department of Health Inspection Report

Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
244,170	1,085,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,329,170**
Current Adopted Budget	$1,193,500
Increase/(Decrease)	$135,670



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 18-W021 Recycled Water Fire Hydrant Upgrades

Funding Allocation: 100% **610**

Project Manager: Rudy Portugal **Status:** Continuing Project

Project Summary:

This project will replace 12 recycled water fire hydrants in Eastern Dublin, Western Dublin, and Dougherty Valley from dry-barrel hydrants to wet-barrel hydrants. Without frequent maintenance, the current dry-barrel hydrant valves seize up and require costly repair. The new wet-barrel hydrant will include a break-off check valve assembly so that if it is hit and broken off, the check valve shuts, preventing the loss of water, water pressure, and a recycled water spill.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: Field Operations request

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
175,000	50,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$225,000**
Current Adopted Budget	$175,000
Increase/(Decrease)	$50,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 12-W016 Reservoir 1B Recoating

Funding Allocation: 100% **610**

Project Manager: Steven Delight **Status:** Continuing Project

Project Summary:

This project will recoat the exterior and interior of Reservoir 1B, which was constructed in 1961. The reservoir was cleaned and inspected in 2016. The inspection report indicated that there are multiple coating blisters on the interior surfaces and areas of corrosion on the roof. The interior and exterior coatings are original. The project will also recoat all tank and piping appurtenances including the roof hatch and vents, interior and exterior ladders, manways, inlet, outlet, and overflow pipes. A new cathodic protection system will also be installed to replace the original system for all reservoirs. Reservoir 1B is a four million gallon (MG) shared facility with 2.35 MG owned by DSRSD and 1.65 MG owned by Zone 7. Per Basic Agreement for Construction and Joint Use of 4MG Dougherty Reservoir and Appurtenant Facilities dated April 19, 1983, DSRSD pays for 50% of operations and maintenance costs.

CEQA: Categorical Exemption [CEQA Guideline 15301].

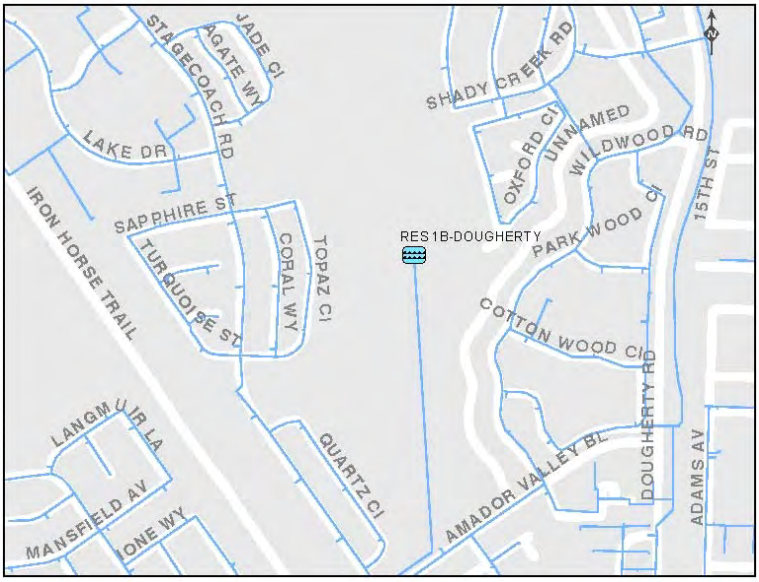
Reference: 2016 Dept. of Health Services inspection report; video testing report.

Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
1,475,000	150,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,625,000**
Current Adopted Budget	$1,625,000
Increase/(Decrease)	$0



CATEGORY: WATER SYSTEM **Water Expansion (Fund 620)**

CIP No. 14-W008 Reservoir 20B

Funding Allocation: 100% **620**

Project Manager: Sukhpreet Mann **Status:** Continuing Project

Project Summary:

Reservoir 20B will provide potable water storage capacity for eastern Dublin and, in combination with existing Pump Station 300B, will provide potable water to Dougherty Valley. The 1.3 million gallon potable water reservoir will be constructed in eastern Dublin. Depending on location of the reservoir, up to 8,700 linear feet of 12-inch Zone 2 pipeline will be needed to integrate the reservoir into the water system, and property acquisition may be required. Project implementation will be dependent on future development growth in service areas.

CEQA: CEQA Initial Study/Mitigated Negative Declaration

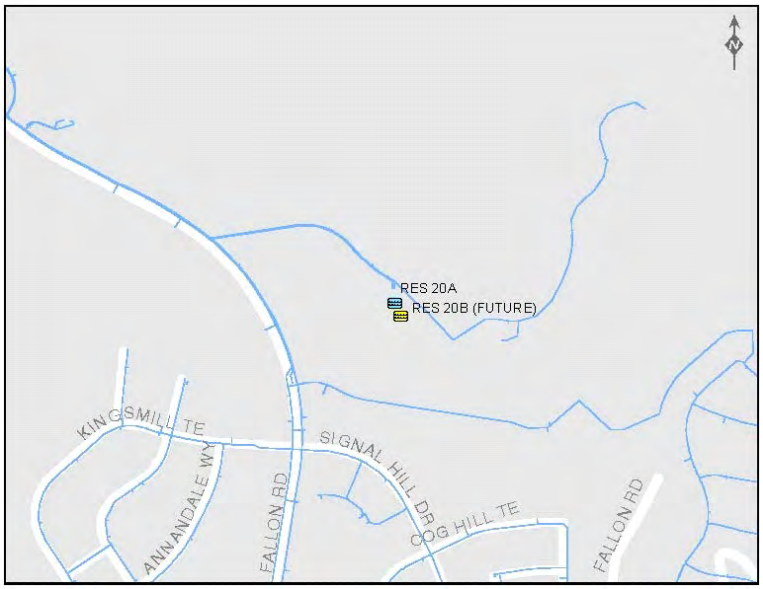
Reference: 2016 Water Master Plan Update

Fund Allocation Basis: Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
445,731	505,000	4,132,000	2,322,269	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$7,405,000**
Current Adopted Budget	$7,150,000
Increase/(Decrease)	$255,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 16-W017 Water Lines Replacement - Wineberry and Canterbury Area

Funding Allocation: 100% **610**

Project Manager: Jose Oropeza **Status:** Continuing Project

Project Summary:

This project will replace approximately 4,400 feet of 8-inch asbestos concrete pipe (ACP) potable water lines, services, and appurtenances on Wineberry Way, Cypress Court, Locust Place - South and North, and Mulberry Place. This area has a history of leaks and water service repairs. The project will also replace approximately 6,500 feet of existing 4-inch, 6-inch and 8-inch asbestos cement pipe (ACP) potable water lines in Canterbury Lane from Bedford Way to Flanders Way, Cardigan Street, Mayan Court, Flanders Way, and Cardigan Court, Canterbury Lane from Flanders Way to Bedford Way, Bedford Way from Canterbury Lane to Alene Street, Hastings Way, Sutton Lane, Jasmine Court, and Canterbury Court, along with valves, hydrants, and services. The lines were installed in 1961. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

CEQA: Categorical Exemption [CEQA Guideline 15302]

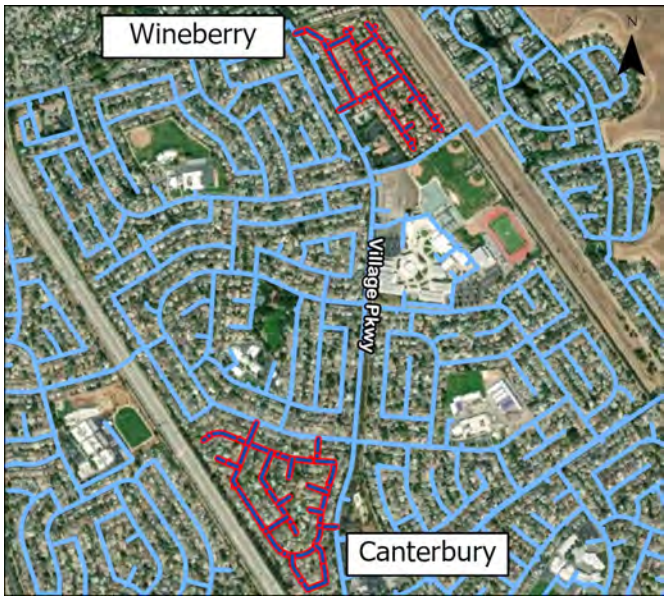
Reference: Maintenance service history and Asset Management Replacement Model

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
332,291	811,162	5,780,400	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$6,923,853**
Current Adopted Budget	$4,605,970
Increase/(Decrease)	$2,317,883



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 17-A006 Field Operations Pavement Rehabilitation

Funding Allocation: 100% **610**

Project Manager: Rudy Portugal **Status:** Continuing Project

Project Summary:

This project has evaluated the existing paved access roads at District facilities excluding the Regional Wastewater Treatment Facility. The various access roads will be scheduled for repair, maintenance, or reconstruction based on the evaluation report. The roads we ranked by condition (fair, poor, very poor). Fair condition roads had minor cracking due to roots, lack of proper edging, poor drainage, and expansive soils. Poor condition roads were similar to fair condition roads but were more severe and noted by existing visual damage. Very poor condition roads had complex subsurface and geologic conditions that need in-depth study for recommended design and construction.

CEQA:	Categorical Exemption [CEQA Guideline 15301].
Reference:	Pavement Investigation Report, Pavement Rehabilitation Project Phase 1, December 12, 2016, Construction Testing Services
Fund Allocation Basis:	Project is required to maintain exsiting water assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
20,370	0	324,630	250,000	200,000	40,000	200,000	200,000	0	0	0	0

Total Estimated Project Cost	**$1,235,000**
Current Adopted Budget	$1,235,000
Increase/(Decrease)	$0



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 18-W004 Pump Station 3A MCC Improvements

Funding Allocation: 100% **610**

Project Manager: Sukhpreet Mann **Status:** Continuing Project

Project Summary:

The existing motor control center (MCC) at potable water Pump Station 3A (PS 3A) is in a small underground vault along with the station programmable logic controller (PLC). The MCC and is over 30 years old and replacement parts are are no longer readily available. The objective of the PS 3A MCC Improvements project is to install a new MCC, PLC and above ground portable generator connection to more quickly provide back-up power in the event of a Pacific Gas and Electric system outage. The remaining pump station equipment will remain inside the vault.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: None.

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
118,000	575,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$693,000**
Current Adopted Budget	$268,050
Increase/(Decrease)	$424,950



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 20-W023 Camp Parks Water Main - 5th Street, Adams to Davis Street

Funding Allocation: 100% **610**

Project Manager: Ryan Pendergraft **Status:** New Project

Project Summary:

This project will replace approximately 1,100 feet of 8-inch potable water main, including services and valves. The existing water main is located in the front yard of homes along 5th Street. The new pipeline will be installed in accordance with District Standards and will be located within 5th Street. The developer working on the "Boulevard" project will complete the work, and the District will issue a reimbursement for a portion of the work.

CEQA: TBD

Reference: Water Replacement Asset Management Model

Fund Allocation Basis: Project is required to maintain existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	550,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$550,000**
Current Adopted Budget	$550,000
Increase/(Decrease)	$0



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 20-W025 Pump Station 1A Rehabilitation

Funding Allocation: 100% **610**

Project Manager: Jose Oropeza **Status:** Continuing Project

Project Summary:

This project will upgrade or replace Pump Station 1A. Pump Station 1A pumps water from the Zone 7 water system to the District's Zone 1 distribution system on the west side. The suction and discharge manifolds cause high head loss, inefficiency, and pump cavitation. The project will also study upgrading or replacing the pump station at the existing location or possibly relocating it to the Turnout 1 site. Fluoride storage and injection equipment housed at the facility will also be upgraded.

CEQA: Categorical Exemption [CEQA Guideline 15302].

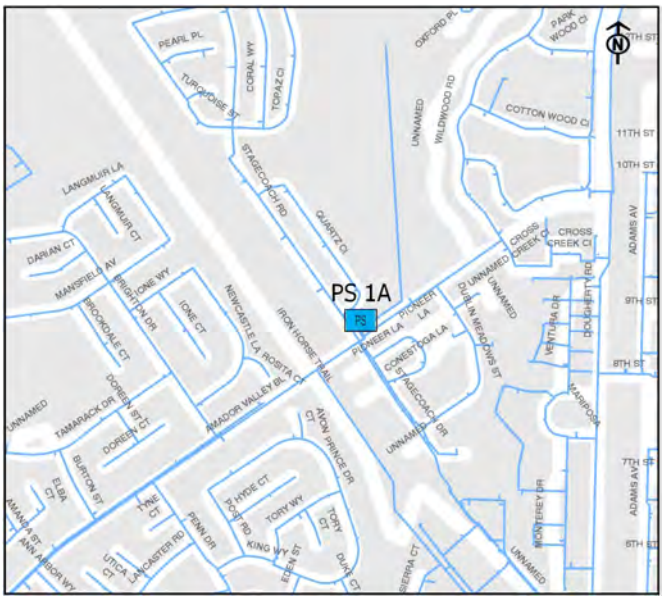
Reference: Staff recommendation.

Fund Allocation Basis: Project is required to replace existing water assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
155,000	330,000	3,220,000	2,965,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$6,670,000**
Current Adopted Budget	$2,860,000
Increase/(Decrease)	$3,810,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 20-W024 Camp Parks Water Main - 12th Street, Mitchell Drive, Evans Avenue

Funding Allocation: 100% **610**

Project Manager: Rudy Portugal **Status:** Continuing Project

Project Summary:

This project will replace 4,650 linear feet of 6-inch and 8-inch cast iron potable water lines with new 8-inch and 12-inch PVC water lines in 12th Street, Mitchell Drive, and Evans Avenue. The project will also replace water services, fire service connections, and fire hydrants. These water lines, installed in the 1940's, are the oldest pipes within the District's service area, have a history of leaks, and are the source of discolored water complaints due to corrosion of the cast iron. This project will be coordinated with Camp Parks development.

CEQA: Statutory Exemption [CEQA Guideline 15262]

Reference: Camp Parks Privatization Study, WBA, July 1998; Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
370,000	2,328,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$2,698,000**
Current Adopted Budget	$1,479,000
Increase/(Decrease)	$1,219,000

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 20-W017 Water System Master Plan and Operations Plan Update

Funding Allocation: 80% **610** 20% **620**

Project Manager: Irene Suroso **Status:** New Project

Project Summary:

This project will update the District's 2016 Water System Master Plan. The master plan, which is typically updated at a five-year interval, outlines the water system required to serve our customers from current conditions through future build-out conditions ensuring the water system operation is reliable as systems expand. The plan will address the America's Water Infrastructure Act of 2018 (AWIA) Risk and Resilience Assessment report and address Risk and Resilience Management Strategies for the District.

CEQA: Statutory Exemption [CEQA Guideline 15262 Feasibility and Planning Studies]

Reference: 2016 Water System Master Plan

Fund Allocation Basis: Based on the ratio of current water demands to projected buildout demands.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	500,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$500,000**
Current Adopted Budget	$500,000
Increase/(Decrease)	$0

CATEGORY: WATER SYSTEM **Water Expansion (Fund 620)**

CIP No. 20-W015 Turnout 6

Funding Allocation: 100% **620**

Project Manager: Jason Ching **Status:** Continuing Project

Project Summary:

This project will provide water supply for development in eastern Dublin. A turnout from Zone 7 south of I-580 at Pimlico Drive with a capacity of 6000 gpm (8.6 mgd) will be installed. This project will include 2300 feet of 20-inch main from the turnout to Dublin Boulevard with 200 feet of trenchless pipeline to cross under I-580. This turnout will include chemical feed facilities and real estate for a potential future pump station. This project is required to meet future demands and will add redundancy to improve reliability of the distribution system. The new turnout is served by Zone 7 Water Agency's Cross Valley Pipeline. Work will also include minor improvements existing TO5, including the installation of a new PRV in the TO5 vault for better flow control.

