

DRAFT Memorandum



DDSD/Antioch Urban Water Reuse Project

Subject: Attachment 2 – Project Description

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Reviewed by: Dean Eckerson, DDSD

Date: August 19, 2008

1 Purpose

The purpose of this memorandum is to provide a detailed project description of the DDSD/Antioch Urban Water Reuse Project (Project) for submittal to the State Water Resources Control Board (SWRCB) Division of Water Rights as part of the Petition For Change application. In accordance with State Revolving Fund (SRF) guidelines, a phone conversation was held with Ms. Kathy Mroka (SWRCB) on April 23, 2008 to discuss the project and determine whether a Petition For Change application would be required as part of the process for securing a State Revolving Fund (SRF) loan. Given that the Project would divert flows for irrigation reuse that would otherwise have been discharged, Ms. Mroka determined that a Petition for Change application would be required. This memorandum provides an overview of DDSD's recycled water program, a detailed description of the Project, and a summary of the environmental documentation findings.

2 Overview of DDSD's Recycled Water Program

Delta Diablo Sanitation District (DDSD) currently provides wastewater collection and treatment services for 184,000 customers within the City of Antioch, City of Pittsburg and unincorporated community of Bay Point (see **Figure 1**). Since 2001, DDSD has also served as a recycled water purveyor in the East Contra Costa County region, providing recycled water for use as a cooling tower supply at two nearby power plants (Delta Energy Center and Los Medanos Energy Center) and as an irrigation supply for 20 acres of parks and landscaped areas.

2.1 Facilities and Operation

DDSD's current Water Pollution Control Facility (WPCF) is comprised of a secondary treatment plant with a rated average dry weather flow (ADWF) capacity of 16.5 mgd, and a Recycled Water Facility capable of treating up to 12.8 mgd of recycled water. As shown in **Figure 2**, the major secondary treatment processes include screening and grit removal, primary clarification, tower trickling filters, aeration, secondary clarification, and disinfection/dechlorination. As shown in **Figure 3**, secondary effluent is diverted upstream of the WPCF disinfection, and undergoes flocculation, clarification, sedimentation, filtration and disinfection before being distributed to recycled water users.

