



# Project Definition Technical Memorandum #1

Paradise Sewer Project

May 19, 2020



*Page Intentionally Blank*

# 1. Introduction

The Town of Paradise (Town) is implementing the Paradise Sewer Project (Project), which involves identifying and implementing a long-term solution for collection, treatment, and reuse/disposal of its wastewater. HDR is under contract to assist the Town with the first two phases of the Project—final selection of a wastewater alternative (Phase 1), and preparation of an Environmental Impact Report (EIR) covering the selected alternative (Phase 2). This technical memorandum (TM) is part of the Phase 1 effort.

The purpose of this TM #1 is to define the understanding of the current project and the Phase 1 effort.

Implementing the Project will require approval from the Central Valley Regional Water Quality Control Board (Regional Board). That approval takes the form of the Regional Board issuing either a National Pollutant Discharge Elimination System discharge permit or Waste Discharge Requirements.

# 2. Sewer Service Area

**Sewer Service Area:** The 2017 *Town of Paradise Sewer Project Alternatives Analysis and Feasibility Report* (2017 Feasibility Report) defined a sewer service area (SSA) in Figure 4-1, Town of Paradise Proposed Sewer Service Area. This SSA is sometimes referred to as the urban core. The SSA defined in 2017 will continue to be used as the SSA for the proposed wastewater system.

**Connection Estimates:** The SSA contains 1,469 parcels. As of April 2020, there were 300 parcels with habitable structures within the SSA. (The count of existing parcels with habitable structures was obtained from the Chico State Geographical Information Center, which compiled the data supplied by CAL FIRE. CAL FIRE defines a structure as habitable if it is less than 25 percent damaged.) HDR will work with the Town to project the occupation of the remaining parcels over time in order to estimate wastewater flow rates over time.

# 3. Sewer System

The Town has indicated that it wishes to move forward with a gravity sewer for its new collection system, not the septic tank effluent pumping (STEP) system previously identified in the 2017 Feasibility Report. Therefore, the analysis will focus solely on a gravity sewer system.

# 4. Wastewater Treatment Plant

**Wastewater Treatment Plant Locations:** Potential wastewater treatment plant (WWTP) locations will be focused along the four “opportunity corridors” identified by the Town in the *Paradise Sewer Project Request For Proposals*.

**Wastewater Treatment Processes:** Treatment processes will be identified that can meet current Title 22 requirements.

**Biosolids Management:** Biosolids management is becoming increasingly challenging and complex, especially for smaller agencies, because of more stringent regulations. To provide flexibility in biosolids reuse/disposal, it is recommended that biosolids generated meet Class A criteria.

**Septage:** A significant portion of the Town will remain unsewered, and will have an on-going need to have their septic tanks pumped. With the Neal Road Landfill no longer treating septage on-site, the cost of septage disposal in the area has increased substantially. In Phase 1, the cost of including treatment of Town septage at the local WWTP will be estimated.

## 5. Effluent Reuse/Disposal

**Land Application Locations:** Application of treated wastewater to agricultural lands may be feasible and will be analyzed. Storage and land application sites as close as possible to the Town will be identified based on topography, soil type, depth to groundwater, and environmental constraints.

**Surface Water Discharge:** Surface water discharge from a local WWTP has the following two potential locations:

- The closest year-round flowing stream (which has better chances for permitting with the Regional Board) is a fork of the Feather River east of Paradise, which flows into Lake Oroville. The Regional Board has indicated that while there is no Basin Plan prohibition on such a discharge, it would be extremely difficult to get such a discharge approved. Therefore, this discharge point will not be analyzed.
- All other streams near Paradise are ephemeral. A discharge location will be chosen near the WWTP location. This discharge could be year-round, or could be a seasonal discharge in combination with a land application system.

**Water Recycling:** The 2017 Feasibility Report identified very limited water recycling opportunities within the Town limits or nearby. One of those locations, the Tuscan Ridge Golf Club, has permanently closed. However, the Town wishes to maintain the option of recycling in the future, if conditions change. Therefore, the following approach will be taken for the current effort:

- No in-town “purple pipe” distribution network is included in the Project.
- Providing in-town recycled water requires a higher level of treatment than sending treated effluent to land application. Therefore, assessment of the treatment process for the local WWTP will include an estimate of the additional cost of providing that higher level of treatment now, to allow the future option of implementing a water recycling program (i.e., installing recycled water pipelines).