CEQA: City of Dublin, Eastern Dublin Specific Plan and General Plan Amendment Evironmental Impact Repo

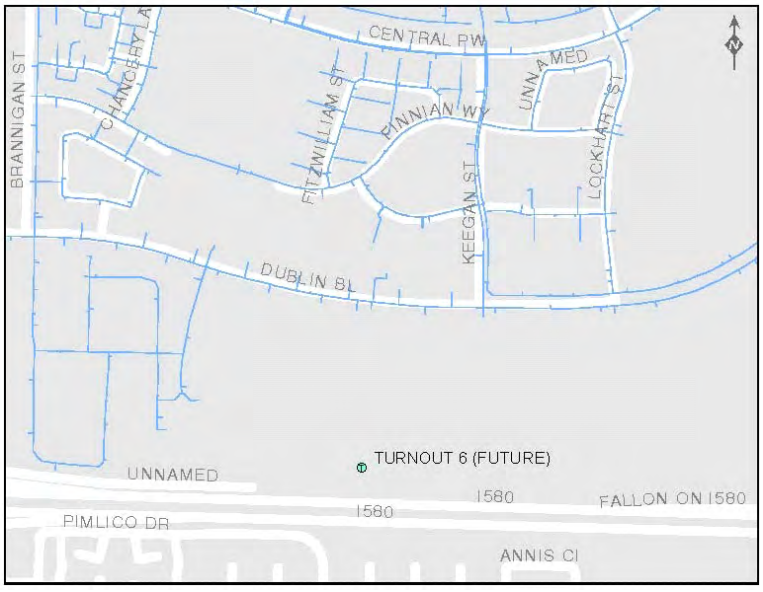
Reference: 2016 Water Master Plan Update

Fund Allocation Basis: Project is required to support future water customers.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
561,794	7,188,206	1,728,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$9,478,000**
Current Adopted Budget	$3,800,000
Increase/(Decrease)	$5,678,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 00-W011 Water System Replacement and Rehabilitation PROGRAM

Funding Allocation: 100% **610**

Project Manager: Steven Delight **Status:** Continuing Program

Project Summary:

This program is an element of the District's Asset Management Program and will fund projects to upgrade, replace and improve water system facilities to ensure the District provides uninterrupted water supply service. This program provides for the renewal or replacement of equipment on an as-needed basis or the upgrade of equipment as it becomes obsolete. This program may also be used to investigate issues that lead to the identification of projects that require the creation of a specific CIP project.

CEQA: To be determined based on individual projects funded by program.

Reference: District internal inspections and Asset Management Replacement Model

Fund Allocation Basis: Program required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	300,000	300,000	950,000	1,500,000	2,000,000	3,500,000	5,000,000	6,500,000	8,000,000	9,000,000	40,000,000

Total Estimated Project Cost	**$77,050,000**
Current Adopted Budget	$0
Increase/(Decrease)	$77,050,000

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T22-03 Water Line Replacements - Camp Parks North of 8th Street

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will replace approximately 6,100 linear feet of 6 and 8-inch potable water mains with 8-inch water mains within Camp Parks north of 8th Street. The project includes new water and fire service lines, as well as hydrants and small pipelines to hydrants and buildings. The streets included in this project are: Cromwell, Adams, Davis, 10th Street. The pipelines were installed in the 1950's and identified in the District's asset replacement model as pipelines that are in need of replacement. The pipelines in this area also have reduced flow rates due to interior pipe deterioration, which matches the predictions from the asset replacement model. This project will be coordinated with Camp Parks development.

CEQA: Categorical Exemption [CEQA Guideline 15302].

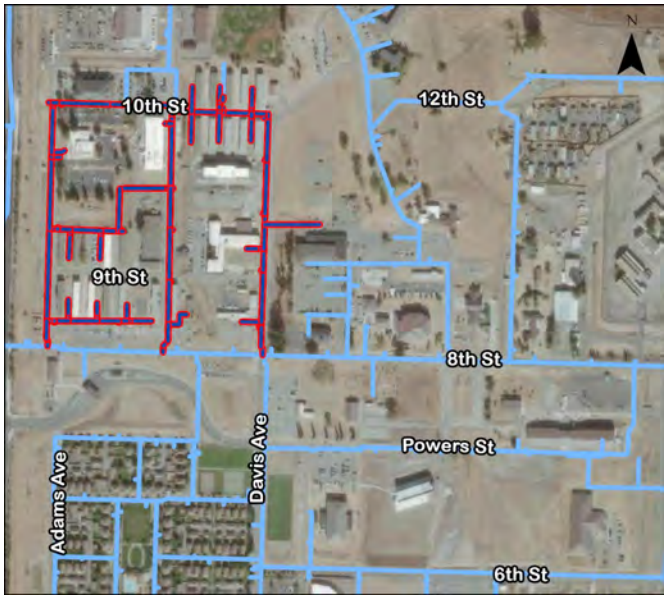
Reference: Water System Asset Replacement Model

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	405,000	4,595,000	0	0	0	0	0

Total Estimated Project Cost	**$5,000,000**
Current Adopted Budget	$0
Increase/(Decrease)	$5,000,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T22-04 Water Line Replacement - Camp Parks South of 8th Street

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will replace approximately 9,200 linear feet of 6, 8 and 12 inch potable water mains with 8 and 12 inch water mains within Camp Parks south of 8th Street. The project includes new water and fire service lines, as well as hydrants and small pipelines to hydrants and buildings. The streets included in this project are: Lorring, Monroe, James, Davis, Evans, Fernandez, Goodfellow, Hutchins, Keppler and 6th Street. The pipelines were installed in the 1950's and identified in the District's asset replacement model as pipelines that are in need of replacement. The pipelines in this area also have reduced flow rates due to interior pipe deterioration, which matches the predictions from the asset replacement model. This project will be coordinated with Camp Parks development.

CEQA: Categorical Exemption [CEQA Guideline 15302].

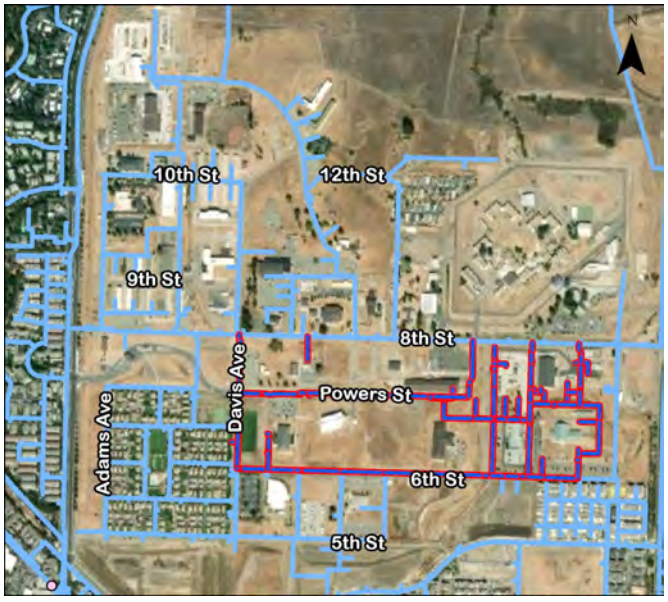
Reference: Water System Asset Replacement Model

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	510,000	5,770,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$6,280,000**
Current Adopted Budget	$0
Increase/(Decrease)	$6,280,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T22-05 Reservoir 1A Chloramination System Upgrade

Funding Allocation: 100% **610**

Project Manager: Sean O'Reilly **Status:** Future Project

Project Summary:

This project will upgrade the potable water reservoir mixer and chloramination system controls at Reservoir 1A to be consistent with the controls at Reservoir 3B.

CEQA: Categorical Exemption [CEQA Guideline 15302].

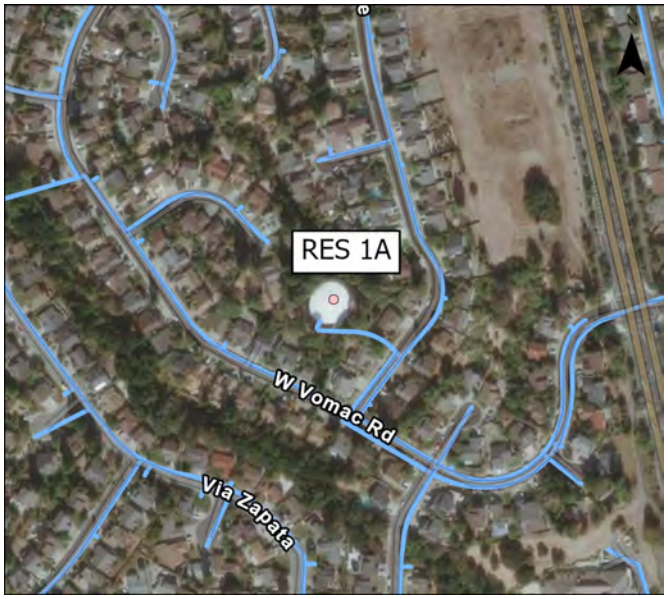
Reference: N/A

Fund Allocation Basis: Project is required to replace existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	100,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$100,000**
Current Adopted Budget	$0
Increase/(Decrease)	$100,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T22-19 Field Operations and District Facilities Energy Plan

Funding Allocation: 95% **610** 5% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

The District's 2021- 2026 Strategic Plan includes a goal to develop a long-term strategy ensure greater energy efficiency and reliability for the district. This project will review the energy usage of the District's water distribution pump stations, local collection system lift stations, and Field Operations and District Office facilities and identify opportunities to increase energy efficiency and offset energy costs through solar or wind power installations.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: N/A

Fund Allocation Basis: Ratio of water system and collection system facilities (vertical assets).

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	650,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$650,000**	**DSRSD Net Cost: $**
Current Adopted Budget	$0	Other Funding:
Increase/(Decrease)	$650,000	

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 16-A016 District Facilities Security Project - Phase 2

Funding Allocation: 90% **610** 10% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will 1) review past recommendations for physical security for the potable and recycled water facilities and the sewer lift stations, 2) inventory which recommendations have been implemented, either installed over the last few years or installed as part of the SCADA project (09-6101) and, 3) develop a plan and cost estimate for remaining required improvements. The project cost will be revised in future years to include the cost of construction once the required improvements are defined. The project will incorporate the District's America's Water Infrastructure Act of 2018 (AWIA) Risk and Resilience Assessment recommendations.

CEQA: To be determined.

Reference: Physical Security Risk Assessment, Pinkerton Consulting, April 2004
America's Water Infrastructure Act (AWIA) Risk and Resilience Assessment Certification, December 2020

Fund Allocation Basis: Based on number of facilities associated with each fund.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	150,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$150,000**
Current Adopted Budget	$50,000
Increase/(Decrease)	$100,000

DSRSD CIP 10-Year Plan for FYEs 2022 through 2031

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T16-28 Water Lines Replacement - Tamarack Drive - Village Pkwy to Firethorn Way

Funding Allocation: 100% **610**

Project Manager: Sukhpreet Mann **Status:** Future Project

Project Summary:

This project will replace the existing 2300 feet of 8-inch and 10-inch asbestos cement pipe (ACP) potable water lines in Tamarack Drive from Village Parkway to Firethorn Way, along with valves, hydrants, and services. The lines were installed in 1961. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	205,000	1,355,000	0	0	0	0	0

Total Estimated Project Cost	**$1,560,000**
Current Adopted Budget	$0
Increase/(Decrease)	$1,560,000



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T16-31 Water Line Replacement - Ironwood Drive

Funding Allocation: 100% **610**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will replace approximately 2800 feet of existing 4-inch, 6-inch and 8-inch asbestos cement pipe (ACP) potable water lines in Ironwood Drive, Irving Way, Honey Court, and Ironwood Court, along with valves, hydrants, and services. The lines were installed in 1960. Staff reviewed the pipe repair history, corrosion information and the acoustic evaluation and have concluded that they are near the end of their useful lives and therefore should be replaced.

CEQA: Statutory Exemption [CEQA Guideline 15282]

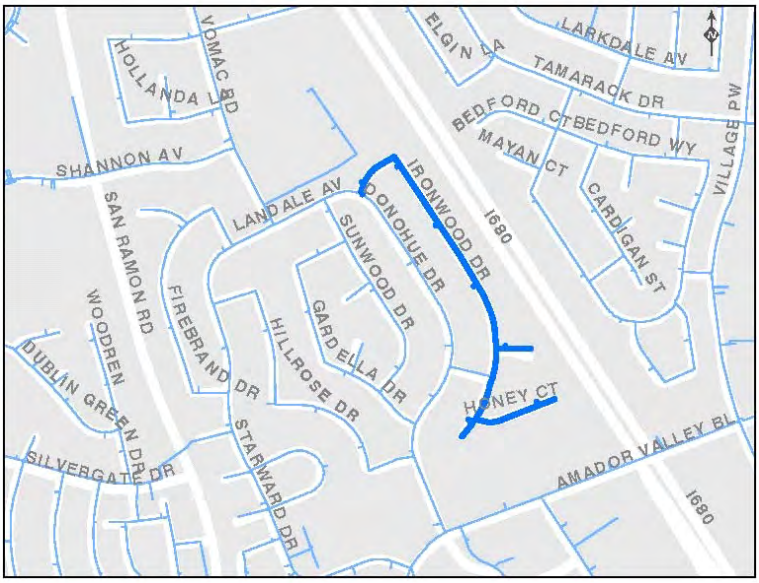
Reference: Asset Management Replacement Model

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	1,830,000	0	0	0	0

Total Estimated Project Cost	**$1,830,000**
Current Adopted Budget	$0
Increase/(Decrease)	$1,830,000



CATEGORY: WATER SYSTEM **Water Expansion (Fund 620)**

CIP No. 08-6202 Pump Station 20A Improvements

Funding Allocation: 100% **620**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will add an additional pump to Pump Station 20A. The pump station was constructed with provisions for the addition of a fourth pump that matches the existing pumps. Pump Station 20B was sized assuming that this additional pump would be installed. The additional pump is needed to meet buildout pumping capacity in Pressure Zone 2 in eastern Dublin as identified in the 2016 Water Master Plan Update. This project includes modifications to the motor control center and controls required to accommodate the fourth pump.

CEQA:	City of Dublin, Eastern Dublin Specific Plan and General Plan Amendment Evironmental Impact Repo
Reference:	2005 Basis of Design Report for Pump Station 20B; Eastern Dublin Specific Plan; 2016 Water Master Plan Update.
Fund Allocation Basis:	Project in support of future water customers.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	470,000	0	0	0	0	0

Total Estimated Project Cost	**$470,000**
Current Adopted Budget	$470,000
Increase/(Decrease)	$0



CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. 00-W002 Long-Term Water Resiliency PROGRAM

Funding Allocation: 75% **610** 25% **620**

Project Manager: Judy Zavadil **Status:** Future Program

Project Summary:

This program will develop long-term projects to meet the objectives of the Water Resiliency Policy adopted by the Board of Directors on April 20, 2021. The program will focus on building water resiliency by working collaboratively with regional partners to implement a diverse portfolio of supply, storage and conveyance projects. The program may include a potable reuse project; participation in regional storage; desalination, and intertie projects; and/or supplemental groundwater projects to expand the recycled water program.

