

Water Supply Pipelines

7.1 Introduction

This section describes the water supply pipeline routes and construction methods for the recycled and domestic water lines. The source of the water, its quality, and potential environmental impacts are discussed in Subsection 8.14. Alternatives to the proposed water supply pipelines are discussed in Section 9.0.

Subsection 7.2 discusses the recycled water line. Subsection 7.3 discusses the potable water line for potable, plant service, fire protection, and “bridge” supply. Subsection 7.4 describes construction methods.

7.2 Recycled Water Pipeline

The recycled water pipeline extends from the project site to the City of Turlock (City) wastewater treatment plant (WWTP), approximately 1.6 miles away. The recycled-water pipeline will be owned and operated by the City of Turlock, which will serve other customers with this line.

The proposed recycled water route is shown on Figure 7.1-1. The recycled-water pipeline will leave the Walnut Energy Center (WEC) plant site and head south to Ruble Road approximately 1,100 feet, along the east side of the 69-acre parcel. At this point it will head east on Ruble Road for approximately 3,350 feet to South Tegner Road. At South Tegner Road, the pipeline will proceed south approximately 1,100 feet, to an existing 69-kV Turlock Irrigation District (TID) transmission line corridor. The pipeline will then turn east, paralleling the transmission line for approximately 2,600 feet until it reaches South Kilroy Road. At South Kilroy Road, the pipeline will head south for approximately 350 feet, where it will head due east onto the City’s WWTP site.

The recycled water pipeline will be 12 to 24 inches in diameter. A 100-foot construction corridor will be used for the recycled water pipeline. This width will provide the City flexibility in determining the precise location of the line within the corridor. However, for the approximately 350-foot segment of the pipeline along South Kilroy Road a 250-foot corridor will be used to provide the City with the flexibility to locate the pipeline on either side of the road. During construction, however, only an area 50- to 75-feet wide will be disturbed. The specific location of the pipeline will be determined based upon the avoidance of any sensitive environmental resources, the ability to obtain right-of-way, and the location of existing pipelines.

7.3 Potable Water Pipeline

The potable water pipeline extends from the project site to the City's potable water main line located at South Tegner Road. The potable-water pipeline will be owned and operated by the City, which will serve other customers using this line.

The proposed potable water route is shown on Figure 7.1-1. The potable-water pipeline will leave the WEC plant site and head south to Ruble Road approximately 1,100 feet, along the east side of the 69-acre parcel. At this point it will head east on Ruble Road for approximately 3,350 feet to South Tegner Road. At South Tegner Road it will interconnect with the City's existing potable water main line.

The diameter of the potable water pipeline will be 8 to 14 inches. A 100-foot construction corridor will be used for the potable water pipeline. This width will provide the City flexibility in determining the precise location of the line within the corridor. During construction, however, only an area 50- to 75-feet wide will be disturbed.

7.4 Construction Practices

Construction of the recycled and potable water supply pipelines is expected to begin toward the end of the first year following the start of project construction. Total construction time is expected to be 3 to 5 months.

