

Mendocino City Community Services District

Wastewater Treatment Facilities Improvements and Recycled Water System Expansion Project

On August 24, 2017, the Mendocino City Community Services District was approved for a USDA Rural Development \$3.1 million 2.6% loan and a \$971,000 grant for the *Wastewater Treatment Facilities Improvements and Recycled Water System Expansion Project* (Project) at the Mendocino Wastewater Treatment Plant. The Project is scheduled to go out to bid in the spring of 2018.

Why Are the *Wastewater Treatment Facilities Improvements* Needed?

Construction of the Mendocino Wastewater Treatment Plant was completed in 1975. The Mendocino Sewerage System is now 43 years old, and many of the components in the treatment plant are at the end of their useful life. Other improvements are needed to meet new discharge permit regulations. The most needed plant and recycled water upgrades have been included in the Project. The following Mendocino Sewerage System improvements are scheduled for construction during 2018-19:

- Plant Operations Center—a new plant Operations Center will be constructed adjacent to the treatment plant. The 38' x 28' building will have an onsite chlorine generation room. The onsite chlorine generation system will produce a dilute nonhazardous chlorine solution that is used for plant effluent and recycled water disinfection. The plant water system and dechlorination system will also be installed in this section of the building. Adjacent to this room is the plant electrical/control room. Operators will monitor and control plant operations from this new Operations Center. The plant's analytical lab will also be located in this room. The building will provide additional indoor parking space for the District's service truck and a forklift. A 50,000 gallon underground tank will be installed under the new building to store recycled water.
- Recycled Water Distribution System Expansion—the new building will also house the recycled water pressure pumps and controls. A new 6-inch purple C-900 recycled water main will be installed from the treatment plant to the existing 30,000 gallon redwood and 50,000 gallon concrete tanks at the High School. Two 500 gallon per minute recycled distribution pumps and controls will be installed in the new building and operated from the new electrical/control center. The pumps will supply fire hydrants along Ukiah Street to provide additional firefighting water capacity for the Mendocino Volunteer Fire Department.
- Ancillary Equipment Replacement—the plant effluent equalization pond liner is the original liner that was installed when the plant was constructed in the mid-1970s. It is at the end of its useful life, and needs to be replaced to prevent plant effluent from infiltrating into the aquifer if it fails.

The existing backwash controls are original equipment. The controls are obsolete and are at the end of their useful life. The old equipment will be replaced with a programmable logic control.

Sludge is a byproduct of the sewage treatment process. Mendocino's sludge is dewatered before it is disposed of in a sanitary landfill. The plant's primary sludge dewatering system is a combination sludge press and thermal dryer. In the event that the primary sludge dewatering system is shut down for repairs, a drying bed is used for emergency dewatering of liquid digester sludge and small quantities sewerage system waste. The District is planning to install a fence on the north and east side of the beds to screen the beds and installing a new supply line to the beds. If there are sufficient grant funds, a liner will be installed under the west bed to protect groundwater from sludge water infiltration into the aquifer if the bed is used in the future.

- Americans with Disabilities Act (ADA) Compliant Office and Meeting Room—the existing lab and process control room instruments will be moved into the new building. The District office and old control room are going to be remodeled into an ADA compliant office/public meeting room.

The new building is a key component of the Project and will become the new Operations Center for the wastewater treatment plant. Plant operators will monitor and control treatment plant systems from this location. MCCSD's analytical lab will be moved into this building as well.

The new building will also house the new recycled water system. The District has had a recycled water permit since 1977, but recycled water quality criteria have become more stringent since then. The District's recycled water system does not meet current Title 22 Recycled Water Standards. Without the proposed recycled water system upgrades, the Recycled Water Program will end when the District's National Pollutant Elimination System (NPDES) permit comes up for renewal in 2019. The recycled water improvements will ensure a continued supply of irrigation water for the Mendocino High School. The Mendocino Headlands State Park is planning to use recycled water for flushing toilets in the Main Street and Heeser Drive public restrooms in the future, and the new recycled water system improvements will make that possible. A property owner will be able to use recycled water for landscape irrigation on their private property once the recycled water system is upgraded. Expanding the use of recycled water in Mendocino will help reduce groundwater extraction from the aquifer, which will extend Mendocino's limited groundwater supply.

One of the most important features of the new recycled water system are the fire hydrants that will be installed along Ukiah Street. Two 500 gallon per minute recycled distribution pumps and controls will be installed in the new Operation Center building. The pumps will pump from the 50,000 gallon underground tank under the new building. The pumps will supply water at 1,000 gallon per minute to fire hydrants along Ukiah Street, and additional water will be stored in the 50,000 gallon concrete tank and the 30,000 gallon redwood tank at the Mendocino High School to provide additional firefighting water capacity for the Mendocino Volunteer Fire Department. The new firefighting capacity is expected to lower fire insurance rates for property owners at the west end of Mendocino. The new building and the underground storage tank are crucial elements of the new recycled water system.

Replacing the equalization pond liner and tertiary backwash controls are examples of exchanging old obsolete equipment and systems that are at the end of its useful life.

The existing lab and control room are currently located next to the office. To enter office, the public has to walk through the lab where human waste is analyzed and chemicals are stored. Both the existing office and the lab/control room will be remodeled. The old lab/control room will be converted to a public meeting room. The District office, meeting room and restroom will be improved to meet ADA compliance standards.

The District has obtained the necessary funding for the Project. SHN Consulting Engineers and Geologists, Inc. has completed both the Preliminary Engineering Report and the USDA required Environmental Report, and SHN has surveyed the recycled water main up to the high school. The District is now in the process of obtaining the required permits for the Project before it goes out to bid.

The MCCSD is in the process of obtaining Mendocino Historical Review Board (MHRB) approval for the new Plant Operations Center building's architectural appearance. The _____ MHRB Public Hearing is open to the public, and individuals that are interested in the ongoing treatment plant and recycled water upgrades are invited to appear, ask questions, and comment on this important community project.

For additional Project information contact:

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