Figure 1: DDSD Recycled Water Service Area

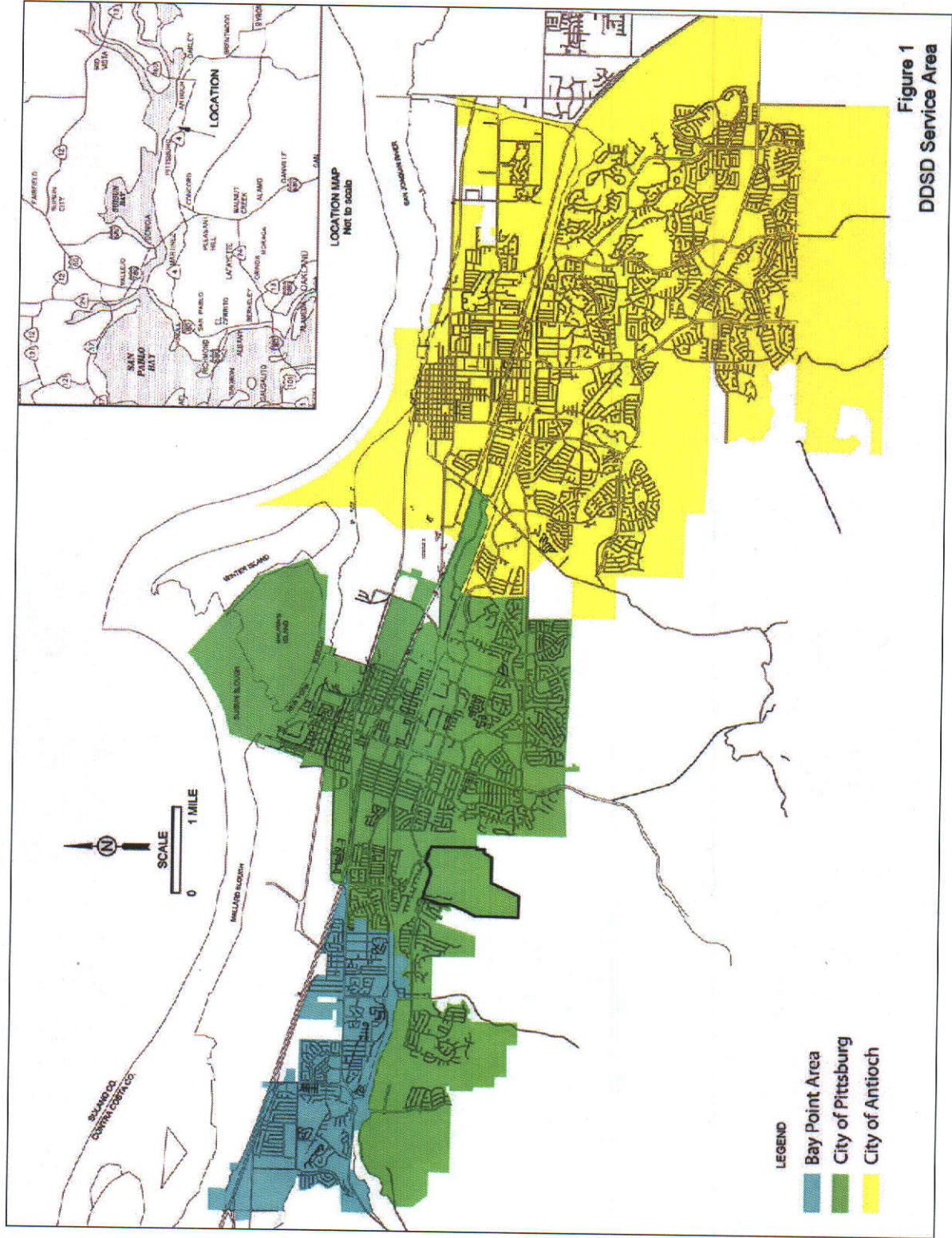
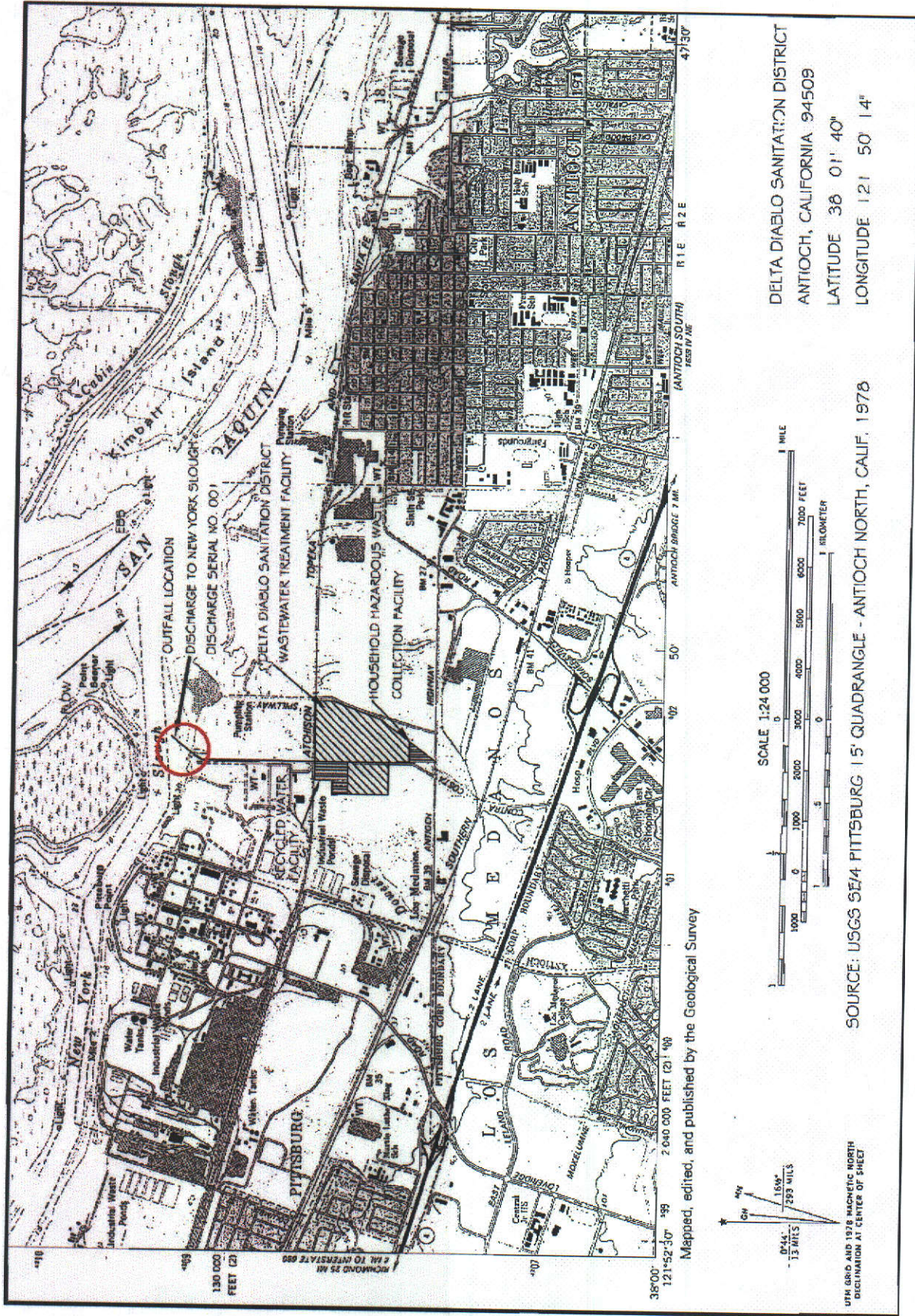


Figure 1
DDSD Service Area

Treated effluent that is not used as a recycled water supply is discharged to New York Slough (see **Figure 4**). The WPCF discharges approximately 9.6 mgd of effluent on an average annual basis. Effluent flows range from a low of 8.2 mgd in August to 10.8 mgd in January. New York Slough's flows are significantly higher than the discharge volume, with 0.5 mgd consisting of 0.043% of the overall flow of New York Slough even in low flow conditions². Because of that, DDSD's NPDES permit for the WPCF discharge allows for a 10:1 dilution credit.

² See Attachment 5 – City of Antioch and DDSD Recycled Water Project – Addendum to the IS/MND for flow data.

Figure 4 – Outfall Location



SOURCE: USGS SEA PITTSBURG 15' QUADRANGLE - ANTIOCH NORTH, CALIF. 1978

DELTA DIABLO SANITATION DISTRICT
 ANTIOCH, CALIFORNIA 94509
 LATITUDE 36 01' 40"
 LONGITUDE 121 50 14"