

Introduction

Redwood Sanitary Sewer Service District Josephine County, Oregon



Parametrix, Inc.

1. INTRODUCTION

1.1 BACKGROUND

In the late 1960s, the Josephine County Board of Commissioners formed the Redwood Sanitary Sewer Service District (District) in an area 4.8 miles southwest of Grants Pass, Oregon (Figure 1-1). The Commissioners' action resulted from a publication ("Engineering Report on a Preliminary Study of Sewage Collection and Waste Treatment Facilities for the Redwood Avenue Area") completed by the County in 1966.

In 1977-78, the District constructed a wastewater collection system and treatment facility in the service district to discharge treated wastewater to the Rogue River. Since 1978, only minor additions to the collection system have been made, and the treatment facility has also had only minor changes, except for the addition (in 1988) of a biosolids composting facility, located adjacent to the plant.

In June 1992, Josephine County executed an agreement with Parametrix, Inc. to prepare a Wastewater Facilities Plan for the District. This action was prompted by a condition in the District's National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit.

The NPDES permit stipulated that . . . *"As soon as practicable, but not later than two (2) years after permit issuance date, the permittee (District) shall submit a final facility plan report describing growth projections, plant expansion, funding mechanisms, and an implementation schedule."*

The Oregon Department of Environmental Quality (ODEQ) issued Permit Number 100868 on March 24, 1992. A copy is included in Appendix A.

In November 1994, the Wastewater Facilities Plan was completed and submitted for ODEQ approval. The Plan recommended that the plant be upgraded and expanded. These actions would include the following: construction of a new aeration basin and secondary clarifier; a headworks upgrade; the conversion of an existing aeration basin to an aerobic digester; and installation of ultraviolet disinfection.

ODEQ approved this Facilities Plan in July 1995. Following approval, final design of the plant upgrade/expansion began.

In August 1994, neighbors near the treatment plant initiated a court action against the District seeking to shut down the biosolids composting portion of the treatment facility. In 1995, the Circuit Court for Josephine County (Case No. 94-CV-0209) resolved this complaint in a judgment (recorded September 5, 1995) against the District requiring that the composting facility cease operation. However, the District appealed the judgment.

