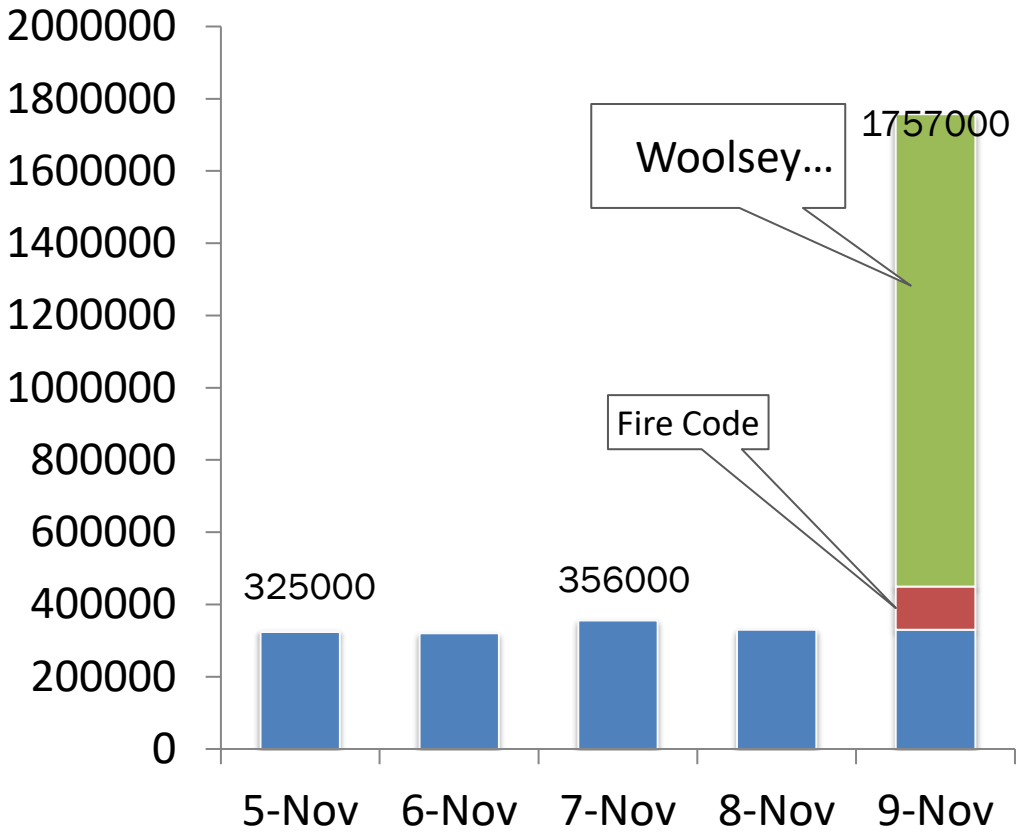
Demand during Woolsey Fire

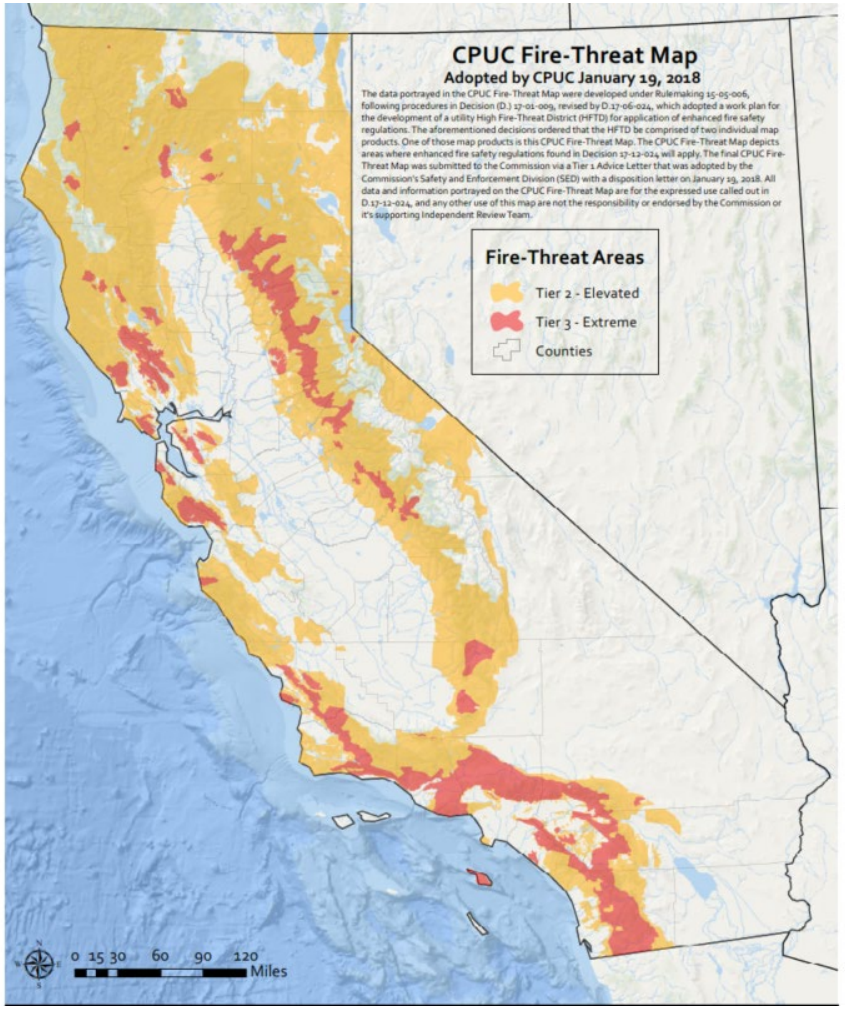
a. Demand in zone prior to fire ~325,000 gallons per day
b. Demand in zone during fire ~1,800,000 gallons per day
c. Ventura County Fire Department requires 1000 gpm for 2 hours