CEQA:	Environmental Impact Report
Reference:	2021 Alternative Water Supply Study: A Framework for a Resilient and Sustainable Water Future; 2016 Water Capacity Reserve Fee Study
Fund Allocation Basis:	Based on the ratio of current water demands to projected build-out demands at the time of program inception

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	500,000	1,000,000	1,500,000	2,500,000	2,500,000	12,500,000	19,500,000

Total Estimated Project Cost	**$40,000,000**
Current Adopted Budget	$40,000,000
Increase/(Decrease)	$0

CATEGORY: WATER SYSTEM **Water Replacement (Fund 610)**

CIP No. T16-67 Reservoir Recoating PROGRAM

Funding Allocation: 100% **610**

Project Manager: **Status:** Future Program

Project Summary:

This project will recoat the interiors and paint the exteriors of potable and recycled reservoirs. The recoating and painting will provide corrosion control, extend the reservoir useful life and maintain facility aesthetics. There are four reservoirs, 3A (FY 2025) 200A (FY 2030), 20A (FY 2031), 30A (FY 2031), that will require recoating from FY 2026 through FY 2031. Actual timing may be adjusted based on interior dive inspections that are completed once every five years. The next scheduled inspection will take place in 2021.

CEQA: Categorical Exemption [CEQA Guideline 15302]

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing water fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	620,000	0	0	0	0	1,950,000	2,800,000	9,370,000

Total Estimated Project Cost	**$14,740,000**
Current Adopted Budget	$0
Increase/(Decrease)	$14,740,000



CIP 10-YEAR PLAN FYEs 2022 through 2031

** Listed according to project timing from earliest to latest*

CATEGORY: WASTEWATER COLLECTION

CIP No.	Project Name	Page
2-Year Projects		
21-S008	Lift Station 2 Upgrades	99
20-S013	East Dublin 36" Trunk Sewer Rehabilitation	100
22-S008	Sewer Collection System Evaluation and Spot Repair	101
20-S028	Dublin Boulevard Extension Sewer Facilities	102
14-S001	Camp Parks Sewer Rehabilitation Project - Goodfellow Ave North of 8th Street	103
20-S014	Dublin Boulevard - Amador Plaza Road to Village Parkway	104
00-S020	Wastewater Collection System Replacement and Rehabilitation PROGRAM	109
Future Projects		
T20-04	Dublin Boulevard - Clark Avenue to Sierra Court	106
T20-05	Dublin Court and Dublin Boulevard Sewer Replacement	107
T20-06	Village Parkway - South of Dublin Boulevard	108
T22-20	Large Diameter Sewer Condition Assessment	109
18-S006	San Ramon Golf Course 24" Trunk Sewer Rehabilitation	110
18-S007	Alcosta Blvd Sewer Replacement	111
T14-02	Camp Parks Sewer Rehabilitation Project - Davis and Cromwell, 8th to 10 Streets	112
14-S002	Camp Parks Sewer Rehabilitation Project - Adams 8th to 10th Streets	113
T16-50	Iron Horse Trail Sewer Replacement	114
08-2101	Donahue Dr./Vomac Rd. Relief Sewer	115
T00-76	Dublin Trunk Relief Sewer	116

CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 21-S008 Lift Station 2 Upgrades

Funding Allocation: 100% **210**

Project Manager: Kevin Randeni **Status:** Continuing Project

Project Summary:

Lift Station 2 located at Croak Road and Terracina Drive in eastern Dublin does not have a standby generator and is prone to overflows in the event of a power outage. This project will add safeguards to Lift Station 2 to prevent overflow of the wetwell in the event that there is a power outage during peak flow conditions. The project will add VFDs or soft starters to the pumps to allow them to be started at a reduced voltage, which allows staff to use a small generator that can be deployed with a single person rather than a trailer mounted generator to start the pumps, saving response time in the event of a power outage. Additionally, the project will add a tee on the force main to allow staff to drain the wetwell with a portable trash pump, which would be used in the event that the pumps have failed.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: Staff recommendation.

Fund Allocation Basis:

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
22,100	64,500	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$86,600**
Current Adopted Budget	$83,000
Increase/(Decrease)	$3,600

CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 20-S013 East Dublin 36" Trunk Sewer Rehabilitation

Funding Allocation: 100% **210**

Project Manager: Rudy Portugal **Status:** Continuing Project

Project Summary:

This project will rehabilitate approximately 670 feet of an existing 36-inch reinforced concrete pipe (RCP) of the East Dublin PRFTA trunk. The pipe was installed in 1960 and has deteriorated with some corrosion visible and significant spalling. The first pipe reach is in an easement that begins just west of Johnson Drive (about 500 feet north of Owens Drive) and continues west almost to Owens Drive. The second pipe section is in an easement just south of I-580 between Owens Court and the Pleasanton BART parking lot (behind Dahlin Group Building). The section between was lined in 1993 and is in fair condition at this time.

CEQA: Statutory Exemption [CEQA Guideline 15282]

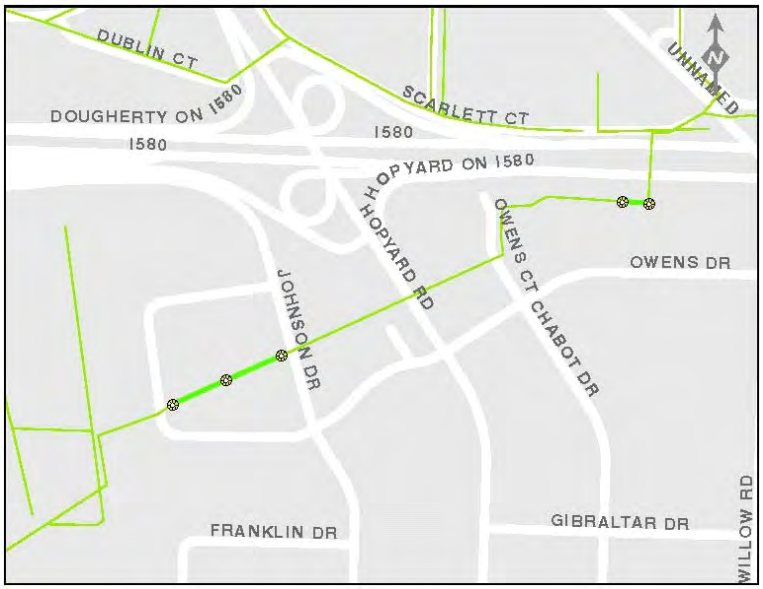
Reference: Results of National Plant Services field investigation (CCTV, sonar, laser) of large diameter sewers

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
196,000	1,004,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,200,000**
Current Adopted Budget	$737,600
Increase/(Decrease)	$462,400



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 22-S008 Sewer Collection System Evaluation and Spot Repair

Funding Allocation: 100% **210**

Project Manager: Jose Oropeza **Status:** New Project

Project Summary:

As part of the Asset Management Program for the collections system, sewer lines are periodically inspected and given a condition rating in accordance with the Pipeline Assessment Certification Program (PACP). The sewer lines with the most severe PACP structural condition ratings are identified as needing futher review to determine neccesary repairs. Data collected over the past several years indicate that there are 102 pipe segments that need further investigation to determine if spot repairs are necessary. This project will evaluate the pipe segments, and if a repair is warranted, determine the most cost-effective repair using standard technical specifications that have been developed as part of a previous collection system spot repair project. A variety of sewer line repair methods may be used, such as CIPP or open trenching. The current budget assumes that fifty pipe segements will require basic spot repairs. If certain segements require more complicated repair, additional construction funding may be required.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	50,000	250,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$300,000**
Current Adopted Budget	$0
Increase/(Decrease)	$300,000

CATEGORY: WASTEWATER COLLECTION **Local Wastewater Expansion (Fund 220)**

CIP No. 20-S028 Dublin Boulevard Extension Sewer Facilities

Funding Allocation: 100% **220**

Project Manager: Ryan Pendergraft **Status:** Continuing Project

Project Summary:

The Alameda County Transportation Commission, Alameda County, and the cities of Dublin and Livermore have partnered on the Dublin Boulevard Extension Project (Extension Project), a 1.5-mile extension of Dublin Boulevard from Fallon Road in Dublin to North Canyons Parkway at Doolan Road in Livermore. To accommodate future development based on the City of Dublin's General Plan, this project will construct 2800 feet of 15 inch wastewater collection pipeline and associated appurtenances in Dublin Boulevard from Fallon Road to Croak Road in coordination with the Extension Project.

CEQA: Final EIR – Dublin Blvd. – North Canyons Parkway Extension Project (City of Dublin) – August 2019

Reference: DSRSD 2019 Collection System Master Plan; DSRSD 2018 Local Wastewater Capacity Reserve Fee Study

Fund Allocation Basis:

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	50,000	655,000	655,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,360,000**
Current Adopted Budget	$1,360,000
Increase/(Decrease)	$0

DSRSD CIP 10-Year Plan for FYEs 2022 through 2031

CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 14-S001 Camp Parks Sewer Rehabilitation Project - Goodfellow Ave North of 8th Street

Funding Allocation: 100% **210**

Project Manager: Steven Delight **Status:** New Project

Project Summary:

This project will rehabilitate approximately 1,500 feet of 8-inch of vitrified clay pipe (VCP) sewer on Goodfellow Avenue north of 8th Street. It will include fixing the siphon installed by the Federal Corrections Institute (FCI). This pipe has several cracks and fractures leading to high inflow and infiltration rates. Project cost will be dependent on the method of rehabilitation which may be slip line, pipeburst or replacement.

CEQA: Statutory Exemption [CEQA Guideline 15282]

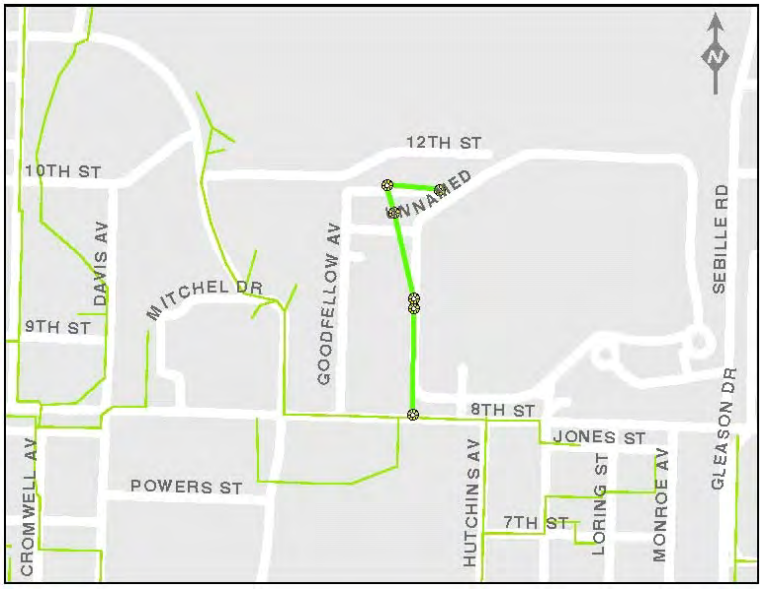
Reference: Camp Parks Privatization Study, WBA, July 1998

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
22,090	100,000	690,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$812,090**
Current Adopted Budget	$411,305
Increase/(Decrease)	$400,785



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Expansion (Fund 220)**

CIP No. 20-S014 Dublin Boulevard - Amador Plaza Road to Village Parkway

Funding Allocation: 100% **220**

Project Manager: Rudy Portugal **Status:** New Project

Project Summary:

This project will upsize 731 feet of 18-inch gravity main to 21-inch gravity main in Dublin Boulevard between Amador Plaza Road and Village Parkway. The recently completed 2019 Collection System Master Plan included an evaluation of the collection system under future flow conditions. Based on the evaluation, improvements were recommended to eliminate future system deficiencies and to meet projected flows for future downtown development. This project will begin with flow monitoring to confirm the current flows in order to confirm estimates from the 2019 Local Collection System Master Plan are correct.

CEQA: CEQA Initial Study/Mitigated Negative Declaration

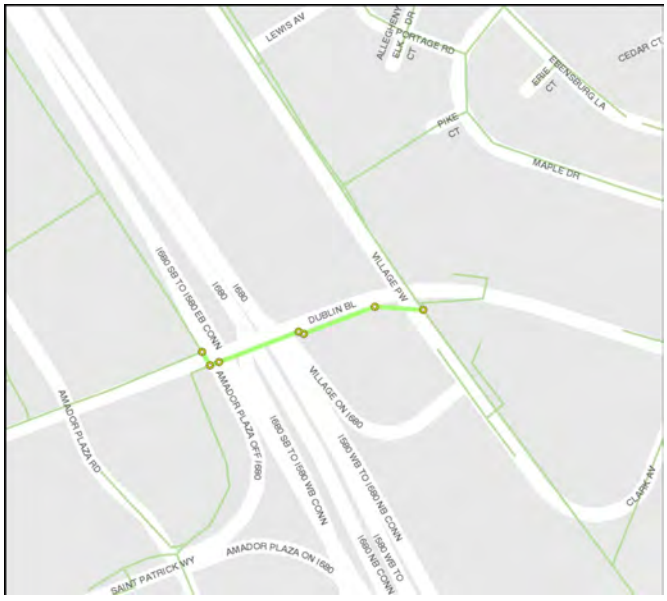
Reference: 2019 Local Collection System Master Plan

Fund Allocation Basis: Project is required to convey future customer wastewater flows

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	50,000	175,000	645,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$870,000**
Current Adopted Budget	$870,000
Increase/(Decrease)	$0



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 00-S020 Wastewater Collection System Replacement and Rehabilitation PROGRAM

Funding Allocation: 100% **210**

Project Manager: Steven Delight **Status:** Continuing Program

Project Summary:

This project will insure that uninterrupted sewer collection service is provided and will include, but are not limited to, repairing leaking pipes, pipe joints and manholes to reduce the amount of infiltration and inflow rates, which will reduce operating costs at the wastewater treatment plant and extend the LAVWMA wet weather capacity. Sewer lines and manholes will be repaired or replaced as identified by District staff annually.

CEQA: To be determined based on each project funded by the program.

Reference: Asset Management Program.

Fund Allocation Basis: Program is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	150,000	150,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000

Total Estimated Project Cost	**$4,800,000**
Current Adopted Budget	$0
Increase/(Decrease)	$4,800,000

CATEGORY: WASTEWATER COLLECTION **Local Wastewater Expansion (Fund 220)**

CIP No. T20-04 Dublin Boulevard - Clark Avenue to Sierra Court

Funding Allocation: 100% **220**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will upsize 1,048 feet of 10-inch gravity main to 12-inch gravity main in Dublin Boulevard between Clark Avenue and Sierra Court. The siphons proximate to these gravity mains are not included as part of the project. This project was recommended in the 2019 Wastewater Collection System Master Plan after extensive hydraulic evaluation.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: 2019 Local Wastewater Collection System Master Plan

Fund Allocation Basis: Project is required to convey future customer wastewater flows

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	175,000	500,000	0	0	0	0	0

Total Estimated Project Cost	**$675,000**
Current Adopted Budget	$0
Increase/(Decrease)	$675,000



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. T20-05 Dublin Court and Dublin Boulevard Sewer Replacement

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will replace approximately 300 feet of 10-inch pipe near the intersection of Dublin Blvd and Dublin Court. The pipeline travels under a drainage canal and has been damaged over time. A small liner was installed as a temporary repair until the segment can be replaced.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: 2019 Local Wastewater Collection System Master Plan

Fund Allocation Basis: Project is required to replace existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	200,000	550,000	0	0	0	0	0

Total Estimated Project Cost	**$750,000**
Current Adopted Budget	$0
Increase/(Decrease)	$750,000



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Expansion (Fund 220)**

CIP No. T20-06 Village Parkway - South of Dublin Boulevard

Funding Allocation: 100% **220**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will upsize 1,262 feet of 36-inch and 39-inch gravity main to 42-inch gravity main in Village Parkway south of Dublin Boulevard. These gravity mains are recently lined but are still recommend for upsizing due to hydraulic deficiency. This project was reccomended as part of the 2019 Wastewater Collection System Master Plan.

