

## 1.0 PROJECT DESCRIPTION SUMMARY

The objective of this project is to construct a Granular Activated Carbon (GAC) water treatment system to treat the water produced by Well 29 located in Yosemite Village Park to remove 1,2,3-trichloropropane (TCP) to achieve a treated water concentration that complies with California State Water Resource Control Board (SWRCB) Compliance Order No. 01-10-21R-002. This Order requires compliance with California Code Regulations, Title 22, Section 64444 on or before April 10, 2024. The maximum contaminant level (MCL) for 1,2,3-Trichloropropane (TCP) is 0.005 micrograms per Liter ( $\mu\text{g/L}$ ).

The Project Site currently contains a well house, emergency diesel generator, and two arsenic filter vessels. The filters will continue to be used to remove arsenic. Well 29 is connected at two locations to the distribution system; one connection is located west of the well site at El Portal Avenue and the other connection is located to the east at El Capitan Avenue. Well 29 has a deep well turbine pump that produces 2,000 Gallons Per Minute (gpm) at 50 pounds per square inch. During normal operation, a Variable Frequency Drive (VFD) operates the pump as determined by system demand. The VFD is controlled by a Programmable Logic Controller (PLC). The PLC receives a call to run, then signals the VFD to start the pump and run at the flow rate needed to maintain a preset system pressure. The PLC also starts the sodium hypochlorite metering pump and flow paces the sodium hypochlorite metering pump to match the well flow. A portion of the pump discharge flow is diverted into the arsenic filters through the use of a *blending* valve.

The amount of water to be treated by the arsenic filters has been predetermined, based on the arsenic concentration in the source water and the desired arsenic level in the blended effluent (the water leaving the well facility must have an arsenic concentration <10 Parts per Billion or ug/L).

The Proposed Project has two layout options: Proposed Site Layout- Option A and Alternative Site Layout- Option B. Components of these two options are detailed below.

Layout Option A would place six new 12-foot-diameter GAC treatment vessels directly to the east of the existing well site on a concrete pad measuring 40 by 60 feet. The new GAC system would tie into the existing Well 29 raw water discharge pipe, prior to arsenic treatment, via two new 12-inch pipes that would run approximately 90 feet southwest. The new GAC vessels would discharge backwash waste into an 8-inch pipe running approximately 255 feet from the GAC vessels to the existing backwash tank located adjacent to the arsenic treatment system. The existing site fencing would be extended around the new treatment facility, and two 16-foot sliding gates would be added for maintenance access. The hypochlorite injection point for potable water disinfection would be relocated from the existing wellhead to an above-grade injection point after the GAC treatment system. A connection to the existing sanitary sewer system would be made in the street adjacent to the site with a new sanitary sewer manhole. An additional sanitary sewer manhole and drain lines would be installed onsite for collecting wash water from the backwash process and excess water that must be drained during media change-outs from the GAC delivery truck. Media change outs are completed by sending a water and media slurry from the treatment vessels to the GAC delivery trucks. Excess water must be drained from the trucks after the slurry pumping operation is completed and before the truck may depart. The water utilized to generate the

slurry is potable water. The existing driveway would be widened by 14 feet and additional pavement added to accommodate the truck turning radius. Option A would require removal of one ornamental tree located at the southeast corner of the existing well 29 footprint.

Layout Option B would include the majority of the same infrastructure as Layout Option A but would be located directly north of the existing well site. Due to the location of Option B, a new 16-foot-wide access driveway would be required just north of the new infrastructure. Since this Layout Option would be placed where the existing basketball court is located, a new basketball court would be constructed east of the existing playground. Option B would not require tree removal as a part of the Proposed Project.