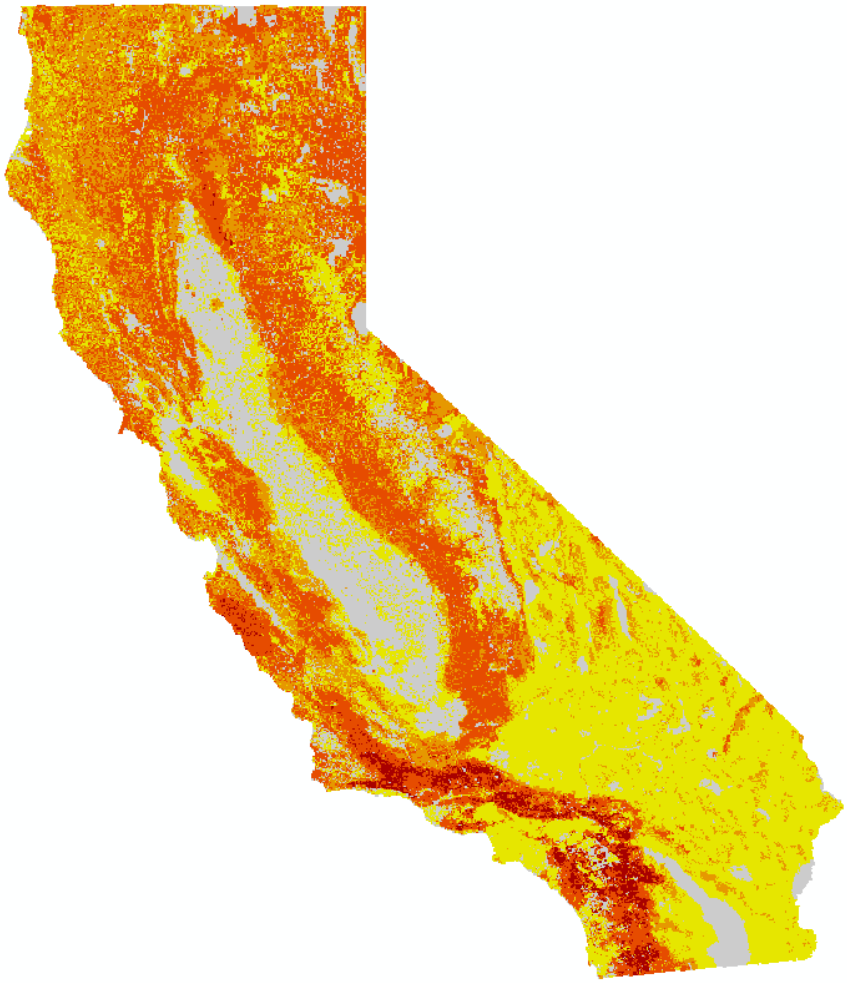
Wildfire Risk Mitigation Criteria

- No Set Standard
- Cal Fire Published Areas
- CPUC for Electric Utilities
- Our Experience in 2018 Fire Season
- Key Water System Issues
  - Supply, Storage, Backup Power, Grid Restrictions
- Established Risks by Zone

