

# BORDER ENVIRONMENT COOPERATION COMMISSION

## STEP II FORM

(Full Proposal)

Date Submitted to BECC:  
February 18, 1997

Date Received by the BECC:  
February 20, 1997

### Project Type:

Water <input checked="" type="checkbox"/>	Closure	Public Sector <input checked="" type="checkbox"/>
Wastewater <input checked="" type="checkbox"/>	Rehabilitation	Private Sector
Municipal Solid Waste	Expansion	Public\Private Partnership
Other	New <input checked="" type="checkbox"/>	

Project Title: South Bay Water Reclamation Plant (SBWRP)

### Primary Applicant:

City of San Diego - Metropolitan Wastewater Department  
Ann Sasaki  
Senior Civil Engineer  
600 B Street, Suite 500  
San Diego, CA 92101  
Tel. (619) 533-4211  
Fax (619) 533-4267  
E-mail: aks@mwadmin.sannet.gov

Co-Applicant(s): N/A

Contractor(s): N/A

High Sustainability: No

### Project Status:

Date Step I submitted to BECC      December 4, 1996

Date BECC Approval of Step I      December 13, 1996

Technical Assistance Requested? No

Technical Assistance Received? No

## Executive Summary

### Description of the Project

The Metropolitan Wastewater Department (MWWD) is responsible for the upgrade and expansion of the Metropolitan Sewerage System (Metro). The Metro System treats approximately 190 million gallons per day of wastewater generated by a Greater San Diego population of 1.9 million. All of this wastewater is treated at the Point Loma Wastewater Treatment Plant. This plant and associated pipelines were constructed in the early 1960's. The South Metro Interceptor, which conveys wastewater from the South Bay area to Pt. Loma, is beginning to reach its capacity and is showing signs of corrosion. In an analysis completed in March 1993, it was concluded that to continue to convey wastewater from the South Bay northward through the South Metro Interceptor would require improvements to increase its conveyance capacity in the near future. The cost of the necessary improvements would be high and the work would present major construction impacts since much of the work would occur in downtown San Diego.

The high cost and difficulties of constructing these improvements have led to the consideration of constructing the South Bay Water Reclamation Plant in lieu of constructing South Metro relief facilities.

The South Bay Water Reclamation (SBWRP) will provide relief to the South Metro Interceptor, it will provide wastewater treatment capacity for the southern area of the San Diego Metropolitan Sewerage System service area and it will also provide reclaimed water for reuse markets in the Cities of San Diego, Imperial Beach, Chula Vista and National City and the unincorporated areas of the County of San Diego. The initial development of the SBWRP will provide a treatment capacity of 7 million gallons per day (mgd) annual average daily flow (AADF) and 18 mgd peak wet weather flow. The plant is designed to allow future expansion to 14 mgd AADF.

The SBWRP consists of secondary and tertiary treatment facilities, an operations and maintenance building, a chemical building and parking areas. The proposed treatment process includes influent screening, grit removal, primary sedimentation, primary flow equalization, activated sludge processes, secondary sedimentation, coagulation, filtration, and ultraviolet light disinfection. Sludge generated at the plant will be pumped through a dedicated pipeline to the South Metro Interceptor Sewer for conveyance to the Point Loma Wastewater Treatment Plant for treatment and disposal. Excess effluent from the plant that cannot be reused will be conveyed through the South Bay Ocean Outfall to the ocean for final disposal.

The SBWRP is located on a 22.3 acre site located southeast of the intersection of Dairy Mart Road and Monument Road, just north of the international border and west of the International Wastewater Treatment Plant.

The MWWD has worked closely with the community and the South Bay Focus Group during the planning and design of this project.

### Compliance with BECC Criteria

1. **General.** This project falls under the BECC priority area of wastewater treatment and it is located within 62 miles of the U.S./Mexican border. The project complies with all applicable international treaties and agreements.