CEQA: CEQA Initial Study/Mitigated Negative Declaration

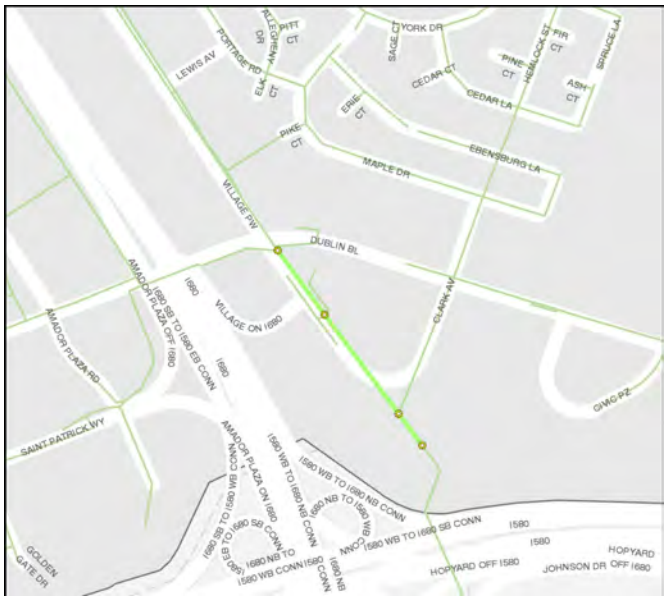
Reference: 2019 Local Collection System Master Plan

Fund Allocation Basis: Project is required to convey future customer wastewater flows

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	0	0	275,000	2,557,000	0

Total Estimated Project Cost	**$2,832,000**
Current Adopted Budget	$0
Increase/(Decrease)	$2,832,000



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. T22-20 Large Diameter Sewer Condition Assessment

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

As part of the Asset Management Program, this project will identify approximately 15,000 – 20,000 feet of larger lines that represent the greatest risk if failure were to occur and perform internal analysis using high technology equipment to assess their conditions. Data collected will include profiles, internal pipe corrosion, debris collection, etc. and will be used for improved maintenance management and CIP project identification. A similar condition assessment was completed in 2014.

CEQA: Statutory Exemption [CEQA Guideline 15262 - Feasibility and Planning Studies].

Reference: To be determined.

Fund Allocation Basis:

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	150,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$150,000**	**DSRSD Net Cost: $**
Current Adopted Budget	$0	Other Funding:
Increase/(Decrease)	$150,000	

CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 18-S006 San Ramon Golf Course 24" Trunk Sewer Rehabilitation

Funding Allocation: 100% **210**

Project Manager: Jackie Yee **Status:** Future Project

Project Summary:

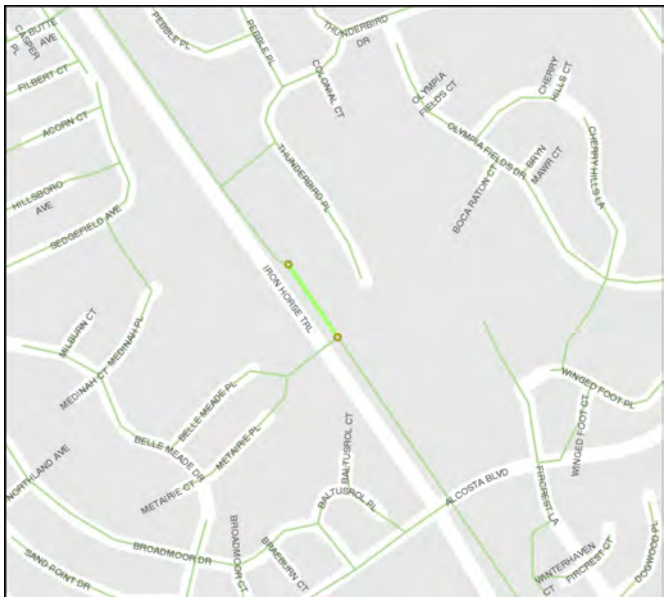
This section of existing 24-inch reinforced concrete pipe (RCP) installed in 1961 has deteriorated. Inspection records indicate the segment has lateral cracks and sags. The project will rehabilitate approximately 470 feet of the trunk sewer in the Iron Horse Trail at the San Ramon Valley Golf Course from about 1,500 feet north of Alcosta Blvd, south to about 1,000 feet north of Alcosta Blvd.

CEQA:	Statutory Exemption [CEQA Guideline 15282]
Reference:	Asset Management Program: results of National Plant Services field investigation (CCTV, sonar, laser) of large diameter sewers
Fund Allocation Basis:	Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	557,500	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$557,500**
Current Adopted Budget	$557,500
Increase/(Decrease)	$0



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 18-S007 Alcosta Blvd Sewer Replacement

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

The project will replace approximately 1,250 feet of 10-inch of vitrified clay pipe (VCP) sewer located in Alcosta Blvd from approximately at Village Parkway east to the Iron Horse Trail. The sags in the pipe make it impossible to TV to determine its condition and requires cleaning on frequent basis. The project will replace the sewer as needed to prevent potential sanitary sewer overflow (SSO) incidents.

CEQA: Statutory Exemption [CEQA Guideline 15282]

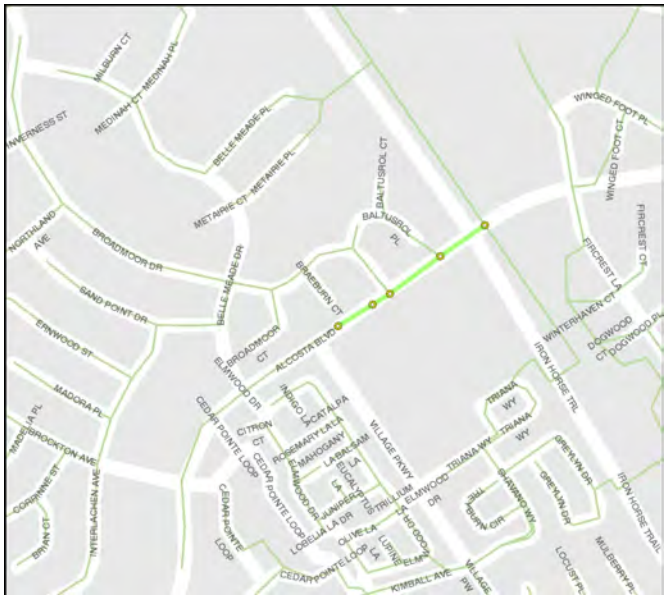
Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	63,500	583,775	0	0	0	0	0

Total Estimated Project Cost	**$647,275**
Current Adopted Budget	$480,375
Increase/(Decrease)	$166,900



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. T14-02 Camp Parks Sewer Rehabilitation Project - Davis and Cromwell, 8th to 10 Streets

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will rehabilitate approximately 2,600 feet of 12-inch of vitrified clay pipe (VCP) sewer along Davis and Cromwell Avenues, between 8th and 10th Streets. The existing sewer has several cracks and fractures leading to high inflow and infiltration rates. The project may pipeburst, or slip line, or replace the pipe in its entirety.

CEQA: Statutory Exemption [CEQA Guideline 15282]

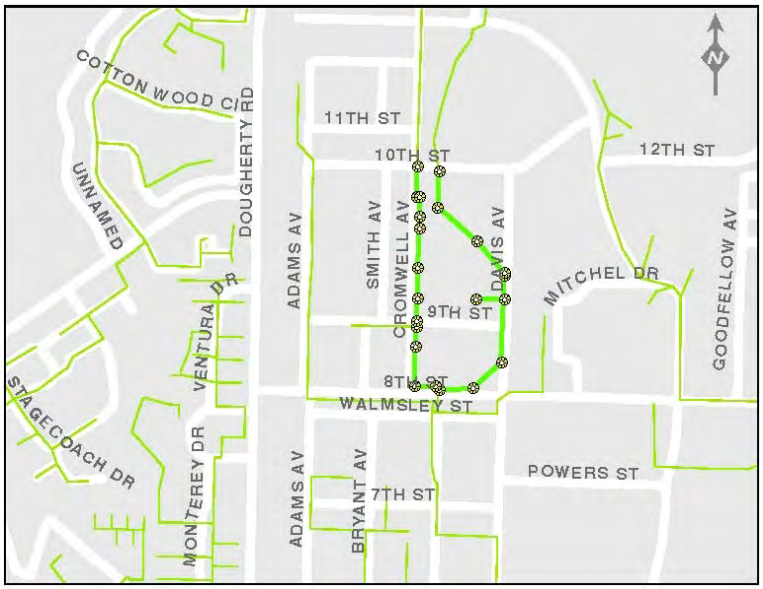
Reference: Camp Parks Privatization Study, WBA, July 1998

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	260,000	1,380,000	0	0	0	0	0

Total Estimated Project Cost	**$1,640,000**
Current Adopted Budget	$0
Increase/(Decrease)	$1,640,000



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 14-S002 Camp Parks Sewer Rehabilitation Project - Adams 8th to 10th Streets

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will rehabilitate approximately 1300 feet of 12-inch of vitrified clay pipe (VCP) sewer along Adams Avenue between 8th and 10th Streets. The existing sewer has several cracks and fractures leading to high inflow and infiltration rates. Project cost will be dependent on the method of rehabilitation which may be slip line, pipeburst or replacement.

CEQA: Statutory Exemption [CEQA Guideline 15282]

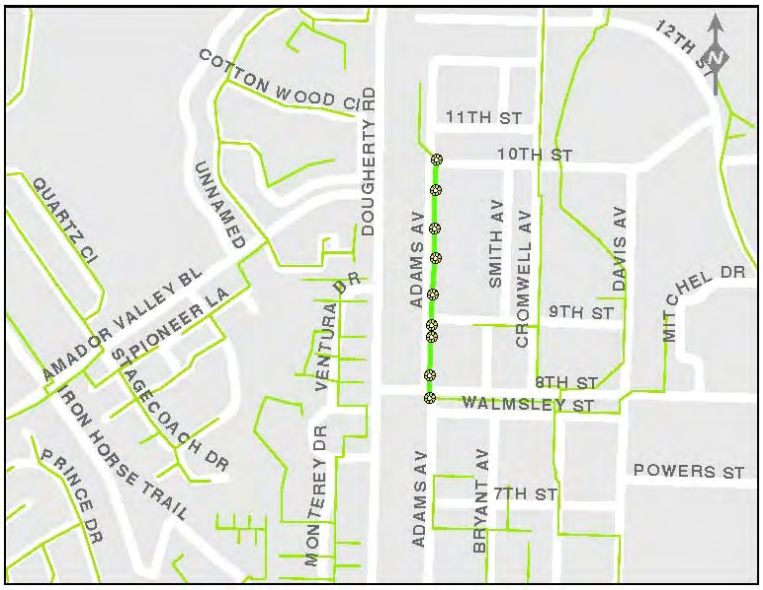
Reference: Camp Parks Privatization Study, WBA, July 1998

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
36,063	0	0	0	0	175,000	600,000	0	0	0	0	0

Total Estimated Project Cost	**$811,063**
Current Adopted Budget	$505,803
Increase/(Decrease)	$305,260



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. T16-50 Iron Horse Trail Sewer Replacement

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

The project will replace approximately 1650 feet of 8-inch and 10-inch of polyvinyl chloride pipe (PVC) and vitrified clay pipe (VCP) sewer located just north of the Alameda/Contra Costa County line that cross the Iron Horse Trail and the adjacent creek. The project will also add manholes; at this time, the manhole spacing makes TV inspection and cleaning problematic. The sags in the pipe make it impossible to TV to determine its condition and requires cleaning on frequent basis (3-month trouble spot). The project will replace the sewer and additional sewers upstream as needed to prevent the potential of sanitary sewer overflow (SSO) incidents.

CEQA: Statutory Exemption [CEQA Guideline 15282]

Reference: District internal inspections, CMMS data; Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	855,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$855,000**
Current Adopted Budget	$0
Increase/(Decrease)	$855,000



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Replacement (Fund 210)**

CIP No. 08-2101 Donahue Dr./Vomac Rd. Relief Sewer

Funding Allocation: 100% **210**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will upsize 2,400 feet of 8 inch to 12 inch gravity main starting on Vomac Road, continuing east to Ironwood Drive. There are 3 sub-basins that lead to the Donahue/Vomac area. One or all of these sub-basins are contributing to unusually high infiltration and inflow rate. The 8-inch gravity main in Donohue Drive between Gardella Drive and Hillrose Drive will be blocked to prevent splitting flow from the gravity main in Hillrose Drive to the gravity main in Donohue Drive. This blockage would prevent an extension of the required improvement project further to the southeast, which is located in easement area.

CEQA: Categorical Exemption [CEQA Guideline 15302]

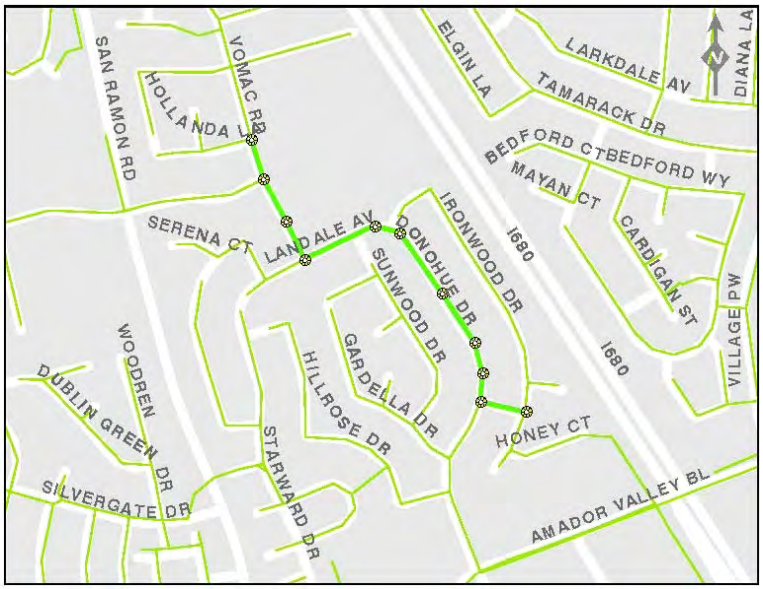
Reference: 2019 Wastewater Collection System Master Plan Update

Fund Allocation Basis: Project is required to replace or rehabilitate existing local wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
71,445	0	0	0	0	0	0	410,000	1,170,000	0	0	0

Total Estimated Project Cost	**$1,651,445**
Current Adopted Budget	$1,481,445
Increase/(Decrease)	$170,000



CATEGORY: WASTEWATER COLLECTION **Local Wastewater Expansion (Fund 220)**

CIP No. T00-76 Dublin Trunk Relief Sewer

Funding Allocation: 100% **220**

Project Manager: TBD **Status:** Future Project

Project Summary:

The project will construct a relief sewer for the Dublin trunk sewer downstream of the east Dublin trunk sewer connection located within the District's Dedicated Land Disposal site to an existing 48-inch sewer line within the WWTP, near the East Amador Lift Station. The project consists of approximately 2100 feet of a 42-inch parallel pipeline. The 2019 Wastewater Collection System Master Plan Update indicated that the Dublin Trunk sewer surcharges in a 20-year return frequency storm. This project is required to comply with the Regional Water Quality Control Board (RWQCB) design requirements and to reduce infiltration and inflow rate.