Wildfire Risks



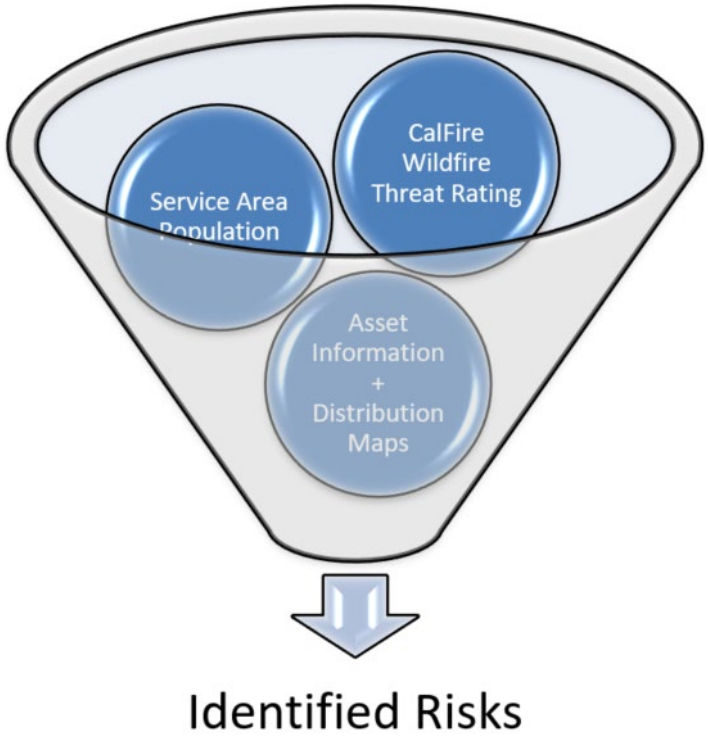
All Wildfire Threats



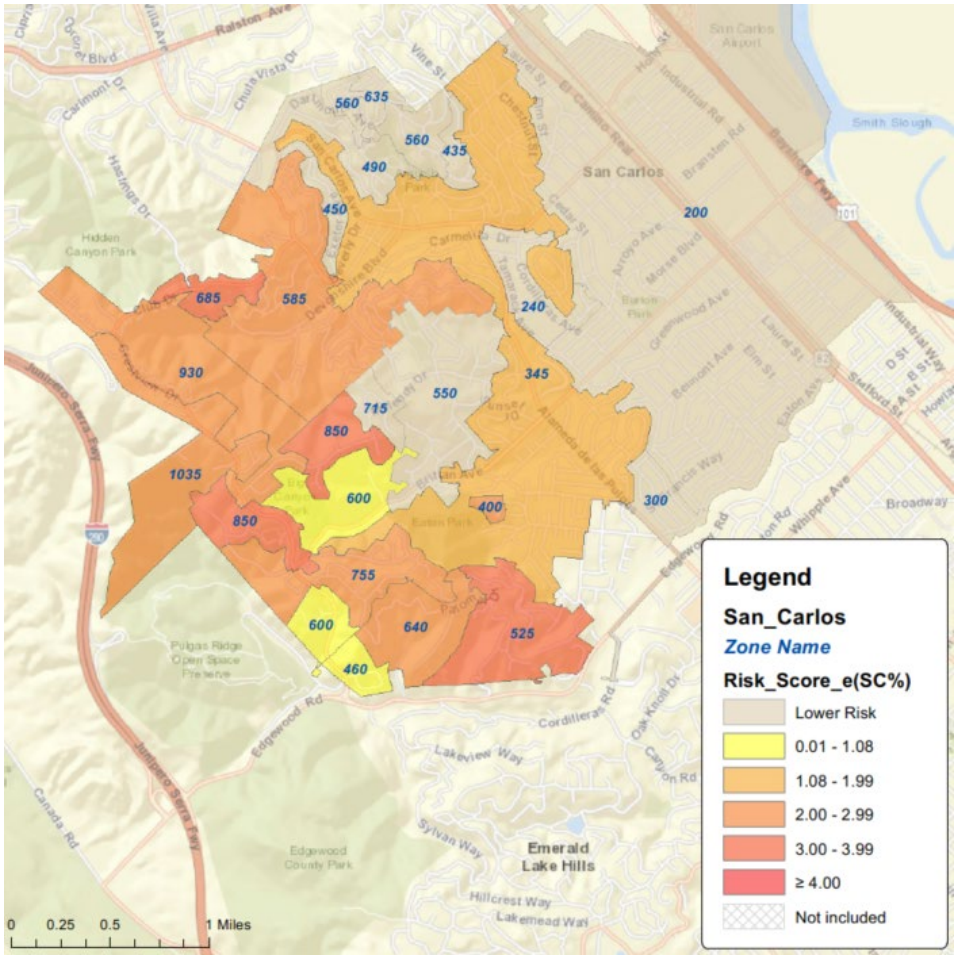
District	System	Highest Threat Level	% of Zones near Extreme Threat	% of Zones near Very High Threat
Antelope Valley	Leona Valley	Extreme	100%	
	Lake Hughes	Extreme	100%	
	Grand Oaks	Very High		100%
Westlake	Westlake	Extreme	75%	25%
Chico	Chico	Extreme	50%	38%
Redwood Valley	Lucerne	Very High		100%
	Armstrong Valley	Very High		100%
	Coast Springs	Very High		100%
Kern River Valley	Kernville	Very High		100%
	Lakeland	Very High		100%
	Lower Bodfish	Very High		100%
	Onyx	Very High		100%
	South Lake/ Squirrel Mountain	Very High		100%
	Split Mountain	Very High		100%
	Upper Bodfish	Very High		100%
Palos Verdes	Palos Verdes	Very High		100%
Livermore	Livermore	Very High		100%
Bear Gulch	Bear Gulch	Very High		100%
Oroville	Oroville	Very High		100%
Salinas	Country Meadows	Very High		100%
	Las Lomas	Very High		100%
	Oak Hills	Very High		100%
	Salinas Hills	Very High		100%
	Salinas	Very High		33%
Los Altos	Los Altos	Very High		88%
Bayshore	South San Francisco	Very High		82%
	San Mateo	Very High		76%
	San Carlos	Very High		64%
Bakersfield	Bakersfield	Very High		63%
Hermosa Redondo	Hermosa Redondo	Very High		43%
King City	King City	Very High		33%

