

Wildfires and Water

The Role of California Public Water Agencies

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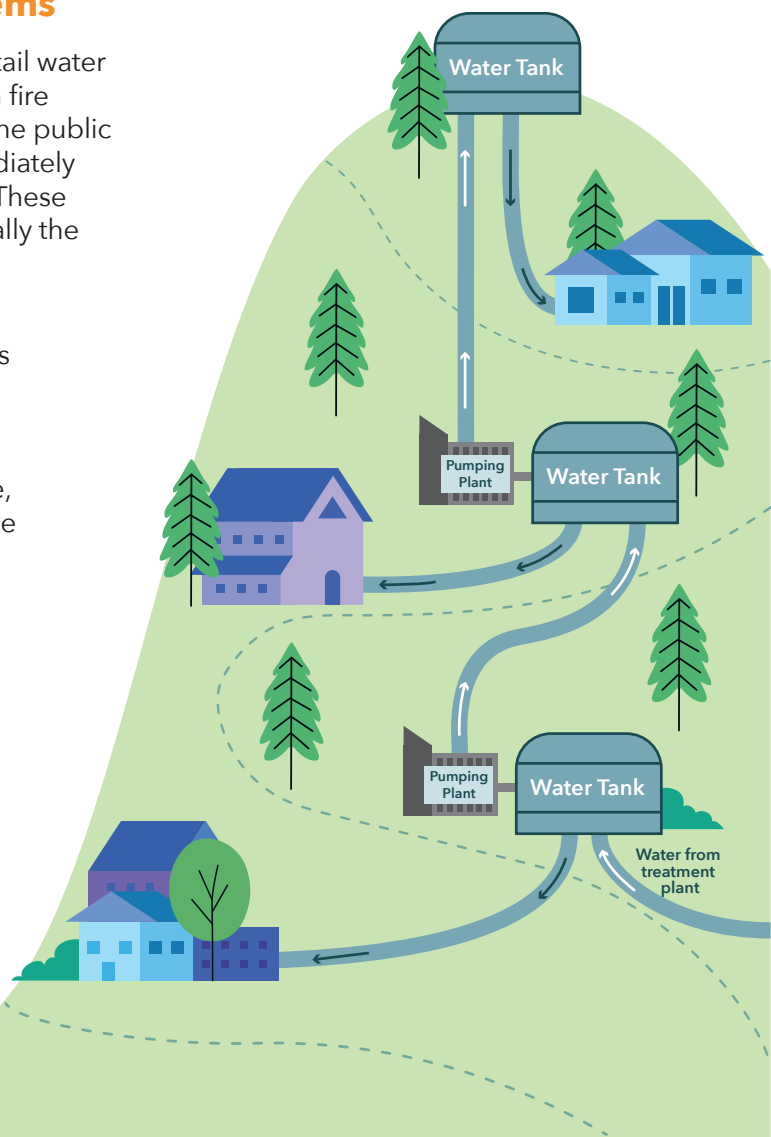
California faces catastrophic climate-driven wildfires, exacerbated by periods of heavy rainfall followed by periods of extreme drought, decades of fire suppression, and historically limited focus on forest health and vegetation management projects. These intense wildfires have devastating impacts on communities that require multifaceted local, statewide, and federal response. Public water agencies serve a critical local government role during these events.

Fire Hydrants and Water Distribution Systems

Public water agencies are responsible for providing critical retail water service to properties across the state, including water to aid in fire suppression. Retail water systems were designed to provide the public with safe and reliable drinking water and to provide an immediately available water service to aid in extinguishing structural fires. These water systems were not designed to combat wildfires, especially the climate-driven wildfires that California experiences today.

Water systems use water pressure created by pump stations and water-storage tanks to move water from lower elevations to higher elevations. These water systems can become overwhelmed when too many fire hydrants are used within the same pressure zone. For a structural fire, there might be three to five fire engines responding to the fire. For a wildfire, there can be hundreds of fire engines hooked up to the same system. The significant drawdown on the system during a wildfire can cause the water pressure to drop, which can affect fire hydrants, particularly those at higher elevations.

Firefighters anticipate this drop in pressure and will adjust their operations as needed. Firefighters can fill large water trucks from hydrants at lower elevations, where there is higher water pressure, and drive the water to higher elevations for use. In addition, fire hydrants are but one tool firefighters use when responding to wildfires. Water agencies also coordinate with firefighters to provide water sources for firefighting helicopters and fixed-wing aircraft. Firefighters also utilize other strategies such as creating fuel breaks to contain the fire.



Preparation and Response to Wildfire Events

Public water agencies are making investments to adapt to climate change, including preparing for catastrophic wildfires. Water agencies also take specific actions in response to wildfire events. The investments and activities of each agency will vary based on the needs of that agency and area of the state.

Long-term Planning

As catastrophic wildfires have increased in severity and frequency, water agencies are taking actions to prepare for future wildfire events, such as:

Infrastructure investments:

- › Retention reservoirs or storage tanks
- › Interties between neighboring water agencies
- › Helicopter refilling stations
- › Upsized pipes for water flow
- › Backup power

Emergency preparedness:

- › Emergency response planning and training
- › Coordination and relationship-building with local agencies

Wildfire Mitigation:

- › Forest health and vegetation management projects



Photo courtesy of Crescenta Valley Water District

Emergency Response

When faced with a wildfire event, water agencies take a number of specific actions that might include:

- › Topping off storage tanks and reservoirs
- › Engaging and refueling backup generators to power critical facilities, including pump stations, during electric outages
- › Providing access for firefighting aircraft to refill at reservoirs or other available sources
- › Shutting off service to structures destroyed by fire to aid in pressurizing the system
- › Providing support to affected water agencies through mutual aid assistance
- › Communicating with the local fire departments and other first-responders
- › Communicating with customers and providing resources



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