CEQA: Initial Study may be required.

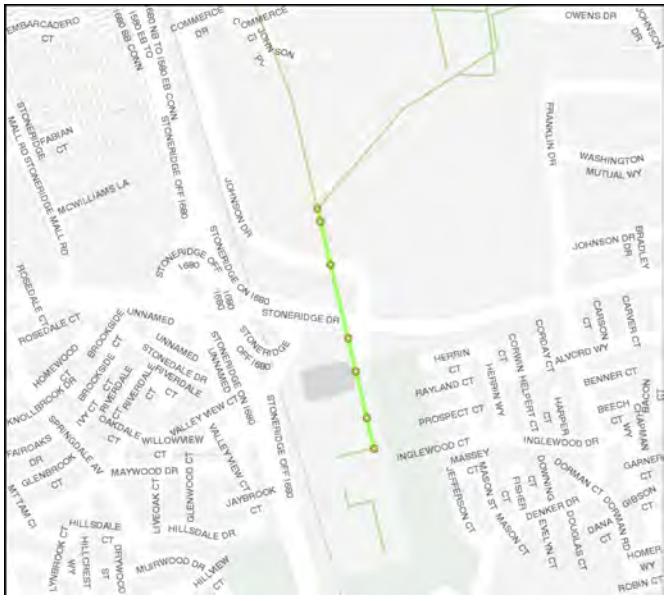
Reference: 2019 Wastewater Collection System Master Plan Update.

Fund Allocation Basis: Project is required to convey future customer wastewater flows.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	0	0	0	0	6,945,000

Total Estimated Project Cost	**$6,945,000**
Current Adopted Budget	$0
Increase/(Decrease)	$6,945,000



CIP 10-YEAR PLAN FYEs 2022 through 2031

** Listed according to project timing from earliest to latest*

CATEGORY: REGIONAL WASTEWATER TREATMENT

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CIP 10-YEAR PLAN FYEs 2022 through 2031

** Listed according to project timing from earliest to latest*

CATEGORY: REGIONAL WASTEWATER TREATMENT

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T10-83	Cover Primary Clarifiers	154
T12-08	Cover Settled Sewage Channel and Selector	155
T16-42	Nutrient Removal	160

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 21-P004 Cogeneration Room Cooling

Funding Allocation: 100% **310**

Project Manager: Kevin Randeni **Status:** Continuing Project

Project Summary:

This project will improve the circulation of air within the room that contains the WWTP cogeneration engines. The project will replace the current inlet air handling units, which are undersized and beyond their useful life. This will reduce heat related health and safety risks for staff who perform daily housekeeping and longer maintenance activities in the room and improve the longevity of equipment inside the room. Criteria for room temperature or acceptable rise in temperature from ambient air will be developed during the design phase.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: Staff recommendation.

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
156,000	111,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$267,000**
Current Adopted Budget	$175,000
Increase/(Decrease)	$92,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 21-P009 East Amador Lift Station Rehabilitation

Funding Allocation: 100% **310**

Project Manager: Sukhpreet Mann **Status:** Continuing Project

Project Summary:

The District has operated and maintained the East Amador Lift Station for the City of Pleasanton in accordance with the 1992 Agreement. Staff is concerned that without major improvements to EALS, the pump station is at risk of failure, which could lead to significant disruptions in sewer service for the City. The pumps and their variable frequency drives (VFDs) are at the end of their useful life. The flow meters and pump controllers also need to be upgraded. The dry well structure is in poor condition and the dry well elevator frequently malfunctions. This project will replace the aforementioned equipment. The project will be managed by DSRSD but 100 percent funded by the City of Pleasanton.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: DSRSD/Pleasanton Agreement for Water Disposal Services (1992)

Fund Allocation Basis: The project will be fully reimbursed by the City of Pleasanton.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
150,000	1,350,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,500,000**	**DSRSD Net Cost: $0**
Current Adopted Budget	$1,500,000	Other Funding: City of Pleasanton $1,500,000
Increase/(Decrease)	$0	

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P009 WWTP Energy Master Plan

Funding Allocation: 80% **310** 20% **320**

Project Manager: Jason Ching **Status:** New Project

Project Summary:

The District's 2021- 2026 Strategic Plan includes a goal to develop a long-term strategy ensure greater energy efficiency and reliability for the district. This Plan will develop energy demands and a strategy to meet those demands through self-generation and PG&E power. More specifically, the plan will install additional power monitoring devices to develop energy use baselines for energy intensive processes and equipment; determine normal and standby power needs for current facilities and anticipated plant upgrades and expansion; evaluate potential process or equipment changes to reduce the energy demand of energy intensive processes including the secondary aeration process and the biosolids thickening process; quantify the impact of DERWA energy demands on the District's energy costs; determine the optimal current cogeneration capacity and develop a facility plan for current and future cogeneration; evaluate the potential for solar energy to complement the cogeneration system; and evaluate the potential of current battery technology to reduce peak energy demands.

CEQA: Not project under CEQA.

Reference: 2017 WWTP and Biosolids Master Plan
Black and Veatch Reports dated September 2019 & April 2020

Fund Allocation Basis: Based on ratio of energy used at wastewater treatment plan versus water facilities.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	800,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$800,000**
Current Adopted Budget	$0
Increase/(Decrease)	$800,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P010 WWTP HVAC Replacements

Funding Allocation: 100% **310**

Project Manager: Sukhpreet Mann **Status:** New Project

Project Summary:

This project would replace the HVAC systems at Buildings A, M and R at the WWTP.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: To be determined.

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	60,000	150,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$210,000**
Current Adopted Budget	$0
Increase/(Decrease)	$210,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P011 WWTP Roof Replacements

Funding Allocation: 100% **310**

Project Manager: Sukhpreet Mann **Status:** New Project

Project Summary:

This project would replace the roofs of Buildings B, Q, and R at the WWTP. The roofs at each building are due for replacement based on their age and condition.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	300,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$300,000**
Current Adopted Budget	$0
Increase/(Decrease)	$300,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P012 Cogen Catalyst Housings Replacement

Funding Allocation: 100% **310**

Project Manager: Shawn Quinlan **Status:** New Project

Project Summary:

This project will replace existing catalyst systems, located inside the engine room, relocate them outside, and replace existing heat exchangers with combination units that collect heat and house the catalysts. Moving the catalyst housing outside reduces the heat load inside the cogeneration room and improves safety conditions for maintenance work by eliminating the need to stand on a ladder while performing maintenance.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: This project is required to replace an existing regional wastewater fund asset.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	310,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$310,000**
Current Adopted Budget	$0
Increase/(Decrease)	$310,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P013 WWTP Process Assessment

Funding Allocation: 100% **310**

Project Manager: Jason Ching **Status:** New Project

Project Summary:

This project will support assessment of wastewater treatment plant assets to determine future rehabilitation projects. The project will fund various specialty inspection and consulting services including but not limited to corrosion control and coatings, odor control, structural engineering, and flow monitoring. Examples of assessments include an evaluation of flow and loading from the grit pumps, integrity of channel covers in the commutator room and return activated sludge channel, condition of and back-up to the plant process water system, process pipelines inspection and useful life determination, and efficiency of odor control processes. Funding is only included for assessments. The results of the assessments will inform future projects.

CEQA: Not a project under CEQA [CEQA Guideline 15378].

Reference: N/A

Fund Allocation Basis:

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	100,000	175,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$275,000**
Current Adopted Budget	$0
Increase/(Decrease)	$275,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P022 WWTP Administration Building (Building A) Remodel/Renovation

Funding Allocation: 100% **310**

Project Manager: Kevin Randeni **Status:** New Project

Project Summary:

This project proposes to engage design professionals for preliminary planning and design of renovations for the WWTP Administration Building (A). A preliminary design study will commence in calendar year 2022. It is anticipated that construction and permitting costs will be presented following scoping and detailed design.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	100,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$100,000**
Current Adopted Budget	$0
Increase/(Decrease)	$100,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 16-P024 WWTP Fire Alarm System Upgrades

Funding Allocation: 100% **310**

Project Manager: Sean O'Reilly **Status:** Continuing Project

Project Summary:

The wastewater treatment plant currently has four different fire alarm controls panels (FACP) on two separate systems. Two of the FACPs are obsolete and the other two are crude remotes to the primary systems at Building A and Building R. There are separate dialers with two phones lines (primary and backup) for each system. This configuration complicates the maintenance and testing of the systems. This project will integrate the entire system into a single FACP that could be easily networked and expanded as needed. Some of the existing infrastructure (i.e. smoke detectors, strobes, pull stations, etc.) will be utilized to the extent possible which should reduce cost and labor. The upgrade will also include other items such as adding fire alarm notification devices to the first and second floors of Building A, tying in flow switch (at riser) to FACP, panel programming, and fire alarm drawings that will improve staff's ability to maintain and repair the system.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference: Staff recommendation.

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
61,030	143,120	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$204,150**
Current Adopted Budget	$204,150
Increase/(Decrease)	$0

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. 16-P028 Biogas Treatment System Improvements

Funding Allocation: 67% **320** 33% **310**

Project Manager: Jason Ching **Status:** Continuing Project

Project Summary:

This project will evaluate the existing biogas scrubber and make recommendations to improve the existing scrubber or replace it. The biogas scrubber cleans and pressurizes biogas prior to being sent to the cogeneration engines. Clean biogas improves engine efficiency and assists in meeting Bay Area Air Quality Management District regulations at cogeneration. With Digester 4 in service, and once the primaries, and fats, oils and grease (FOG) station are put into operation, additional solids will be collected for digestion, increasing biogas production. Since the existing biogas scrubber is currently working at capacity. Any additional gas will need to be cleaned prior to sending it to cogeneration.

CEQA:	Categorical Exemption [CEQA Guideline 15303].
Reference:	DSRSD Wastewater Treatment Plant Digester Gas Treatment Master Plan, September 2019, Black and Veatch
Fund Allocation Basis:	Based on 140 scfm current gas flow vs 430 scfm new gas flow after improvements

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
873,767	2,265,000	1,292,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$4,430,767**
Current Adopted Budget	$4,030,767
Increase/(Decrease)	$400,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 16-P030 EPS1 and EPS2 Pump Modifications

Funding Allocation: 100% **310**

Project Manager: Shawn Quinlan **Status:** Continuing Project

Project Summary:

This project will modify three effluent pump station #1 (EPS1) pumps and two effluent pump station # 2 (EPS2) pumps to maintain full pumping capacity in wet weather conditons. The effluent pump bushings require modifications to flush out sediment and plastics. Three of the pumps have seized up and had to be pulled out and repaired. This project will modify the bushings of the remaining pumps.

CEQA: Categorical Exemption [CEQA Guideline 15302 and 15301].

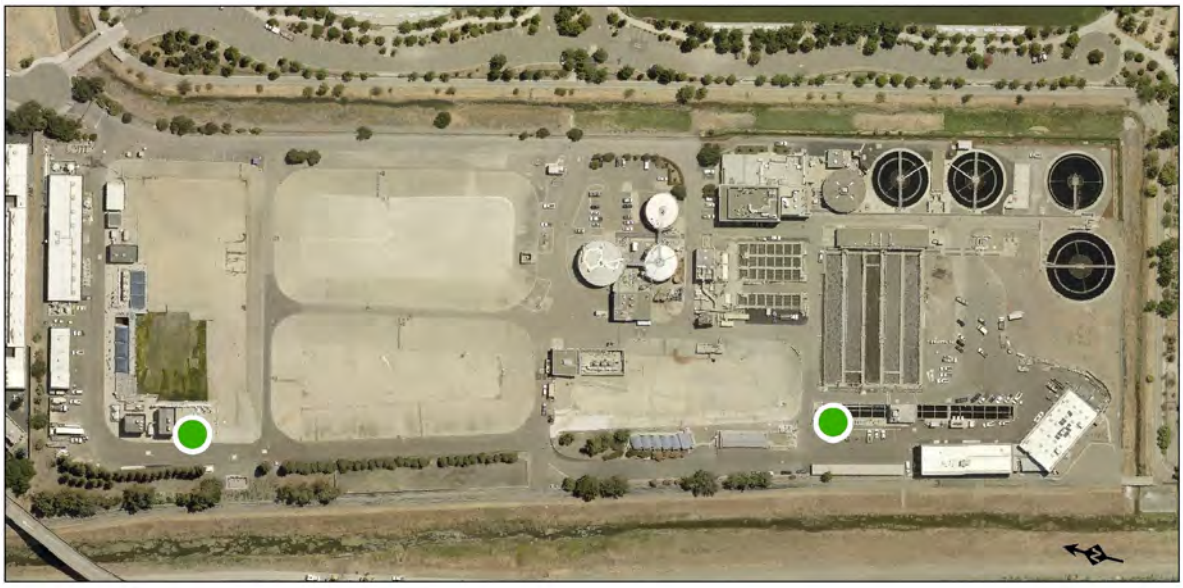
Reference: Staff recommendation.

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
149,297	0	100,703	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$250,000**
Current Adopted Budget	$250,000
Increase/(Decrease)	$0



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. 17-P004 Primary Sedimentation Expansion and Improvements

Funding Allocation: 85% **320** 15% **310**

Project Manager: Jackie Yee **Status:** Continuing Project

Project Summary:

This project will construct one new primary sedimentation tank and partially demolish and replace one of the existing primary sedimentation tanks at the Regional Wastewater Treatment Facility (RWTF). The project will also add an additional grit tank, replace internal mechanisms in the three remaining primary sedimentation tanks, and replace the motor control center. The primary treatment capacity is undersized for the facility's current average dry weather flow. Insufficient primary treatment capacity overburdens the aeration basins and secondary clarifiers leading to higher energy costs and more difficulties in controlling the secondary effluent water quality. The additional primary sedimentation tank will provide the treatment capacity needed for current and buildout flows.

CEQA: Initial Study/Mitigated Negative Declaration

Reference: 2017 WWTP and Biosolids Master Plan

Fund Allocation Basis: Based on ratio of WWTP flow at which project was estimated to be required to WWTP buildout flow at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
15,617,369	3,382,631	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$19,000,000**
Current Adopted Budget	$19,000,000
Increase/(Decrease)	$0



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 18-P010 Biogas Flare Improvements

Funding Allocation: 100% **310**

Project Manager: Jason Ching **Status:** Continuing Project

Project Summary:

This project will replace the Regional Wastewater Treatment Facility's existing biogas flare. Typically, all biogas is used to power the cogeneration engines after the gas is scrubbed. If the gas scrubber is out of service, or if cogeneration is offline, biogas must be vented to prevent over pressurization of the digesters. The flare cleanly burns the biogas under a Bay Area Air Quality Management District (BAAQMD) permit. This project will evaluate and replace the existing flare. Additional permitting may be required through the BAAQMD.