Distribution System Risks

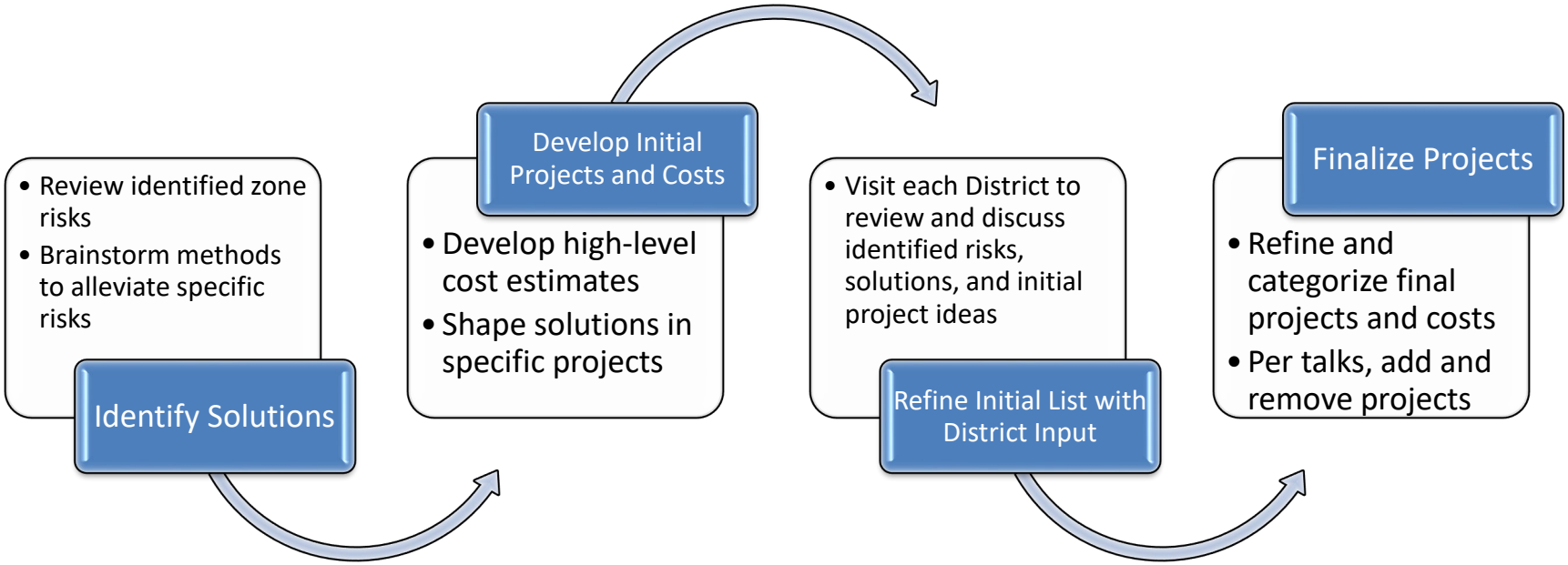
- Within 500 ft of “Very High” or “Extreme”
- Total Number of Services in Zone
- Insufficient Storage
- Supply limited
- Lack of Backup Power
- Grid Limitations



Risk Scores


Legend
San_Carlos
Zone Name
Risk_Score_e(SC%)
Lower Risk
0.01 - 1.08
1.08 - 1.99
2.00 - 2.99
3.00 - 3.99
≥ 4.00
Not included
San Carlos
Emerald Lake Hills
0 0.25 0.5 1 Miles
560
635
560
435
490
450
200
685
585
240
930
345
550
715
850
1035
600
400
300
850
755
600
640
525
460

Project Development



Projects Considered

- Portable generator and booster connections
- Grid strengthening/looping
- Permanent generators
- Interconnections
- Additional pumping/storage facilities