

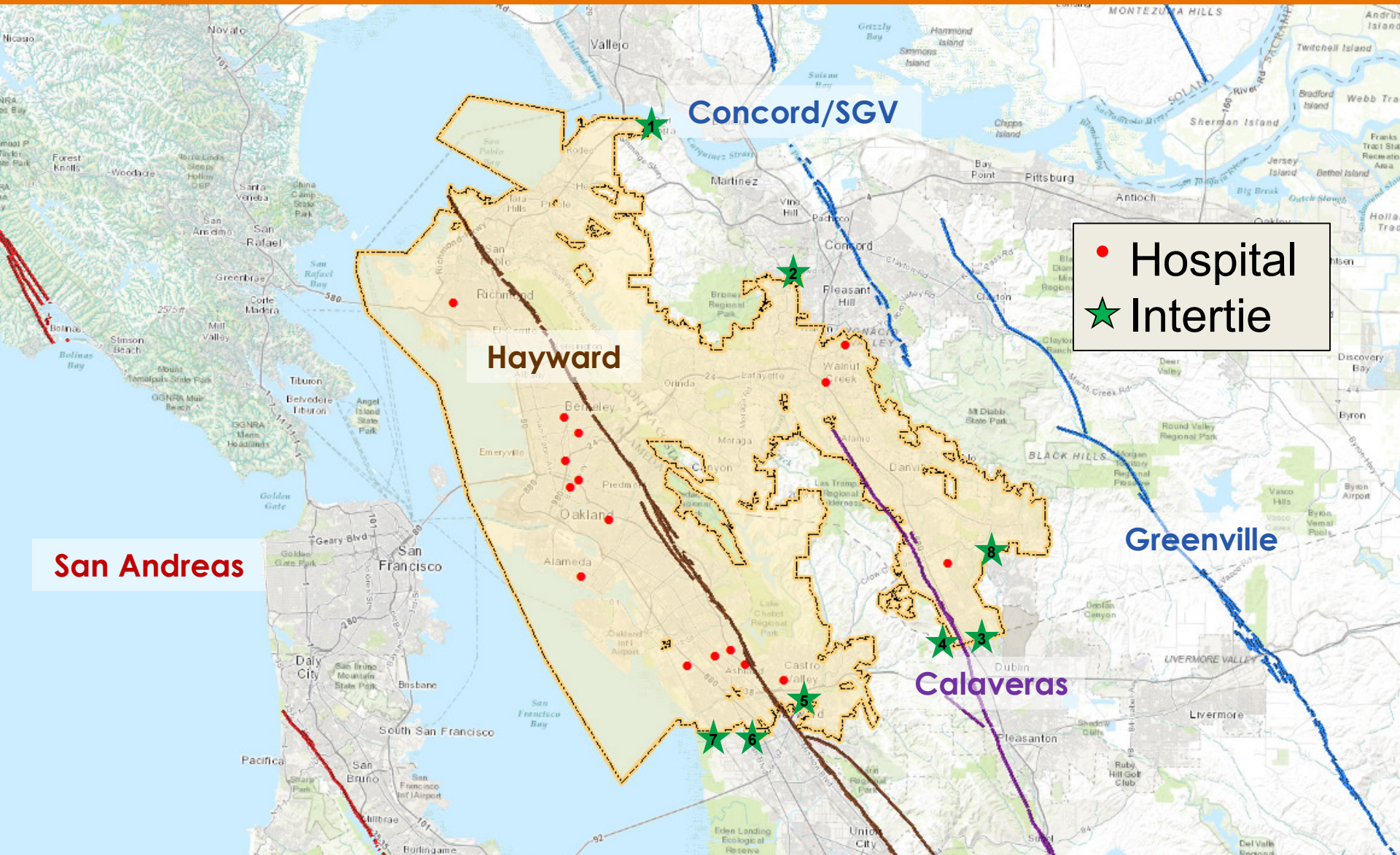
Cross-sector Infrastructure Planning for Water Purveyors and Critical Care Facilities