CEQA:	Categorical Exemption [CEQA Guideline 15301 and 15302].
Reference:	DSRSD Wastewater Treatment Plant Digester Gas Treatment Master Plan, September 2019, Black and Veatch
Fund Allocation Basis:	Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
295,000	340,000	920,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,555,000**
Current Adopted Budget	$1,500,000
Increase/(Decrease)	$55,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 05-3206 WWTP SCADA Improvements

Funding Allocation: 100% **310**

Project Manager: Jason Ching **Status:** Continuing Project

Project Summary:

This project will upgrade the WWTP Supervisory Control and Data Acquisition (SCADA) communication network, replace and program the programmable logic controllers (PLCS), replace the servers, install a new database repository for historical data, acquire a web portal to view SCADA data over the District's business network, upgrade the alarm notification and reporting software, upgrade the plant's fiber optic communications network andreplace 9 Robicon variable frequency drives. This project will involve complex construction sequencing to allow for parallel SCADA systems during implementation as the plant processes cannot be interrupted. It will also require thorough testing of the PLC programming and communication system to assure reliable plant operation after implementation to the new system. The nine existing VFDs scheduled for replacement are currently functioning; however, Robicon went out of business several years ago and no other company picked up support of their product line. Replacement parts cannot be found and there is no technical support. A Design-build project delivery method will be utilized for this project.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference: SCADA System Master Plan, March 2010

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
634,305	3,030,000	1,000,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$4,664,305**
Current Adopted Budget	$2,964,305
Increase/(Decrease)	$1,700,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 18-P002 WWTP Electrical System Master Plan

Funding Allocation: 100% **310**

Project Manager: Jason Ching **Status:** Continuing Project

Project Summary:

The last Electrical Master Plan was completed in 2004. This master plan will review the WWTP electrical system and determine the required improvements to support current electrical demands as well as the future electrical demands of WWTP processes planned in the 2017 WWTP and Biosolids Master Plan. Efforts to prepare for the Master Plan were undertaken in prior years, resulting in expenses to document the existing electrical system, and perform an arcflash study.

CEQA:	Not a project under CEQA [CEQA Guideline 15378].
Reference:	2004 Electrical Master Plan Update, 2017 Wastewater Treatment Plan and Biosolids Master Plan, WWTP Energy Master Plan
Fund Allocation Basis:	Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
250,000	0	500,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$750,000**
Current Adopted Budget	$750,000
Increase/(Decrease)	$0

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 18-P016 Alum Addition

Funding Allocation: 75% **310** 25% **320**

Project Manager: Kevin Randeni **Status:** Continuing Project

Project Summary:

This project will construct facilites to add alum to the facultative sludge lagoon return water. The addition of alum will precipitate phosphate from the return water and reduce the formation of struvite. Currenty, one of the strategies to avoid the formation of struvite at the wastewater treatment plant (WWTP) is to run the WWTP in a mode where the phosphate remains in the liquid process and exits the WWTP with the effluent, rather than remaining in the biosolids and forming struvite in the digesters. However, this mode of operation is not as effective in producing a consistently high quality effluent. The additon of alum will allow the WWTP to operate in an alternate mode that will produce a better settling sludge and higher quality effluent, thus eliminating the need for an additional clarifier.

CEQA: Categorical Exemption [CEQA Guideline 15303]

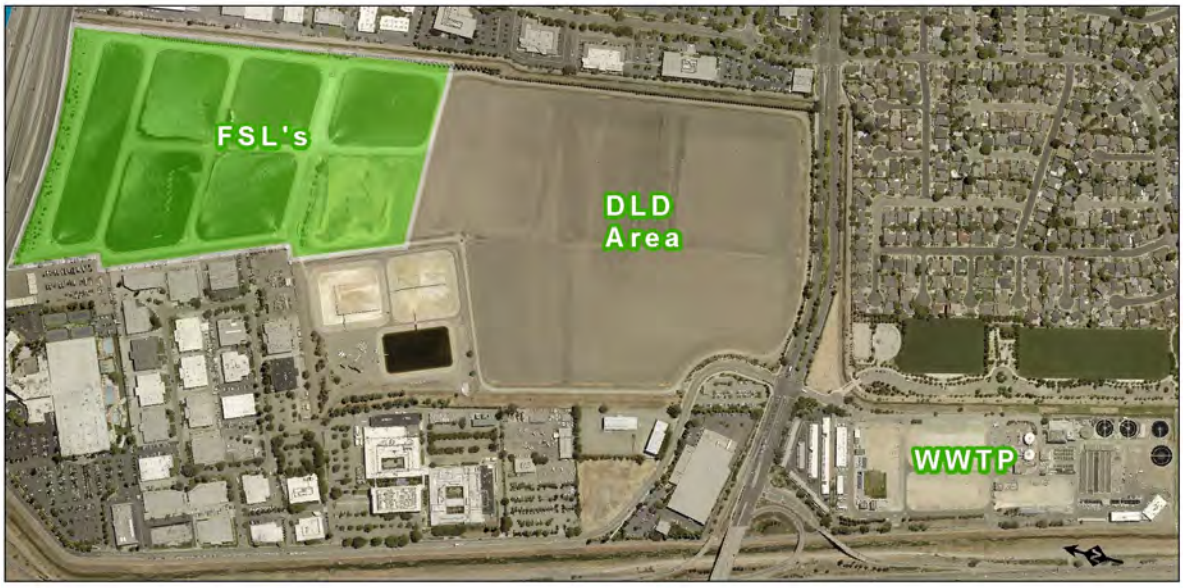
Reference: 2017 Wastewater Treatment Plant and Biosolids Master Plan

Fund Allocation Basis: Project is required to improve current operations; based on current vs. projected buildout average dry weather flow at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
142,080	1,526,000	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,668,080**
Current Adopted Budget	$800,000
Increase/(Decrease)	$868,080



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. 18-P013 Biosolids Dewatering Facility

Funding Allocation: 100% **320**

Project Manager: Kevin Randeni **Status:** New Project

Project Summary:

The water content of the biosolids harvested from District's facultative sludge lagoons (FSLs) limits the amount of biosolids that can be placed on the dedicated land disposal (DLD) site. With this limitation, the FSLs are slowly accumulating biosolids. The current land application of biosolids on the DLD is by far the most cost-effective solution for biosolids management. To continue using the DLD for biosolids disposal, the biosolids need to be dewatered. This project will construct a new biosolids dewatering facilities and building at the DLD site. The dewatering of biosolids will allow the DLD to continue to be the primary method of sludge disposal. Should the District wish to diversify biosolid management or take advantage of new technologies to recover biosolids as a resource, dewatering will be required. Therefore, dewatering is a near term solution for biosolids disposal that will also move the District toward diversifying its biosolids management in the long term. This project is required for both options of continuing with DLD disposal or participation in a regional biosolids facility.

CEQA: To be determined.

Reference: 2017 Wastewater Treatment Plant and Biosolids Master Plan

Fund Allocation Basis: Project is required to meet the needs for biosolids disposal for future customers.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	300,000	0	0	0	2,525,000	12,120,000	0	0	0	11,900,000

Total Estimated Project Cost	**$26,845,000**
Current Adopted Budget	$26,545,000
Increase/(Decrease)	$300,000

DSRSD CIP 10-Year Plan for FYEs 2022 through 2031

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 20-P006 Recoating of Digester Interior Covers 3, 2, and 1

Funding Allocation: 100% **310**

Project Manager: Rudy Portugal **Status:** New Project

Project Summary:

The steel digester covers were installed in 2002. This project will repair and coat the interior covers of the digesters, if needed, to extend their useful life. The project will also include minor general repairs to the digesters. While the digesters are drained for cleaning, the interior covers will be inspected. After the condition of each interior cover is determined, necessary work will be performed. Digester 1 was last cleaned in 2012 and Digesters 2 and 3 in 2013.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference:

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
62,934	227,066	0	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$290,000**
Current Adopted Budget	$290,000
Increase/(Decrease)	$0



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 22-P021 Hypochlorite Building Rehabilitation

Funding Allocation: 100% **310**

Project Manager: Kevin Randeni **Status:** New Project

Project Summary:

There are four sodium hypochlorite bulk storage tanks at the wastewater treatment plant. These tanks were replaced in 2014. During the tank replacement, a visual analysis of the existing pads and building were reviewed by a structural engineer. The coating at the perimeter of the existing tank pads and coating on the tank room slab have failed in areas where the storage tanks had leaked. The coating in the pump room had also failed completely due to chemical exposure. This project will address those findings and correct the problems. Concrete samples will be taken and tested for chloride ion concentration. Concrete repair will be undertaken before reinforcing steel capacity is compromised. Alternatives to arrest any ongoing corrosion will also be investigated and implemented. Concrete coating will be applied over the concrete repairs and corroded pipe; pump supports in the pump room will be replaced; and the wall to slab, wall-to-wall connection and roof beams will also be strengthened to update the building to current seismic standards. The project will replace all existing tanks and also install a fifth storage tank to provide additional storage and make use of an existing pad and infrastructure already in place.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference: Hypochlorite Storage Building Condition and Seismic Assessment, Carollo Engineers, October 2014.

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	490,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$490,000**
Current Adopted Budget	$0
Increase/(Decrease)	$490,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 19-P003 WWTP Fencing and Security - Phase 2

Funding Allocation: 100% **310**

Project Manager: Rudy Portugal **Status:** New Project

Project Summary:

This project will improve security along the Wastewater Treatment Plant (WWTP) perimeter. This project will install 8-feet tall vinyl coated fence along the south, west and north border of the facility. It will also install landscaping, including small retaining walls along the south fence and north fence near Building R. Fencing and landscaping along the eastern border of the facility was completed in conjunction with the construction of the fourth digester in 2019.

CEQA: Negative Declaration approved May 19, 1998.

Reference: Physical Security Risk Assessment, Pinkerton Consulting, April 2004.

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	1,210,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$1,210,000**
Current Adopted Budget	$1,210,000
Increase/(Decrease)	$0



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 00-P026 RWTF Replacement and Rehabilitation PROGRAM

Funding Allocation: 100% **310**

Project Manager: Steven Delight **Status:** Continuing Program

Project Summary:

This program will fund projects to upgrade, replace and improve facilities and equipment within the Regional Wastewater Treatment Facility (RWTF) to meet operational and permit requirements. Some equipment is now more than 30 years old. This program provides for the renewal, replacement and/or increase in capacity of process equipment on an as-needed basis or the upgrade of equipment as it becomes obsolete. This program may also be used to investigate issues that lead to the identification of projects that require the creation of a specific CIP project. Increases in future years' estimated cashflow reflect anticipated Asset Management Program needs as plant infrastructure ages.

CEQA: To be determined based on individual projects funded by program.

Reference: Asset Management Program

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	500,000	500,000	1,200,000	1,600,000	1,900,000	2,100,000	2,300,000	2,300,000	2,100,000	2,100,000	6,500,000

Total Estimated Project Cost	**$23,100,000**
Current Adopted Budget	$0
Increase/(Decrease)	$23,100,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 20-P010 Cogeneration Engine #4

Funding Allocation: 100% **310**

Project Manager: Rudy Portugal **Status:** Future Project

Project Summary:

Based on recommendations from the WWTP Energy Master Plan this project will permit, replace, and install additional cogeneration capacity at the wastewater treatment plant (WWTP). The WWTP receives its energy from three cogeneration engines and a direct connection to the PG&E power grid. Approximately 65 to70 percent of the energy is supplied by the cogeneration engines. Approximately 22 percent of the gas to run the cogeneration engines is biogas. The remaining gas supply is natural gas from PG&E. The 2017 Wastewater Treatment Plant (WWTP) and Biosolids Facility Master Plan indicated that given the current cost of natural gas and electricity additional cogeneration capacity would provide an annual savings of $470,000 per year and have an approximately 8- 12-year simple payback. Additional onsite generation capacity will also provide a more reliable energy supply for the district with more frequent power grid outages.

CEQA: Initial Study/Mitigated Negative Declaration

Reference: 2017 Wastewater Treatment Plant (WWTP) and Biosolids Facility Master Plan

Fund Allocation Basis: All work shall be done at the WWTP for an existing facility.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	1,000,000	7,000,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$8,000,000**
Current Adopted Budget	$0
Increase/(Decrease)	$8,000,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 20-P012 WWTP Security Improvements

Funding Allocation: 100% **310**

Project Manager: Sean O'Reilly **Status:** Future Project

Project Summary:

Security at the Wastewater Treatment Plant (WWTP) is a high priority for the District. This project will address traffic control, video surveillance, physical hardware related to plant security, and provide updated programming to the District's existing security monitoring system. Traffic control will include improvements to the main access gate and provide better control of vehicle movement once in the treatment plant area. Video surveillance will include improvements and reassignment to the 25 cameras currently in use, including the installation of multi-imager cameras that will improve the amount of plant video coverage. Hardware improvements include in stallion of tamper switches to monitor and prevent unauthorized access to the security control panels. In addition, all doors will be evaluated and those that cannot be secured or monitored in a reliable way will be replaced. Once all improvements are in place, programming changes will be made to the existing security system program, integrating the improvements listed above.

CEQA: Categorical Exemption [CEQA Guideline 15302].

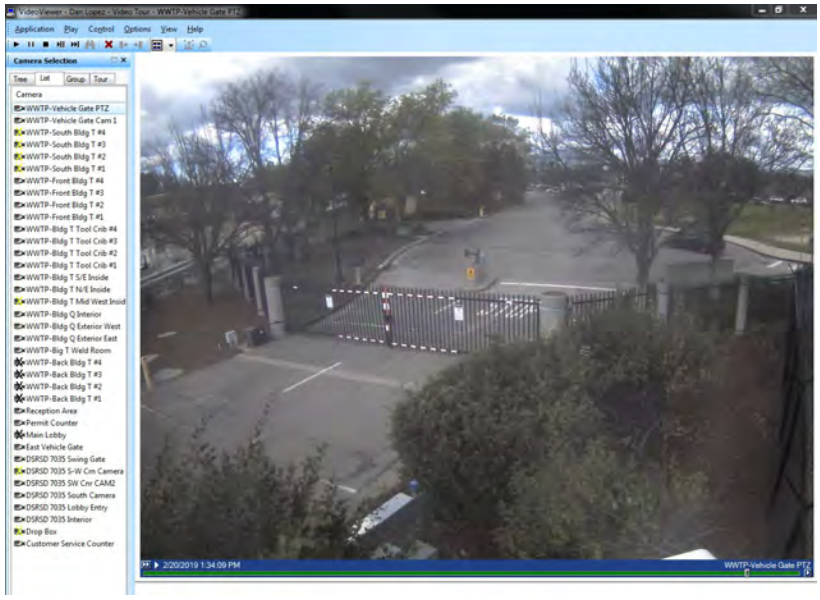
Reference: TEECOM Study (2019)

Fund Allocation Basis: Project is required to replace and upgrade existing regional wastewater assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
3,426	0	0	0	454,574	0	0	0	0	0	0	0

Total Estimated Project Cost	**$458,000**
Current Adopted Budget	$458,000
Increase/(Decrease)	$0



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. T20-14 WWTP/Biosolids Master Plan

Funding Allocation: 85% **320** 15% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

The Wastewater Treatment Plant (WWTP) and Biosolids Facility Master Plan was completed in 2017. The master plan recommended future facilities based on flow projections and potential regulatory scenarios. This update will update the facility plans and costs based on 1) recent WWTP flow and loading data, 2) the effluent nutrient limits proposed for the third San Francisco Bay Nutrients Watershed Permit anticipated for adoption June 2024, and 3) relevant changes in biosolids regulations and technology.