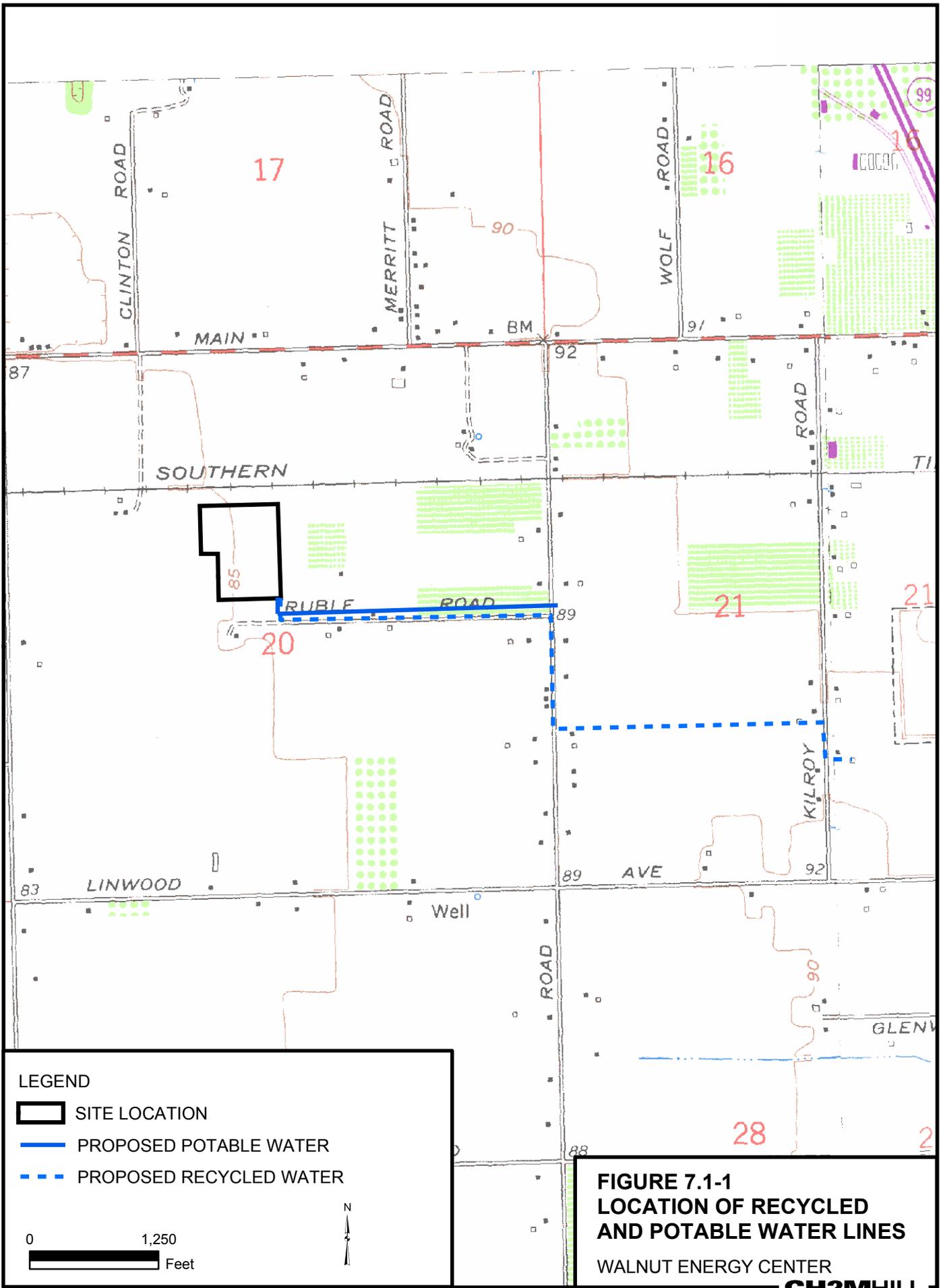
The water pipelines will be constructed with a minimum of one crew ("spread") working continuously along the pipeline right-of-way (ROW). Workers will park along the pipeline ROW or at designated parking areas and be transported to the work site. The ROW will be accessed from existing roads. Most major pieces of construction equipment may remain along the ROW over the course of construction. Piping will be stored in the plant laydown areas or along the pipeline ROW. Pipeline construction is estimated to occur during the timeframe and with the workforce described in Subsection 8.8. Construction will be done in accordance with an environmental mitigation plan prepared for the project.

The construction of the recycled- and potable-water pipelines will consist of the following activities:

- **Trenching**—Trenching will consist of digging two 3- to 7-foot-wide trenches. Trench width will depend on the type of soils encountered and slope required by OSHA regulations. Trench depth will be sufficient to meet the requirements of the codes and agency having jurisdiction. However, the pipeline will be buried to provide a minimum cover of 3 feet. The excavated soil will be piled on one side of the trench and used for backfilling after the pipe is installed in the trench.
- **Stringing**—Stringing will consist of trucking lengths of pipe to the ROW and laying them on wooden skids beside the open trench.
- **Installation**—Installation of the water pipelines will consist of lowering the pipe string into the trench.
- **Backfilling**—Backfilling will consist of returning spoil back into the trench around and on top of the pipe, ensuring that the surface is returned to its original grade or level. The

backfill will be compacted to protect the stability of the pipe and to minimize subsequent subsidence.

- **Plating** – Plating will consist of covering any open trench in areas of foot or vehicle traffic at the end of a workday. Plywood plates will be used in areas of foot traffic and steel plates will be used in areas of vehicle traffic to ensure public safety. Plates will be removed at the start of each workday. Efforts will be made to minimize the length of open trench along the ROW.
- **Hydrostatic Testing** – Hydrostatic testing will consist of filling the pipeline with water, venting all air, increasing the pressure to the specified code requirements, and holding the pressure for a period of time. After hydrostatic testing of the pipeline, the test water will be chemically analyzed for contaminants and discharged into a dewatering structure consisting of hay bales, geotextile fabric, and silt fencing. The discharged water will filter through the hay bales and silt fence onto a jute matting before it is discharged. Temporary approvals for test water use and permits for discharge will be obtained as required.
- **Cleanup** – Cleanup will consist of restoring the surface of the ROW by removing any construction debris, grading to the original grade and contour, and revegetating and repairing where required.
- **Safety** – A construction safety plan will be prepared for the project. This plan will address specific safety issues, such as working in an active railroad ROW, traffic control, working along traveled city or county streets, and other areas as required by permits.



LEGEND

- SITE LOCATION
- PROPOSED POTABLE WATER
- PROPOSED RECYCLED WATER

0 1,250
 Feet



**FIGURE 7.1-1
 LOCATION OF RECYCLED
 AND POTABLE WATER LINES**

WALNUT ENERGY CENTER