November 2017

Cross-sector Interdependencies



Service Area and Major Faults



- Hospital
- ★ Intertie

San Andreas

Hayward

Concord/SGV

Greenville

Calaveras

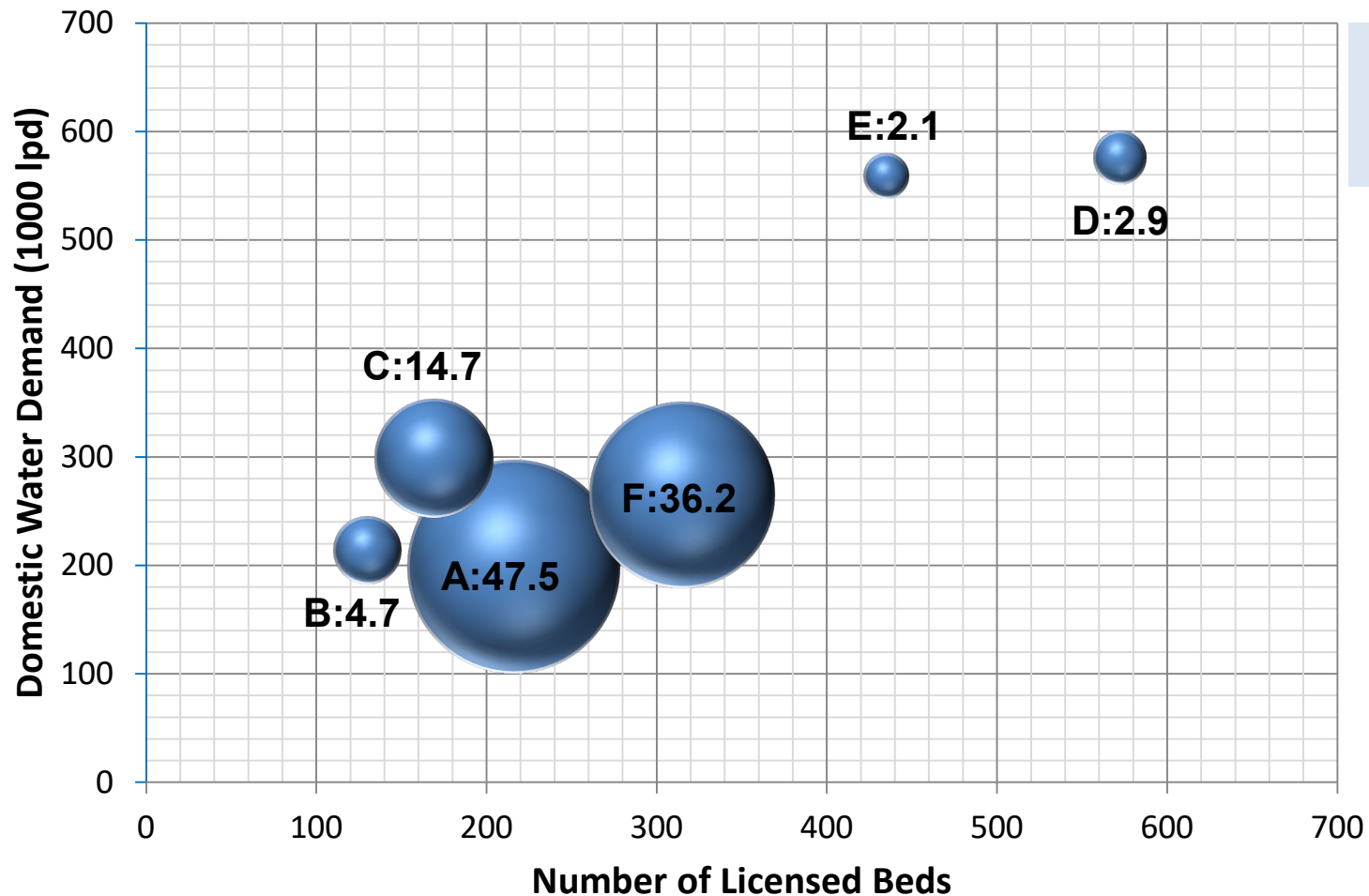
Hospital Emergency Water Supply



ID	No. of Beds	Emergency Water Supply (liter)			Multiple Connection Points?
		Potable Water Tank	Non-potable Water Tank	Bottled Water	
A	216	261,193	132,489		yes
B	130	34,069	7,949	MOU	no
C	169	88,389*	94,635		no
D	572		37,854	30,904	no
E	435		37,854	11,924	yes
F	315	151,416	246,052	1,537	yes