CEQA:

Reference:

Fund Allocation Basis: Fund split based on ADWF that initiates project vs. buildout flowrate

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	650,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$650,000**
Current Adopted Budget	$0
Increase/(Decrease)	$650,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T20-15 Flocculation Baffles in Secondary Clarifiers

Funding Allocation: 100% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will perform computational fluid dynamics (CFD) analysis of the District's secondary clarifiers and provide design of the necessary modifications for secondary clarifier #2. Field testing conducted in August 2018 indicated that secondary clarifiers perform well, but the flocculation center wells (FCWs) are too large and not fully utilized at normal and low flow conditions. Testing indicated that secondary clarifiers suffer from hydraulic short-circuiting and performance could be improved by adding simple modifications, such as flocculation baffles. Improving the secondary clarifier performance will reduce effluent suspended solids concentrations, solids loading on the ACTIFLO process, and chemical usage. CFD analysis will be utilized to determine the most cost effective modifications and conceptual design of the flocculation baffles. The current budget is for design services only.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project will improve the efficiency of existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	80,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$80,000**
Current Adopted Budget	$0
Increase/(Decrease)	$80,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T22-09 Recoating and Rehabilitation of Digester 3, 2, and 1

Funding Allocation: 100% **310**

Project Manager: Kevin Randeni **Status:** Future Project

Project Summary:

There are four digesters at the wastewater treatment plant. Each digester is routinely drained, cleaned and inspected every five to seven years. Digester 1 and 2 were cleaned and inspected in 2019, while Digester 3 was cleaned and inspected in 2021. This project will inspect and perform needed maintenance to the digesters, including the recoating of each interior cover. Interior covers have a life expectancy of twenty years. This will be the first recoating since the installation of each cover in 2002.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	350,000	350,000	500,000	0	0	0	0

Total Estimated Project Cost	**$1,200,000**
Current Adopted Budget	$0
Increase/(Decrease)	$1,200,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T22-18 Inner Sewer Flow Metering

Funding Allocation: 100% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will install a metering manhole upstream of the influent diversion structure to measure the contribution of plant process flows and storm drainage to the plant influent.

CEQA: Categorical Exemption [CEQA Guideline 15282].

Reference: Inner-Sewer Wetwell and Pumping Assessment, Option C.2 (CIP18-P012), October 2018, Psomas.

Fund Allocation Basis:

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	500,000	0	0	0	0	0

Total Estimated Project Cost	**$500,000**	**DSRSD Net Cost: $**
Current Adopted Budget	$0	Other Funding:
Increase/(Decrease)	$500,000	

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T22-21 Backup Power at Laboratory

Funding Allocation: 80% **310** 20% **610**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will evaluate and install an uninterruptible power supply (UPS) for the laboratory.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Based on laboratory staff allocation.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	90,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$90,000**	**DSRSD Net Cost: $**
Current Adopted Budget	$0	Other Funding:
Increase/(Decrease)	$90,000	

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T22-28 Laboratory Cabinetry Replacement

Funding Allocation: 80% **310** 20% **610**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will evaluate the current workflow for the laboratory and replace the cabinetry and bench tops. The current cabinetry was installed in the early 1990's and is failing in several areas.

CEQA: Categorical Exemption [CEQA Guideline 15302].

Reference: N/A

Fund Allocation Basis: Based on laboratory staff allocation.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	200,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$200,000**
Current Adopted Budget	$0
Increase/(Decrease)	$200,000

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 14-P005 Wet Weather Flow Capacity and Chlorine Contact Tank Dewatering

Funding Allocation: 85% **310** 15% **320**

Project Manager: Kevin Randeni **Status:** Future Project

Project Summary:

This project will remove a divider wall between the chlorine contact tank (CCT) influent channel and the CCT and remove the weir in the chlorine junction box to allow greater flows through these structures. The project will also add a CCT dewatering system. When the wastewater treatment plant flow is greater than 37 mgd, the secondary clarifiers flood due to hydraulic constraints downstream of the clarifiers. Removal of the walls and weirs will allow for greater flows through the wastewater treatment plant. Also, the chlorine contact tank should ideally be cleaned once every quarter. Dewatering the CCT for cleaning involves extensive pumping equipment setup and staff time, and once everything is set up, it takes time to pump out the water. This project will design necessary pumping valving and controls for a CCT dewatering system.

CEQA: Mitigated Negative Declaration approved by Board on 8/17/1999

Reference: Secondary Effluent Wet Weather Capacity Review, RMC, August 2014; 2017 WWTP and Biosolids Master Plan.

Fund Allocation Basis: Based on current vs projected buildout average dry weather flow at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
57,381	0	0	725,000	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$782,381**
Current Adopted Budget	$507,381
Increase/(Decrease)	$275,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 18-P014 WWTP Recycled and Potable Water Systems

Funding Allocation: 100% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will expand the use of recycled water for plant processes. The current fire main supplies both the potable and fire water systems. This project will install approximately 550 feet of 3-inch above ground and 350 feet of 3-inch below ground recycled water pipe to the cogeneration building, blower building, plant air compressors, bar screens, 1250kW and 750 kW generators, and buildings S and T. The first phase of the project, installing 500 feet of 2-inch potable water lines to Building A, D, S, T, and fleet maintenance building, has been completed.

CEQA: Categorical Exemption [CEQA Guideline 15303].

Reference:

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
276	0	0	200,000	184,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$384,276**
Current Adopted Budget	$384,000
Increase/(Decrease)	$276

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. 18-P017 Public Outreach Signage at WWTP

Funding Allocation: 100% **310**

Project Manager: Sue Stephenson **Status:** Future Project

Project Summary:

Facility tours are one way the District communicates the value we provide the community 24/7. Engaging with our customers in an on-going, direct, proactive way builds confidence in the District as a reliable, trustworthy service provider and increases our customers' understanding of what they get for their money. Tours also promote careers in the water/wastewater industry. This project will purchase and install signs at the wastewater treatment plant to help facilitate the tours that are given on a regular basis.

CEQA:

Reference:

Fund Allocation Basis: Project will benefit existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	100,000	0	0	0	0	0	0	0	0	0

Total Estimated Project Cost	**$100,000**
Current Adopted Budget	$100,000
Increase/(Decrease)	$0

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T16-11 WWTP Motor Control Center and Distribution Panel "A" Improvements

Funding Allocation: 100% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will upgrade WWTP Motor Control Centers (MCCs) MCC-E and Electrical Distribution Panel A (DPA) to a standard 65,000 Ampere Interrupting Capacity (AIC) rating. Based on the most recent short circuit analysis, ten MCCs and DPA either do not have adequate short circuit equipment AIC ratings to either handle possible fault scenarios or to handle future expansions. The upgrade will also require modifications to existing MCC buckets as the MCC's are 20+ years old and exact replacement parts (i.e. starters, circuit breakers, etc.) are no longer readily available.

CEQA: Categorical Exemption [CEQA Guideline 15301, 15302].

Reference:

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	1,350,600	0	0	0	0

Total Estimated Project Cost	**$1,350,600**
Current Adopted Budget	$0
Increase/(Decrease)	$1,350,600

CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T16-40 WWTP Pavement Repair

Funding Allocation: 100% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will repair and seal coat pavement at the wastewater treatment plant. The facility's pavement is subject to vehicles with heavy loads. This work is required periodically to maintain the integrity of the pavement.

CEQA: Categorical Exemption [CEQA Guideline 15301].

Reference:

Fund Allocation Basis: Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	200,000	0	0	0	0	0	0	0

Total Estimated Project Cost	**$200,000**
Current Adopted Budget	$0
Increase/(Decrease)	$200,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T16-54 Odor Reduction Tower Replacement

Funding Allocation: 100% **310**

Project Manager: Sukhpreet Mann **Status:** Future Project

Project Summary:

This project will either rehabilitate or replace the Odor Reduction Tower (ORT) and commutator room. The ORT treats odorous air from the WWTP influent pump room, aerated grits tanks, and the grit building. Although the ORT effectively treats hydrogen sulfide, it does not effectively treat reduced sulfur compounds. This project will help the District meet the WWTP odor control goals and support the District's "good neighbor" policy to minimize odor impacts to the surrounding community.

CEQA: Categorical Exemption [CEQA Guideline 15302]

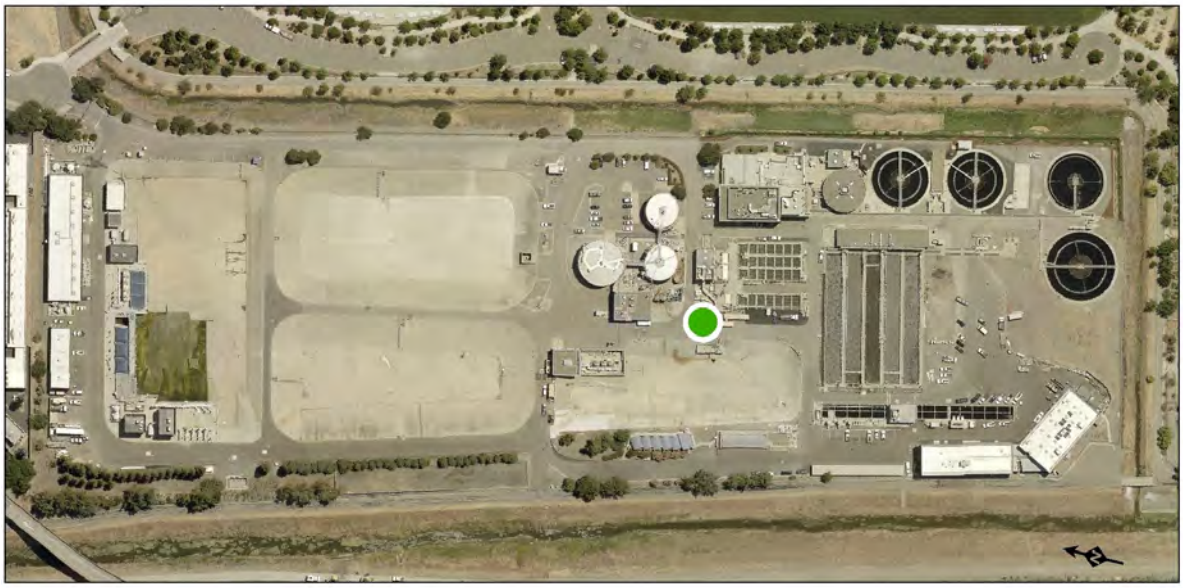
Reference: 2008 Update to Odor Control Focus Areas Analysis, CH2M Hill, July 2009

Fund Allocation Basis: Project is required to replace existing regional wastewater assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	2,000,000	0	0	0	0	0	0

Total Estimated Project Cost	**$2,000,000**
Current Adopted Budget	$0
Increase/(Decrease)	$2,000,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T18-15 Cogeneration Engine Replacement

Funding Allocation: 100% **310**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will replace the existing cogeneration engines based on recommendations from the WWTP Energy Master Plan. The existing cogeneration engines ae in good working condition but are old, with one engine block more than 50 years old. Much of the ancillary cogeneration equipment needs replacement and it is anticipated the engines will need to be replaced because of air quality regulations, parts availability, or a catastrophic breakdown of some units.

CEQA:	Categorical Exemption [CEQA Guideline 15302].
Reference:	The 2017 Wastewater Treatment Plant (WWTP) and Biosolids Facility Master Plan, Appendix N, WWTP Energy Master Plan
Fund Allocation Basis:	Project is required to replace or rehabilitate existing regional wastewater fund assets.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	2,000,000	5,000,000	5,000,000	0	0

Total Estimated Project Cost	**$12,000,000**
Current Adopted Budget	$0
Increase/(Decrease)	$12,000,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. T10-62 Emergency Power for Distribution Panel-D

Funding Allocation: 100% **320**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will install a 900 kW emergency power generator for the Distribution Panel-D (DPD) switchgear to support continued growth of the service population and the corresponding increases in influent pumping and related WWTP equipment, such as the Bar Screens, Primary Clarifiers, etc. Panel DPD is currently provided with emergency power via the existing generator, but higher flows will require an additional generator for Panel DPD. Emergency power is also a requirement of the District's NPDES Permit. This project will be revised per the updated Energy Master Plan and Electrical Master Plan, which is scheduled for completion in 2023.

CEQA:	To be determined
Reference:	2004 WWTP Electrical Master Plan and dependent on findings of 2019 Electrical Master Plan Update; 2017 WWTP and Biosolids Master Plan
Fund Allocation Basis:	Project is required for future customer wastewater treatment capacity.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	0	0	0	0	5,560,000

Total Estimated Project Cost	**$5,560,000**
Current Adopted Budget	$0
Increase/(Decrease)	$5,560,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. T10-83 Cover Primary Clarifiers

Funding Allocation: 100% **320**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will cover the primary clarifiers. The settled sewerage channel and the primary clarifiers have been identified in the Odor Control Master Plan as areas in the wastewater treatment plant that have odor issues. The project may cover the entire primary tanks or only the launderers. The foul air removed from the primary clarifiers will be treated in a new odor treatment facility that also serves the settled sewerage channel and other processes in the area.

CEQA:	Categorical Exemption [CEQA Guideline 15303]
Reference:	2008 Update to Odor Control Focus Areas Analysis, CH2M Hill, July 2009; 2017 WWTP and Biosolids Master Plan
Fund Allocation Basis:	New project is odor control associated with increasing flows into WWTP.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	0	0	4,694,000	0	0

Total Estimated Project Cost	**$4,694,000**
Current Adopted Budget	$0
Increase/(Decrease)	$4,694,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Expansion (Fund 320)**

CIP No. T12-08 Cover Settled Sewage Channel and Selector

Funding Allocation: 100% **320**

Project Manager: TBD **Status:** Future Project

Project Summary:

This project will cover the settled sewage channel and the selector. The settled sewage channel and the primary clarifiers have been identified in the Odor Control Master Plan as areas in the WWTP that have odor issues. In addition, adding the covers will allow the addition of air to the settled sewage channel, which will increase the performance of the WWTP. The foul air removed from the settled sewage channel will be treated in a new odor treatment facility that also serves the primary clarifiers and other items in the area. The new biofilter will be constructed modular and will be added when the primaries are covered.

CEQA: To be determined

Reference: 2008 Update to Odor Control Focus Areas Analysis, CH2M Hill, July 2009; 2017 WWTP and Biosolids Master Plan

Fund Allocation Basis: New project is odor control associated with increasing flows into WWTP.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	2,358,000	0	0	0	0	0	0

Total Estimated Project Cost	**$2,358,000**
Current Adopted Budget	$0
Increase/(Decrease)	$2,358,000



CATEGORY: REGIONAL WASTEWATER TREATMENT **Regional Wastewater Replacement (Fund 310)**

CIP No. T16-42 Nutrient Removal

Funding Allocation: 80% **310** 20% **320**

Project Manager: TBD **Status:** Future Project

Project Summary:

In April 2014, the Bay Area Regional Water Quality Control Board (RWQCB) issued a San Francisco Bay Nutrients Watershed permit to municipal wastewater dischargers. The permit requires wastewater dischargers to evaluate reductions in nutrient discharges through treatment upgrades and contribute toward studies to develop a San Francisco Bay Nutrient Management Strategy. The District is working with the Bay Area Clean Water Agencies (BACWA) to address the permit requirements. If the current studies determine wastewater discharges have an adverse effect on Bay water quality, the RWQCB will impose nutrient load limits on the wastewater treatment plant effluent which will require treatment upgrades. Although future regulation or the extent of the regulation is uncertain, it is prudent that the District plan for some future treatment upgrades. This project assumes the addition of three aeration basins, a fifth secondary clarifier, and chlorination improvements to meet BACWA Level 2 effluent nutrient requirements.

