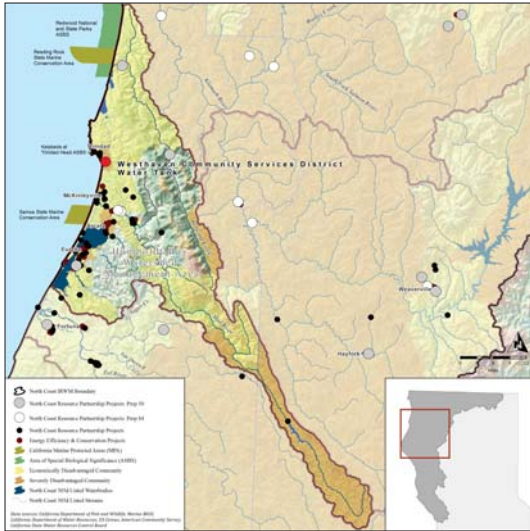


# Westhaven Community Services District Water Tank

## WESTHAVEN COMMUNITY SERVICES DISTRICT (WCSD)



### STATEMENT OF THE PROBLEM

The WCSD water supply system relies on a single 100,000 gallon concrete storage tank with a metal roof supported by fir trusses in an advanced state of rot. A 2005 inspection listed the condition of the roof as a “system or operational defect and/or potential health hazard—costly to correct—to be included in any long-range water improvement project.”

The roof has exceeded its lifespan. The deterioration of the trusses is such that a catastrophic event such as an earthquake or heavy winds could cause the roof to collapse. Without repair, it is highly likely the roof will fail in the next 5 years.

If the roof fails, it would take about 6 months to repair the existing tank and roof. In the interim, WCSD would issue a boil water order and provide bottled drinking water to its users. After initial cleanup, which would take several days, the WCSD would keep the tank in service and provide non-potable water during construction of a new tank. While the tank was out of service, WCSD would supply the system directly from the gravity fed slow sand filter. During peak demand, WCSD would augment supplies with untreated water directly from an open reservoir. Residents would be without a potable water source during replacement roof constructions—6 months—and without any water source during temporary roof construction—about 5 days.

### PROJECT GOALS

1. Ensure an adequate, reliable, and sanitary supply of drinking water

### THE SOLUTION

WCSD will construct a new tank that meets current seismic code, and allows it to repair the failing roof on its existing tank.

### PROJECT IMPLEMENTATION

The project will:

1. Construct a new glass-lined steel 85,000 gallon storage tank adjacent to the existing concrete tank to allow the system to take the existing tank out of service
2. Replace the roof on the existing tank with a new free-span aluminum roof.

The project will also construct a new ring-wall foundation, install station piping, and install a cathodic protection system, tank floats and related controls. The new tank will operate in series with the existing tank.

### PROJECT BUDGET

IRWM funds:	\$ 360,000
Leveraged funds:	\$ 20,000
<b>TOTAL</b>	<b>\$ 380,000</b>

### BENEFITS

#### Economic

- Approximately \$60 per year in avoided costs associated with issuing a boil water notice
- Approximately \$77,079 in avoided costs associated with bottled water purchases
- Approximately \$28,548 in avoided costs associated with flushing the water system
- Approximately \$999 in avoided costs associated with temporary loss of water supply
- Approximately \$1,000 per year in avoided costs associated with reduced water treatment
- Approximately \$449 in avoided costs associated with reduced energy use
- Approximately \$15 in avoided costs of climate change from reduced carbon emissions
- Approximately \$243 in avoided costs associated with temporary roof construction
- Approximately \$155,000 in avoided costs associated with construction of a permanent roof

#### Water Supply

- Improved water supply reliability through reduced risk of periodic shortages

#### Water Quality

- Improved drinking water quality through reduced levels of harmful pollutants

#### Social

- Improved health through reduction of harmful pollutants in drinking water

#### Jobs and Local Economy

- About \$380,000 will be spent locally using local labor and supplies when possible, thus contributing to State goals for environmental justice and social equity

### NEXT STEPS & RECOMMENDATIONS

WCSD will continue to maintain and upgrade the water supply system to ensure reliable, high quality drinking water to its customers.

#### CONTACT

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**NORTH COAST RESOURCE PARTNERSHIP**