* Planned for construction in 2019

Hours of Normal Operation Post Disaster

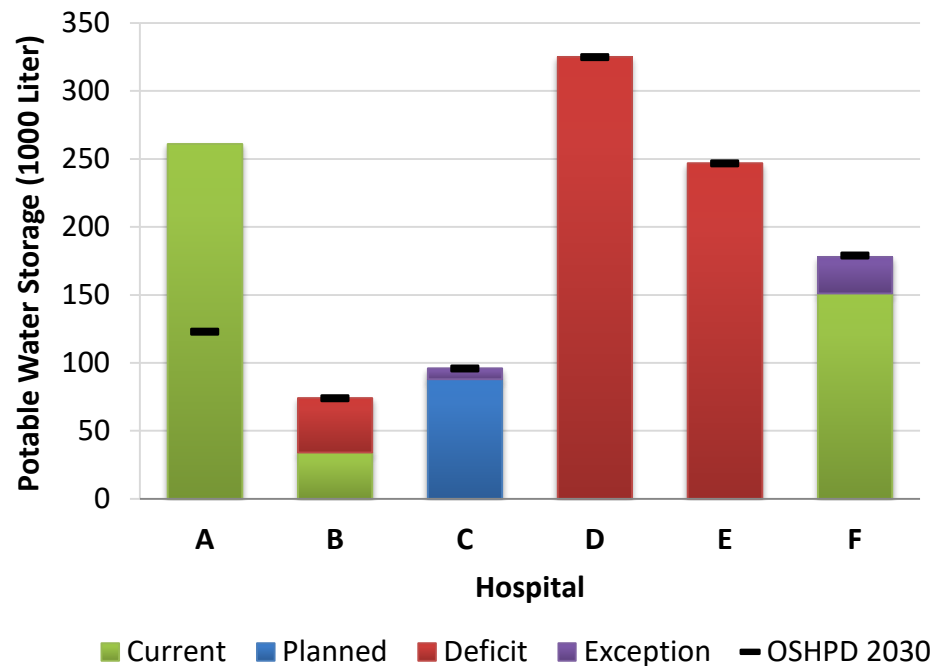


Goal:
72 hr

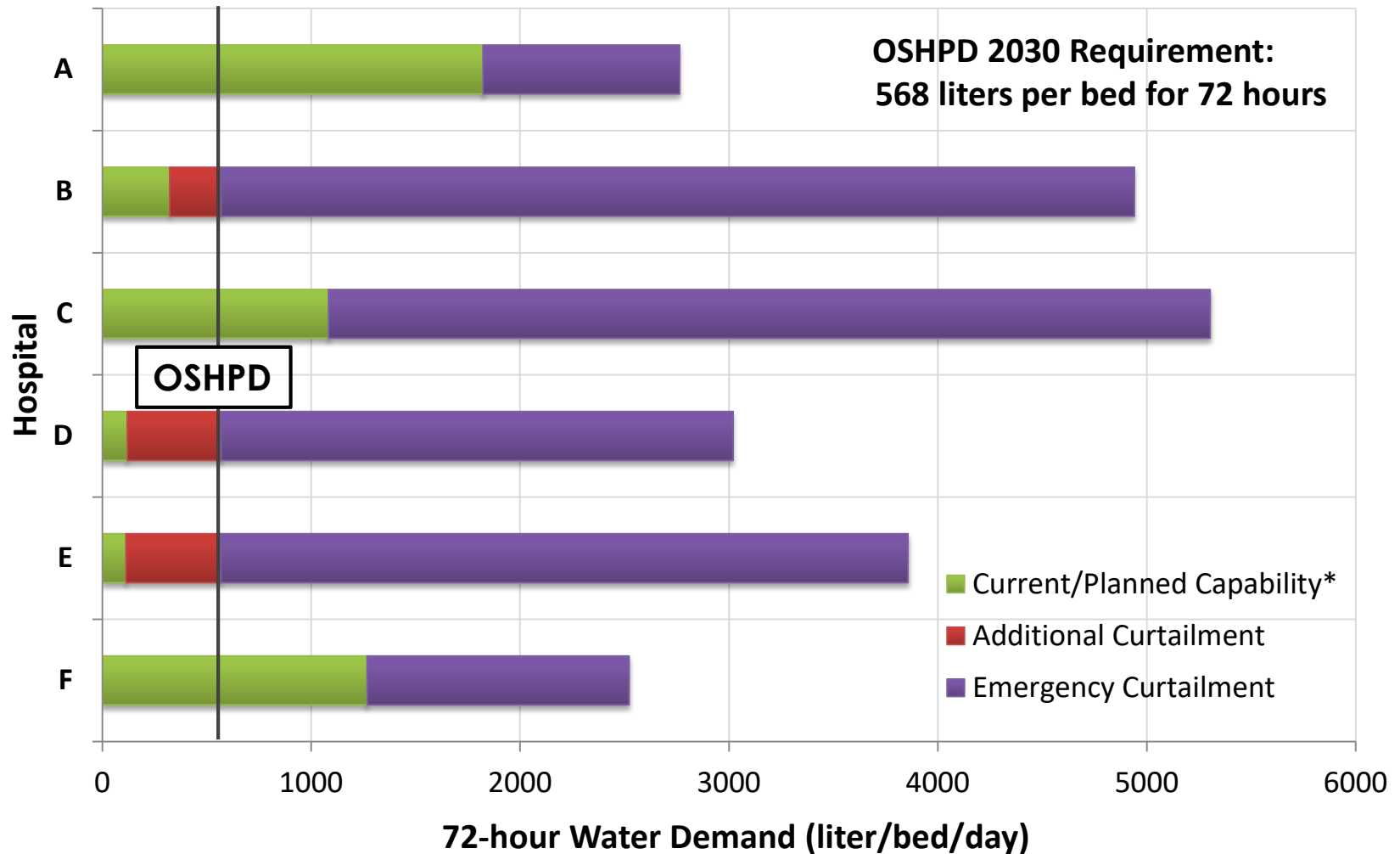
Potable Water Supply Compliance



- Red Cross, CDC, FEMA: 3 to 14 days
- Joint Commission: 96 hours
- California OSHPD: 72 hours
 - ❖ 2030 Requirement = 189 liters per bed per day for 72 hours

