

# Water and Wastewater Facility Improvements for a Small Northern California Residential Development



**Existing RO domestic water treatment unit**



**Domestic water supply tank and water supply well**

EKI assisted with facilities planning and served as the design engineer for water and wastewater facility upgrades at a 199-unit mobile home park in northern California. The development is located on an area that had challenging constraints for both water resources and wastewater treatment and disposal. Groundwater supply beneath the site was limited and had a high and unpalatable degree of dissolved salts. After investigating the existing groundwater resources and groundwater treatment options, EKI determined that use of this source was infeasible and that an alternative water source for the development was required. Source water options were evaluated to compare treatment requirements, challenges and opportunities, costs, and feasibilities. EKI also identified alternative treatment technologies for the wastewater systems and examined various opportunities, such as using natural wastewater treatment systems and the potential for recycled water use. EKI facilitated discussions with the local water district and planning agencies to present water supply alternatives and seek consensus on water source and water treatment options used by the development.

EKI performed the following:

- Prepared contract documents for a new wastewater treatment system (consisting of rotating biological contractors, filtration, and UV) and the disposal system for the mobile home park.
- Provided construction management services during wastewater treatment and disposal system construction.
- Assisted in preparation of California Environmental Quality Act documents as well as Report of Waste Discharge.
- Led negotiations with Contra Costa Water District for the supply of potable water through a new 13,000 length-feet pipeline constructed by the District.
- Provide ongoing technical consultation for operation and maintenance of the wastewater treatment system.
- Provide on-going technical support for operation and maintenance of the existing water system including bolted steel tanks.