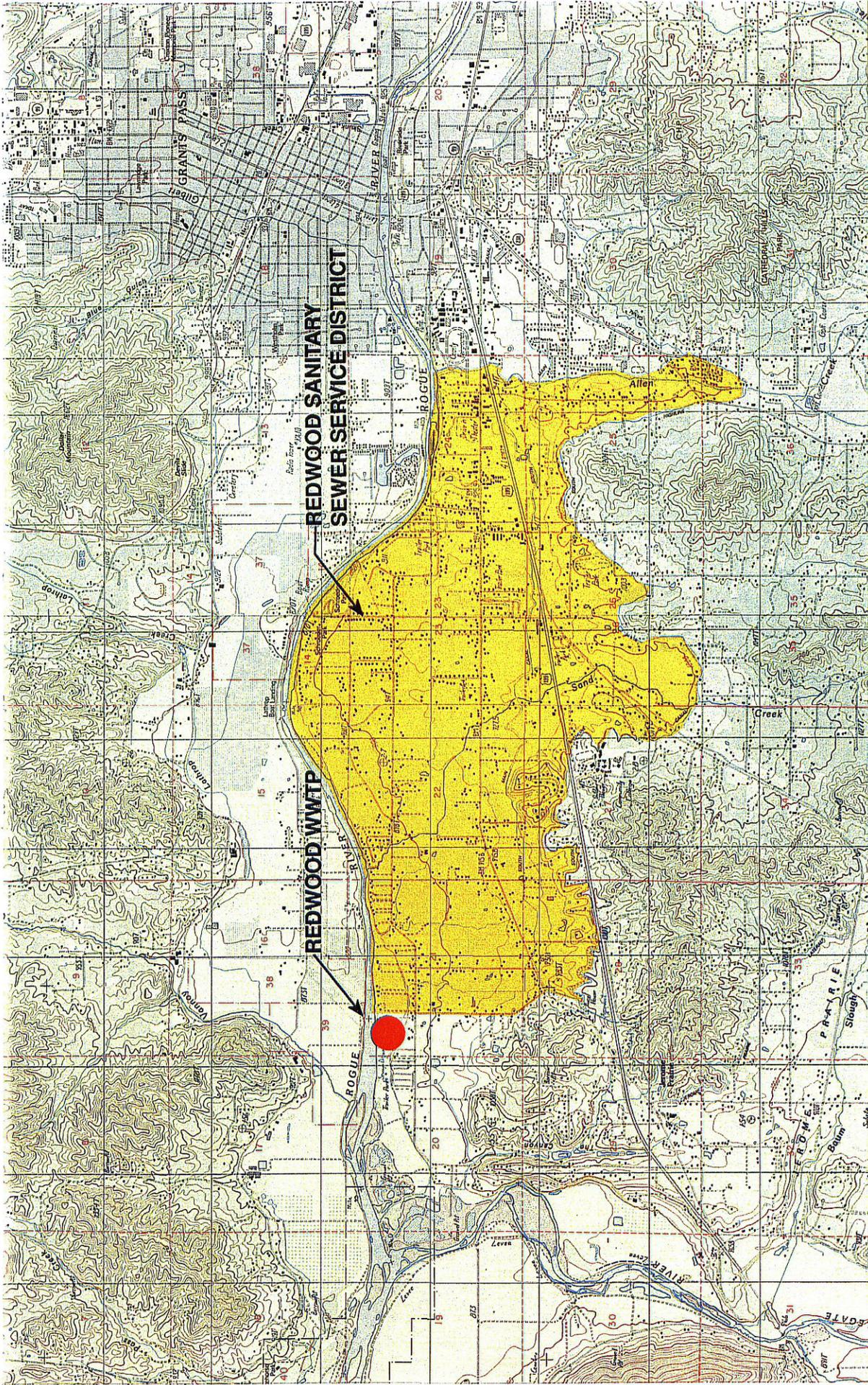


Figure 1-1
Redwood Sanitary Sewer Service District
and Grants Pass

Meanwhile, in fall of 1995, the final design of the plant upgrade/expansion was proceeding. In February 1996, a fifty percent complete design review meeting was scheduled; however, at the meeting, instead of reviewing the fifty percent complete design, ODEQ informed the District that approval of the Wastewater Facilities Plan was not possible at this time. This action was prompted by ODEQ's concern for a proposed mass load increase in the Facilities Plan. Having revisited the proposed increase (prior to the meeting), ODEQ believed additional studies were necessary to support approval of the increase rather than their original belief that the plan could be approved without these studies. Based on this decision, the upgrade/expansion design of a Redwood Wastewater Treatment Plant (Redwood WWTP) was stopped.

In 1996, Parametrix completed for the District the *Biosolids Treatment Evaluation* that reviewed biosolids treatment options that could be implemented at the treatment plant if the composting operation were to be closed. In 1997, Parametrix prepared a *Mass Load Increase Evaluation Report* to document for ODEQ the District's required mass load increase case. Final design work was stopped pending the outcome of the District's appeal on compost operation closure and pending ODEQ's approval of the District's request for a mass load increase for their treatment plant and then reapproval of their Facilities Plan.

In the fall of 1998, the District's appeal was denied and compost operation was ordered to close by October 1999. The District's mass load increase request remains to be reviewed and approved by ODEQ.

1.2 AUTHORITY AND PURPOSE

One of the alternatives investigated in the original facilities planning process was abandonment of the existing Redwood WWTP and wastewater conveyance to the City of Grants Pass Water Restoration Plant (WRP). (This alternative was evaluated in a separate report entitled, "*Feasibility Analysis, Wastewater Conveyance to City of Grants Pass Wastewater Treatment Plant,*" prepared by Parametrix, Inc. and dated June 1994.) This concept was not considered feasible at that time because it was more costly than upgrading/expanding the Redwood WWTP.

Because composting is no longer permitted at the Redwood WWTP site, a completely new biosolids treatment and disposal process needs to be included in the Redwood WWTP upgrade/expansion cost and estimates. Addition of a new biosolids facility to the Redwood WWTP increases the cost of the WWTP upgrade/expansion alternative substantially. It now appears that the preferred alternative may be to abandon the Redwood WWTP and convey all wastewater to the City of Grants Pass WRP. Abandonment of the Redwood WWTP and conveyance of the wastewater to the City of Grants Pass WRP would likely become the least cost alternative and the best alternative to implement.

The purpose of this report is to update the Wastewater Facilities Plan for the District and reevaluate the cost of a conveyance alternative compared to the cost to upgrade/expand the existing Redwood WWTP. The conveyance alternative would include abandonment of the existing Redwood WWTP and construction of a new sewer force main and pump station system

to convey wastewater to the City of Grants Pass WRP. This system would generally consist of two pump stations and pipelines as originally identified in the above-stated 1994 "Feasibility Analysis" report as "Alternative 3D."

The purpose of this report is to also present a detailed predesign study of the preferred alternative to clearly identify and resolve any and all potential predesign issues.

1.3 PREVIOUS STUDIES AND REPORTS

During the engineering analysis conducted in this study and during preparation of this document, the following studies and reports were used.

- Parametrix, Inc., August 1997. *Mass Load Increase Evaluation Report*. Sumner, Washington
- Parametrix, Inc., October 1996. *Biosolids Treatment Evaluation*. Sumner, Washington
- Parametrix, Inc., January 1996. *Redwood Wastewater Treatment Plant Improvements*. Redwood Sanitary Sewer District, Josephine County, Oregon.
- Parametrix, Inc., November 1994. *Redwood Sanitary Sewer Service District Wastewater Facilities Plan*. Sumner, Washington.
- Parametrix, Inc., November 1992. Report – Task I Priority Engineering/Financial Analysis. Sumner, Washington.
- CH2M, June 1996. Engineering Report on a Preliminary Study of Sewage Collection and Waste Treatment Facilities for the Redwood Avenue Area.
- CH2M, February 23, 1970. Letter to Josephine County Board of County Commissioners regarding Redwood Sanitary Sewer Service District.
- CH2M, July 1976. Contract documents for the Construction on the Redwood Sanitary Sewer Service District Wastewater Collection System and Treatment Plant.
- ADS Environmental Service, 1993. Redwood Sanitary Sewer Service District Assessment of I/I for Facility Planning for Josephine County, Oregon.
- Redwood Wastewater Treatment Plant, 1989-1993. Daily Monitoring Report Forms and Wastewater Flow Chart.

- Brown and Caldwell, December 1992. Facilities Plan, City of Grants Pass - Water Restoration Plant.
- Redwood Sanitary Sewer Service District, 1989. Sludge Management Plan. Josephine County, Oregon.
- Preliminary Feasibility Report for a Yard and Wood Waste Recycling Program in Josephine County, Oregon, 1990.
- Federal Emergency Management Agency, June 1982. Floodway-Flood Boundary and Floodway Map, Panel 217 of 500. Josephine County, Oregon.
- Josephine County Public Works, July 1985. Redwood Service District, Sanitary Sewer Collection System Map.

1.4 ACKNOWLEDGMENTS

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