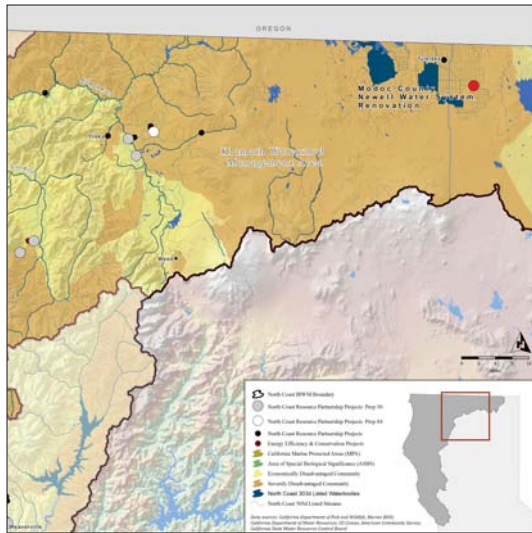


Newell Water System Renovation

COUNTY OF MODOC



STATEMENT OF THE PROBLEM

The economically disadvantaged Town of Newell's water system was originally constructed as a temporary facility for Japanese-American internment during WWII; however, it continued to serve the community 60 years later. Leak tests performed in 2001 demonstrated nearly 60% of the groundwater pumped up was being lost to leaks and bacterial contamination was occurring through the leaks.

PROJECT GOALS

Short-term goals:

- Replace deteriorated drinking water pipelines to protect public health
- Stop loss of treated drinking water

Long-term goals:

- Ensure safe drinking water supply reliability for the community of Newell

The Solution

The Newell drinking water system consisted of three wells, two storage tanks (25,000 and 100,000 gallons) and an unknown length of distribution and lateral service pipelines.

Approximately 25,000 feet of the known system was original steel pipe dating from the 1940s and there were also ductile iron pipes with leaded joints. All of these pipes were still in use far beyond their useful life and inspections showed that the pipes were rusting from the inside out.

Only two of the District's three wells were operational; Well No. 3 was not functioning. Water from all three pumps needed to be redirected to storage before entering the distribution system to correct chlorination contact time deficiencies. Additionally, an old well that had not been properly abandoned had the potential to further contaminate the water system.

PROJECT IMPLEMENTATION AND ACCOMPLISHMENTS

This project included completion of final engineering plan and specifications and project construction. Construction tasks included:

- Installation of 30,445 ft of drinking water pipe, 2" thru 10" (5.7 miles)
- Boring and jacking 132 feet of casing pipe under State Highway 140 and the Railroad
- Installation of 3 water truck outlets
- Installation of 26 new fire hydrants; reconnection of 9 existing fire hydrants
- New turbine pump in well house #3
- Installation of new welded steel 100,000 gallon drinking water storage tank

- New water meters at each of the 3 pump houses
- Installation of 101 new water meters, boxes and home services

COMPLETION DATE

November 30, 2010

PROJECT BUDGET

IRWM funds: \$ 1,496,963

Leveraged funds: \$ 1,000,000

Total cost: \$ 2,496,963

BENEFITS

Economic

- Reduced operational costs of \$916,219
- An economic benefit of \$711,997 from an avoided well construction project that would have been necessary without this project
- Enhanced fire-fighting capabilities will provide an economic benefit of \$98,445

Water Quality

- Bacterial contamination due to access through leaks has been reduced to zero
- Water quality meets/exceeds federal and state drinking water requirements

Water Supply

- System leakage has been reduced to zero, resulting in water supply reliability for the community of Newell which has a monetary benefit of \$118,449

Other

- System electrical and control systems have been brought up to current safety and building code standards, ensuring the safety of water system employees
- The new system reduced staff workload by approximately 90%, freeing them to focus on other maintenance projects to protect community health and well-being

Jobs and Local Economy

- The project cost \$ 2,496,963, which was spent locally using local labor and supplies when possible, thus contributing to State goals for environmental justice and social equity.

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NORTH COAST RESOURCE PARTNERSHIP