**Human Health and Environment.** The project will provide needed treatment capacity and provide a source of reclaimed water to lessen the City's dependence on imported supplies of water and offset the need to develop new sources of water. A draft Environmental Impact Report/Environmental Assessment has been completed for this project in compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The proposed project is the least environmentally damaging alternative. A public meeting for the environmental document was held on January 27, 1997. The Final Environmental Impact Report/Environmental Assessment has been prepared and includes an assessment of potential transboundary impacts. This document was provided for public review on April 28, 1997. A public hearing to certify the Final Environmental Impact Report/Environmental Assessment and approve the projects' coastal development permits will be held on Tuesday, May 13 at 2:00 pm in the San Diego City Council Chambers at the City Administration Building, 202 C Street, 12<sup>th</sup> Floor, San Diego, CA 92101.

In addition to the completion of the environmental documents, the project requires several discretionary actions/approval from federal, state, and local agencies and jurisdiction. Such actions include the following:

#### **Federal:**

- U.S Army Corps of Engineers, Section 404 of the Clean Water Act
- Compliance with Section 106 of the National Historic Preservation Act (NHPA)
- U.S. Fish and Wildlife Service, Section 7 of the Endangered Species Act

#### **State:**

- California Coastal Commission approval of a Consistency Determination
- California Department of Fish and Game, Section 1601 of the Fish and Game Code, Streambed Alteration Agreement
- State Water Resources Control Board, NPDES-Storm Water Program

#### **Local:**

- San Diego Air Pollution Control District Authority to Construct
- Regional Water Quality Control Board, NPDES- General Discharge and Clean Water Act 401 certification
- City of San Diego, Development Services department, Approval of a Coastal Development Permit

The City is in the process of obtaining these approvals and permits and expects to secure all approvals by June 1997.

**Technical Feasibility.** The proposed project uses a conventional activated sludge treatment process. The process includes influent screening, grit removal, primary sedimentation, primary flow equalization, activated sludge processes, secondary sedimentation, coagulation, filtration, and ultraviolet light disinfection. This is currently the most cost efficient and practical method of treatment in the industry. The treated effluent from the plant will comply with federal Clean Water Act and California Ocean Plan standards. Also, the reclaimed water will comply with Title 22 of the California Code of Regulations which establishes water quality standards and treatment reliability criteria for water reclamation.

A Start-Up Operation program is incorporated into the contract specifications for the proposed project. The Contract documents require the contractor to start up the facility under the direction of the owner, operate it, and pass a 7-day test prior to Substantial Completion. All equipment must run continuously for 24 hours per

day during this test period. In the event of equipment malfunction during the test period, equipment shall be repaired and retested, with no credit given for the operating time prior to malfunction.

A detailed Operations and Maintenance Manual (O&M manual) describing unit process systems and components of the SBWRP is being prepared in accordance with the City's Clean Water Program Guidelines. The O&M manual is organized in three Volumes, with Volumes I and II comprising the Operations Manual and Volume III comprising the Maintenance Manual. Volume I of the Operations Manual contains process information and Volume II contains standard operating procedure. Volume III (Maintenance Manual) contains all maintenance information for the facility and will be prepared during construction as more information will be available from the manufacturer of the process equipment. Each volume is then divided into sections which describe a major unit process, operation or facility. Each process section is composed of four main subsections; introduction, process components and operation, process analysis and control and safety.

Volume II - Standard Operating Procedures is a detailed statement of actions which must be performed to properly operate a unit process within a specific treatment process as well as the associated parts of the entire treatment process. The Standard operating procedure will include: startup procedures, routine operational procedures, shutdown procedures, abnormal operational procedures, and safety procedures.

Safety is an integral part of operations and maintenance. The Metropolitan Wastewater Department (MWWD) has specific safety regulations and educational training that every employee must complete, adhere to and implement. In addition, all personnel will be trained to be familiar with the City's Risk Management and Prevention Plan, and the Evacuation Plan, both of which must be fully understood by all SBWRP personnel.