CEQA: To be determined.

Reference: RWQCB's San Francisco Bay Nutrients Watershed Permit; 2017 WWTP and Biosolids Master Plan.

Fund Allocation Basis: Based on ratio of current ADWF to projected buildout ADWF at the time of project inception.

10-Year Cash Flow and Estimated Project Cost:

Prior	FYE 22	FYE 23	FYE 24	FYE 25	FYE 26	FYE 27	FYE 28	FYE 29	FYE 30	FYE 31	Future
0	0	0	0	0	0	0	0	0	7,000,000	15,000,000	15,000,000

Total Estimated Project Cost	**$37,000,000**
Current Adopted Budget	$0
Increase/(Decrease)	$37,000,000

Appendix A

Fiscal Year 2022 and 2023 Capital Outlay By Fund

Asset Description	FY 2022	% Water	% Local	% Regional
Vehicle - Ford Escape Hybrid	$ 35,000	50%	20%	30%
Vehicle - Ranger Supercab (Qty. 2)	$ 74,000	60%	35%	5%
Vehicle - Ford F-250 Trucks (Qty 2)	$ 110,000	90%	10%	0%
Vehicle - Transit Connect	$ 35,000	90%	10%	0%
CCTV Tuck	$ 500,000	0%	100%	0%
Valve Truck	$ 200,000	100%	0%	0%
Long Reach Forklift	$ 150,000	0%	0%	100%
Influent Gate Control	$ 120,000	0%	0%	100%
Environmental Compliant Blasting/Removal System	$ 50,000	0%	0%	100%
Pump Station 20A Pump #1 & #3	$ 60,000	100%	0%	0%
D7 Tractor for Bio-Solids Harvesting	$ 303,210	0%	0%	100%
Ion Chromatography Unit	$ 65,460	60%	0%	40%
FISCAL YEAR 2022 TOTAL:	**$ 1,702,670**	**$ 477,676**	**$ 550,900**	**$ 674,094**

Asset Description	FY 2023	% Water	% Local	% Regional
Vehicle - Ford F-250 Trucks (Qty 4)	$ 220,000	90%	10%	0%
Facultative Sludge Lagoon Mixers	$ 100,000	0%	0%	100%
Vehicle - Ford Transit Van	$ 30,000	50%	20%	30%
Vehicle - Van	$ 30,000	0%	50%	50%
FISCAL YEAR 2023 TOTAL:	**$ 380,000**	**$ 213,000**	**$ 43,000**	**$ 124,000**

GRAND TOTAL:	**$ 2,082,670**	**$ 690,676**	**$ 593,900**	**$ 798,094**

Dublin San Ramon Services District
Water, wastewater, recycled water

STAFF REPORT

Meeting Date: June 1, 2021

TITLE: Receive Presentation on Residential Recycled Water Fill Station and Provide Direction

RECOMMENDATION:

Staff recommends the Board of Directors receive a presentation on the residential recycled water fill station and direct staff to explore an option to operate a joint Tri-Valley recycled water fill station in the summer of 2022 if the District is in a period of mandatory water conservation.

SUMMARY:

At the request of the Board, staff is providing the history of the residential recycled water fill station (fill station), a summary of issues to consider in reopening the fill station, and fill station options. The District operated a successful fill station from 2014 to 2016 in response to drought conditions. Due to recycled water supply limitations and the cost and resources required to operate a fill station, the District's Water Recycling policy states that the District will only consider operating a residential fill station when mandatory conservation measures are in effect. The Tri-Valley is in a second year of drought, and the District is currently encouraging voluntary water conservation and wise water use. Staff has evaluated options for operating a fill station if drought conditions worsen and is recommending that the Board direct staff to work with other Tri-Valley agencies to explore the option for a joint Tri-Valley recycled water fill station in 2022 if mandatory water conservation measures are implemented.

BACKGROUND:

In 2014, in response to continuing and worsening drought conditions, all the water agencies of the Tri-Valley declared a local drought emergency and implemented mandatory water conservation measures. Most notably, these included a common limit of no more than two days of outdoor irrigation a week. To provide an alternative for residents in the DSRSD service area with trees or landscaping that required more water than the potable limits, DSRSD developed and created a residential recycled water fill station program at the Regional Wastewater Treatment Plant (WWTP) for residential customers. DSRSD's effort was particularly innovative, requiring special approvals from the State Water Resources Control Board (SWRCB) to allow the program under the District's existing recycled water permit. The fill station served as a model for other Bay Area agency fill stations that are currently operating. Ultimately, DSRSD received awards from WateReuse California and the California Association of Sanitation Agencies for the implementation of its residential recycled water fill station program.

The District anticipated some interest in the program but did not expect the huge response it received. Prior to opening day on June 12, 2014, the program had 50 potential users on a waiting list. By the end of 2014, the program had registered 495 users and distributed 2.3 million gallons of recycled water. In 2015, the local outdoor irrigation restrictions were made effective statewide, and the severity of the drought was brought more emphatically into focus. The number of permitted customers in 2015 rose to over 3,600 and the amount of recycled water consumed in the residential fill station program increased to 28.2 million gallons, representing about 2.7 percent of the recycled water produced that year. On individual days, the fill station use accounted for up to 5 percent of the recycled water produced. Customers were not limited to DSRSD's service area. Interest in the fill station extended throughout the Tri-Valley and as far as San Bruno, Salida, Pittsburg, Newark, Los Gatos, Foster City, and Alameda.

Due to high public demand, the District expanded the fill station from 3 back-in stations in 2014 to 28 back-in stations and five drive-through stations for customers with trailers in 2015. The fill station was open year around. During the peak months, three attendants were on duty and traffic ranged from 800 to 1,000 customer trips a day. On June 24, 2015, the District opened a second fill station at the City of Dublin's Public Safety Complex located on Dublin Boulevard, installing eight back-in fill stations at the site and hiring additional attendants.

Originating Department: Engineering Services	**Contact: J. Zavadil**	**Legal Review: Not Required**
Financial Review: Not Required	**Cost and Funding Source: $200,000 - $500,000 Water Enterprise Fund (600)**	
Attachments: ☒ None ☐ Resolution ☐ Ordinance ☐ Task Order ☐ Proclamation ☐ Other (see list on right)		

With good precipitation in the early months of 2016, on June 21, 2016, the District terminated the local drought emergency declaration, ended mandatory water conservation measures, and implemented voluntary 10 percent water conservation. Although mandatory conservation measures were ended, the District continued operation of the fill station. In 2016, the number of active individual users declined to 1,800 and fill station use fell to 14.2 million gallons. The District rescinded the 10 percent voluntary water conservation goal on May 16, 2017.

On December 20, 2016, the Board reviewed operational and financial options for the fill station. The DERWA Recycled Water Treatment Plant Expansion Project was planned to start in January 2017 and continued through the summer of 2018. The project entailed significant construction activity in and around the WWTP gate area which would create traffic conflicts with residential recycled water haulers and potential unsafe conditions. To avoid conflicts with the project construction, the Board considered: (1) closing the fill station, (2) limiting the fill station hours, and (3) relocating the fill station.

The Board also considered funding options for the fill station. The direct and indirect costs of the program were estimated to be $500,000 per year. The fill station costs were paid by the District's water enterprise customers who reside or have businesses in Dublin and Dougherty Valley, however the distribution of fill station users was:

- Dublin – 17.5%
- San Ramon – 12.5%
- Pleasanton – 45%
- Other non-DSRSD customers – 25%

To mitigate the District's water customers subsidizing a program that primarily benefits users outside the District service area, the Board considered (1) charging an annual permit fee to fill station users outside the District service area, and (2) charging all fill station users an annual permit fee. The proposed fee was $170 per year.

Given the safety concerns with construction and the cost to operate the fill station, the Board decided to close the fill station and reconsider opening the fill station in the future if necessitated by drought. The City of Livermore also operated a fill station which closed at the end of 2016. There are no other recycled water fill stations in the Tri-Valley.

In July 2020, the Board's decision was incorporated into an update of the District's Water Recycling policy which stated the District would provide recycled water for off-haul to residential customers only in times of mandatory potable water conservation.

DISCUSSION:

Given that most of California is now in a period of drought, the Board requested on April 20 and May 4 a review of the residential fill station program. Staff has provided a summary of key considerations and options regarding the fill station for the Board's consideration.

Key Considerations:

Recycled Water Supply

The most important consideration in reopening the fill station is the recycled water supply. Since 2016, DSRSD and East Bay Municipal Utility District (EBMUD) have expanded their delivery of recycled water for the San Ramon Valley Recycled Water Program through the DSRSD-EBMUD Recycled Water Authority (DERWA). In addition, the City of Pleasanton has now developed a recycled water program. During peak irrigation season, DERWA uses all the wastewater emanating from the DSRSD service area to produce recycled water as well as all the wastewater emanating from the City of Pleasanton that is not used by the City for its recycled water program.

On March 25, 2019, the DERWA Board adopted a resolution requesting that the member agencies implement a moratorium on new connections, except for those EBMUD Phase 2 connections that were already in progress, and that member agencies also implement other demand management practices to curtail use of recycled water. Also in 2019, to address the pending recycled water supply shortfall, DERWA approved a temporary supplemental supply agreement with Central Contra Costa Sanitary District (Central San) to divert approximately one million gallons of wastewater from the Central San collection system to the District's collection system. With the EBMUD Phase 2 connections and the

growth of the Pleasanton recycled water program, the temporary supplemental supply will be needed to meet the DERWA existing customer recycled water demands. Furthermore, potable water conservation in response to the drought could potentially reduce indoor water use which would result in even less wastewater available for recycling.

Although a residential fill station may not use a significant amount of recycled water and is technically not a new connection to the recycled water system, it is contrary to the intent of the DERWA moratorium and DERWA approval is recommended. Should DERWA approve of a fill station, the fill station may need to accept EBMUD potable water customers as well. Notwithstanding DERWA approval, a greater issue would be contradictory messaging to the community. The District has turned down requests for recycled water from developers, the Dublin Unified School District, and the City of Dublin. The District has also communicated to its existing recycled water users that there is limited recycled water supply and has encouraged efficient use of the resource. A recycled water fill station may potentially require conservation by existing recycled water program customers that have paid to connect to the recycled water system.

Financial and Staffing Resources

The residential fill station program was significant in its cost and operational impact to the District. The direct and indirect costs of the program were estimated to be $500,000 per year. The costs included hiring, training, managing, and paying temporary fill station employees, maintaining the fill stations, signing up and training the fill station customers, tracking usage, and inspecting user sites. As noted above, the former fill station costs were borne by the District's water enterprise customers, yet nearly 75 percent of the fill station customers were outside the water service area. To address this funding inequity, the Board may want to consider a charge for use of the fill station. However, implementation of a charge will pose a communications challenge as many fill station users see their efforts as contributing towards the conservation of potable water.

Beyond the fill station costs, District operations were impacted as staff was diverted from their regular duties. Opening a fill station this summer would be difficult. The Plant Operations and Mechanical Maintenance Divisions, which managed and maintained the fill stations, are currently short staffed, with eight (8) position vacancies and two (2) vacancies imminent. In addition, the workload for these divisions is highest in the summer months as they are busy operating and maintaining the recycled water facility to meet peak demands and harvesting biosolids which must be completed during the dry summer months. Furthermore, recruiting and training temporary workers for a fill station would require a focused effort for at least 8 to 12 weeks and would divert resources from filling currently vacant permanent positions in the Operations Department.

Other Considerations

As noted above, safety was one of the key considerations in closing the fill station in December 2016. Although the DERWA Recycled Water Treatment Plant Expansion Project has been completed, fill station customer safety remains a concern. With the current primaries project, chemical deliveries, and trucks using the commercial recycled water fill station, there is still a fair amount of large vehicle and tanker trucks entering the WWTP. Aside from potential conflicts with large vehicles, the fill station traffic alone poses problems. Some fill station visitors would exceed the required speed limits within the plant. At the height of the drought, the fill station customer traffic would regularly back up to or onto Stoneridge Drive and at times onto the freeway which resulted in official warnings from the City of Pleasanton and the California Highway Patrol. For this reason, staff had suggested in the December 2016 report to the Board that if reopening of the fill station was warranted, that use of an alternate site, such as the District's Gleason property in Dublin, might be appropriate. Staff estimated $175,000 of improvements would be needed to open a fill station at the Gleason property, including paving and utility services that would require permitting and environmental review.

Finally, COVID-19 poses an additional challenge in operating a fill station this summer. Although the federal and state guidelines are quickly changing, the District must still follow the stricter Cal/OSHA (California Division of Occupational Safety and Health) COVID-19 requirements for the workplace and would need to develop procedures for the public. It should also be noted that COVID-related claims, claims of people claiming they got COVID from being at a District site or from exposure to recycled water, touching the hoses, etc., are excluded from the District's general liability policy.

Fill Station Options:

Option 1 – Do Not Open a District Recycled Water Fill Station in 2021

The first option is to not open a fill station and continue to communicate to customers the reasons why the fill station is not operational. If this option is selected, the Board could revisit the issue if mandatory water conservation were required at a later time, consistent with adopted Board policy.

Option 2 – Open a District Recycled Water Fill Station in 2021

The second option is to reopen the fill station. The key considerations described above would need to be addressed. A summary of key steps include:

- Request an exception to the Recycled Water Connection Moratorium from the DERWA Board.
- Require conservation of existing recycled water customers to accommodate fill station use.
- Provide direction to staff to either recover costs through a fill station user fee or revise the water enterprise budget.
- Review the lessons learned from past fill station operation and develop robust safety training and procedures.
- Start a focused staffing effort to recruit and train temporary fill station staff.
- Complete maintenance on fill station.

This option would require deferral of some current maintenance activities and deferral of recruiting for vacant full-time positions, and would require 8 to 12 weeks to implement. Additionally, if the Board directed operation at an alternate site such as the Gleason property, the delay would take several months to implement.

Option 3 – Explore a Joint Tri-Valley Recycled Water Fill Station in 2022

A third option would be to explore a fill station in cooperation with the other water and wastewater agencies in the Tri-Valley to be opened in 2022. This option could address the lack of supply and alleviate some of the burden by sharing costs, staffing, and physical infrastructure. As a reminder, nearly 75 percent of the customers who utilized the District's fill station from 2014 to 2016 reside outside the District's water service area. A joint Tri-Valley fill station would reflect the regional benefits of a recycled water fill station.

If the Board selects this option, staff will initiate conversations with the other agencies in the Tri-Valley to explore possible interest in a joint fill station.

Staff Recommended Option:

Given the key considerations above, staff recommends not opening a fill station unless the District implements mandatory potable water conservation requirements – consistent with the Recycled Water policy adopted last year. However, drought conditions continue to evolve, and if next year is also dry, the District may need to move towards implementing mandatory water conservation measures in 2022. Therefore, it is timely to consider a fill station now. Staff recommends pursuing Option 3, exploring a joint Tri-Valley Recycled Water Fill Station in 2022. After discussions with the other Tri-Valley agencies, staff will report back to the Board.