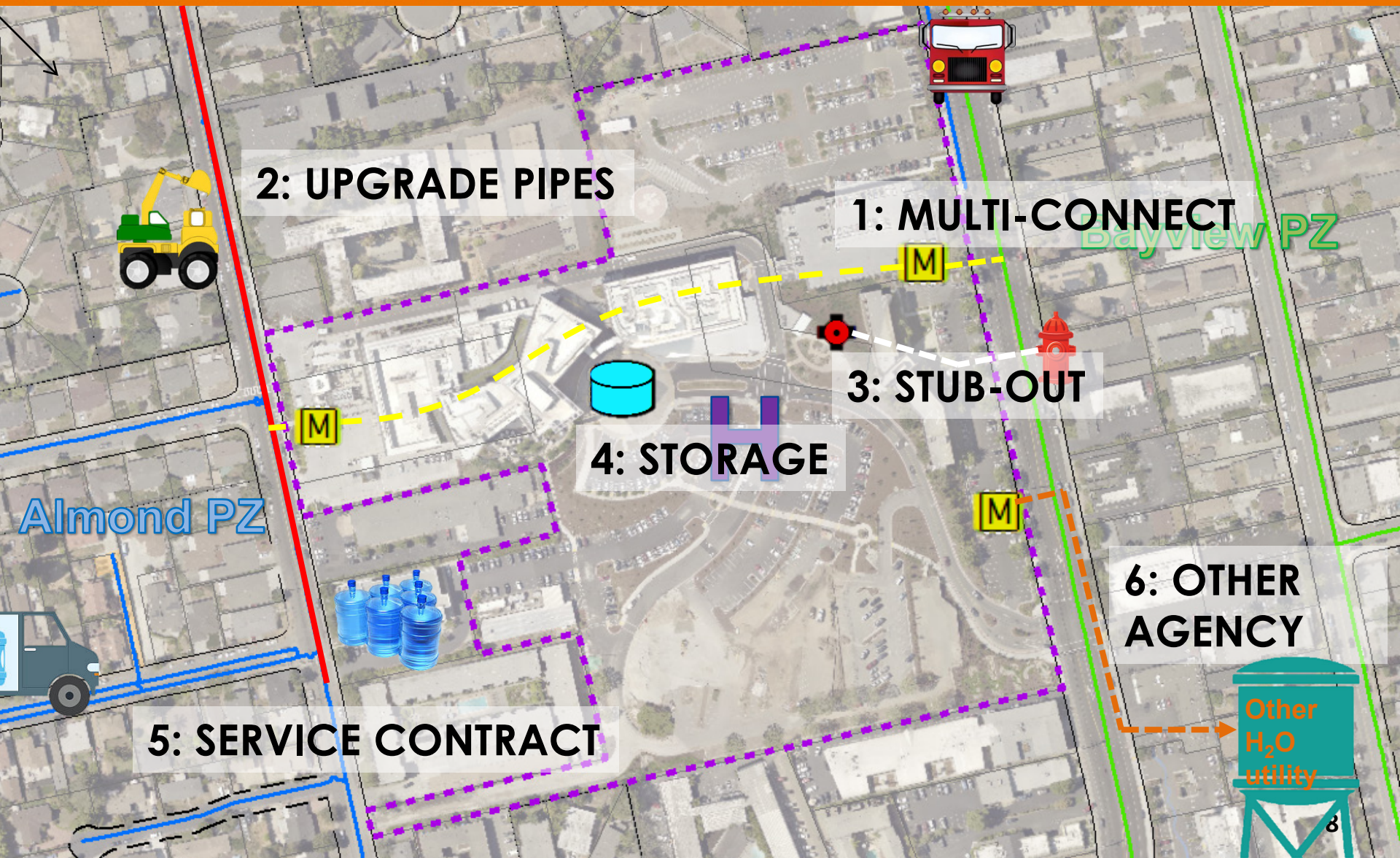


Emergency Water Use Curtailment



**Based on Total Emergency Water Supply*

Water Reliability Alternatives



- Hospitals and water utilities are inter-dependent
- Interdependencies could be mitigated with various measures:
 1. Multiple connections
 2. Upgraded water mains
 3. Emergency stub-outs
 4. Onsite storage
 5. Delivery contracts
 6. Connection to adjacent water utility
- Face-to-face discussions can help identify needs and appropriate measures

Thank you for your attention