1. **Financial Feasibility and Project Management.** This project is one of many that are designed to serve the needs of the regional system. A dedicated revenue source will not be established for this or any regional facility. Capital and annual operating costs of the project are included as part of total expenditures for the Department. Primary sources of revenue are bond proceeds and service charge revenues. The Department operates as a Sewer Enterprise Fund; costs of providing wastewater treatment and disposal services are financed or recovered primarily through user charges. User charges and other revenue sources will be set at levels to generate the required funds to maintain the regional system. The applicant is requesting \$42 million dollars in assistance from the USEPA. However, a financial affordability index will be applied to this request and the ultimate grant amount, if any, may be substantially less than the amount requested (\$0-\$42 M)
2. **Community Participation.** Over the last three years the Metropolitan Wastewater Department has worked very closely with the local community and sought their input on the design of the proposed project. In April, 1994, a local steering committee called the South Bay Focus Group was formed to assist with the planning and design of the SBWRP. The group is comprised of representatives from a diverse number of organizations who have an interest in the project area. Some examples of representatives who actively participate in the focus group include representatives from local, regional and federal governments, elected officials and their staff, civic groups, planning groups, environmental interests, water agencies, recreational interests and local residents. The group meets on a monthly basis
3. Additionally, over the last three years, MWWD staff has made over 79 presentations to local business, civic, community, neighborhood, environmental and recreational interest groups. Two "Open House" public meetings have been held in the community to both inform the community residents/property owners regarding the proposed project and to receive comments

A public hearing was held for the draft Environmental Impact Report (EIR) on January 27, 1997 and a City Council hearing will be held on May 13, 1997 for the certification of the Final EIR.

Additionally, MWWD will meet with representatives of the Tijuana and San Diego community serving on the Citizen Committees for the Parallel Conveyance System Project, to provide information on the South Bay Reclamation project and to receive feedback. Finally, MWWD will host a final public meeting (with proper 30-day notice) on June 9<sup>th</sup>, at Southwest High

School, open to the public on both sides of the border, to present the project and receive public comments.

**Sustainable Development.** This project will provide additional treatment capacity in the South Bay region to serve existing and future needs. This project will also provide a source of reclaimed water to the southern region of the City, the Tijuana River Valley and the Otay Mesa area. It will strength the community by supporting development and lessening the City's dependence on imported water supplies. The project complies with the City's General Plan and the local land use plan.

The project also incorporates public art and educational aspects, including a garden for the demonstration of the uses of reclaimed water and the installation of pictograms throughout the plant to explain the wastewater treatment process. It is anticipated that the plant will host tours for community members and school children to help them better understand the water cycle, the importance of wastewater treatment, the benefit of water reuse and the importance of water to our arid region. The MWWD has worked closely with the community and we have gained their support for this project.

### Characteristics of High Sustainability Recognition

Not Applicable to this project.

Diagram indicating project work tasks, anticipated costs, timeframe, task executor, and total project cost

Work Task	Schedule	Task Executor	Cost
Project Administration	June 1994 - January 2001	City of San Diego, Metropolitan Wastewater Department (MWWD)	\$ 2,154,000
Design	February 1995 - May 1997	MWWD, Parsons Engineering Science	\$ 7,081,000
Environmental Document	May 1995 - May 1997	MWWD, Skidmore Environmental Planning	\$ 222,000
Permit Acquisition	April 1996 - June 1997	MWWD	\$ 2,118,000
Land Acquisition	Completed December 1996	MWWD	\$ 933,000

Construction	July 1997 - July 2000	MWWD	\$81,200,000 (including contingency)
Construction Management	February 1995 - December 2000	MWWD, Sverdrup	\$ 5,880,000
Start-up	July 2000 - December 2000	MWWD	
Total Project Cost			\$99,588,000

### List of Materials provided to BECC

1. Step II Application and supplemental information
2. 100% design plans and specifications
3. Draft Environmental Impact Report / Environmental Assessment
4. Engineering Report on the Production, Distribution, and Use of Reclaimed Water
5. Storm Water Pollution Prevention Program
6. South Bay Water Reclamation Plant Proposed Schedule and Budget
7. Health Risk and Odor Impact Assessment Supplemental Information in Support of the Permit Application
8. South Bay Plant Influent Characterization Study

9. Operations Manual - Volume I for SBWRP

10. Permit applications to Regulatory Agencies

11. Comprehensive Community Participation Plan

12. Section 4 Supplemental Support Information

- o Attachment J1 - Project Cash Flow Comparison
- o Attachment J2 - Revenue and Expenditures Statement
- o Attachment J3 - MWWD 1996 Annual Financial Report

13. Metropolitan Industrial Waste Program

Information attached to the Step II Form, and thus not available in the electronic version of the document, may be requested from the Applicant, San Diego Wastewater Department, or the BECC.

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