Notice of Preparation

To:

From: County of Sacramento
Department of Environmental
Review and Assessment
827 7th Street, Room 220
Sacramento, CA 95814
(916) 874-7914

Contact: Dennis E. Yeast

Subject: Notice of Preparation of a Draft Environmental Impact Report

The Sacramento Regional County Sanitation District will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We invite interested persons to provide their views on the scope and content of the environmental information to be included in the EIR. Agencies should comment on the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project.

The project description, location and potential environmental effects are described more fully in the attached materials.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but not later than 30 days after receipt of this notice.

Please send your response to Dennis Yeast, Environmental Coordinator at the address shown above and provide the name for a contact person in your agency.

Project Title: **Sacramento Regional Wastewater Treatment Plant 2020 Master Plan Project (Control No: 97-PWE-0599)**

Project Location: **Franklin-Laguna Community, Unincorporated Sacramento County**

Project Applicant: **Sacramento Regional County Sanitation District (SRCSD)**
10545 Armstrong Avenue
Mather, California 95655

Date:

By:

Dennis E. Yeast
Environmental Coordinator
County of Sacramento

Project Description

The Sacramento Regional County Sanitation District (SRCSD) proposes to adopt the 2020 Master Plan, which includes both the Sacramento Regional Wastewater Treatment Plant (SRWTP) Master Plan (SRWTPMaster Plan), and the Buffer Lands Master Plan (BLMP). The 2020 Master Plan is a program level document that identifies the wastewater treatment and reuse/disposal facility options to meet the needs of the District's service area for a 20-year planning period through the year 2020. The goal of the SRWTP Master Plan is to provide a phased program of planned growth in treatment capacity while maintaining treatment reliability; meeting future anticipated regulatory requirements, and optimizing costs. The SRWTP Master Plan is currently in draft form.

The BLMP was prepared as a part of the 2020 Master Plan to establish a long-term, cost effective management direction for the buffer lands. The BLMP provides guidance to SRCSD staff for maintaining a buffer zone surrounding the treatment plant, and for protecting and enhancing the area's environmental resources.

To provide long-range direction for wastewater facility development, the SRCSD Board of Directors (Board) authorized the preparation of a 20-year wastewater treatment plant master plan in 1990. This master plan, with a planning horizon through the year 2010, was published in 1992. In late 1997, work began to update the master plan to reflect changes in regulatory requirements and to extend the planning horizon through the year 2020.

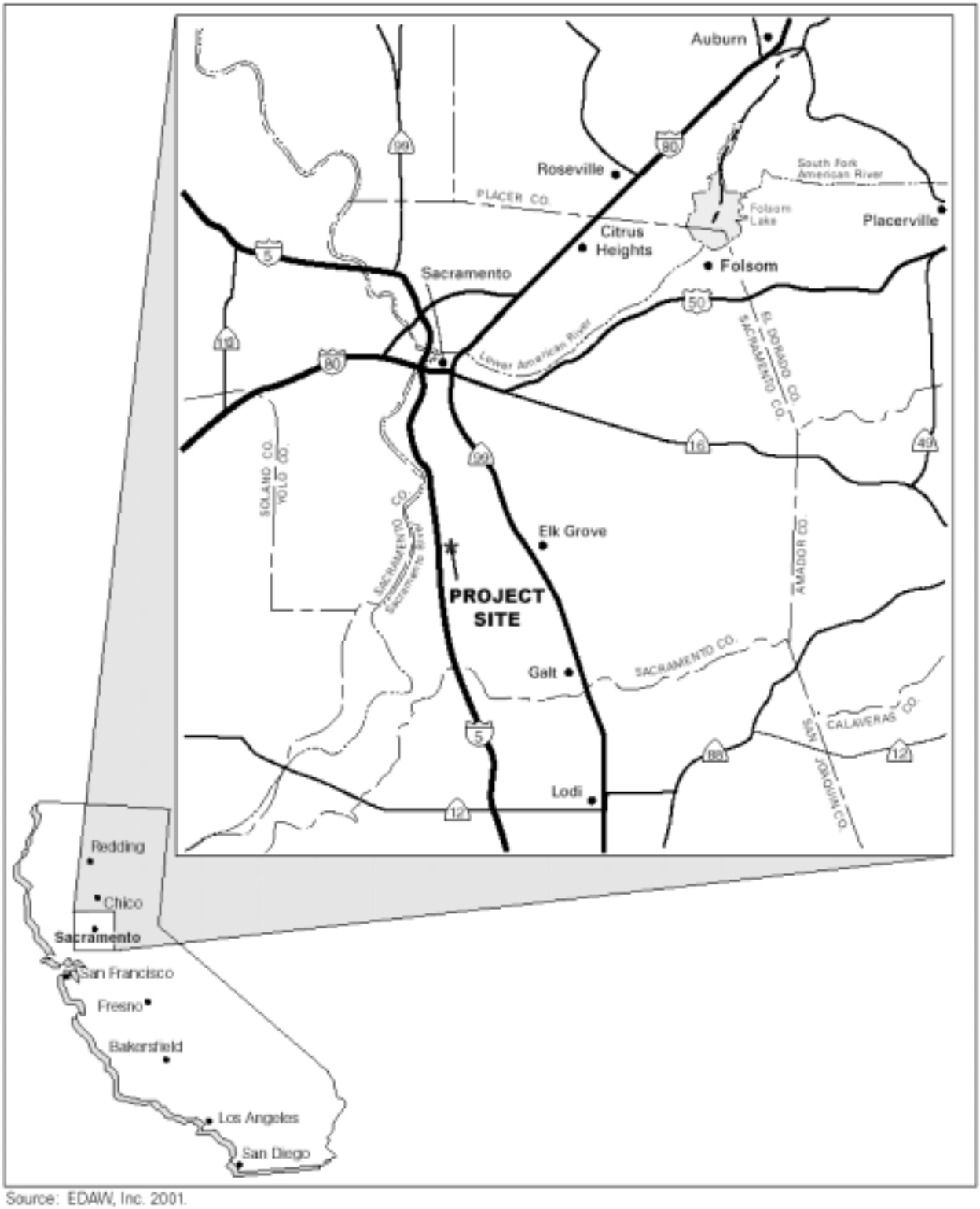
Environmental Setting

The existing SRWTP facilities are located at 8521 Laguna Station Road in the Franklin/Laguna Community of Sacramento County (Exhibit 1). The facilities occupy 900 acres and are located near the center of an approximate 3,500-acre site owned by the District. The remaining 2,600 acres comprise open space land and provide a buffer zone (referred to as the buffer lands) between the facilities and surrounding land uses (Exhibit 2). Nearby land uses include residential development to the north, east and south, industrial development to the south, and Interstate 5 and the Sacramento River to the west. A 1,000 foot wide restricted development area is located to the south of the plant and provides buffering benefits as the buffer lands. The nearest residential development is located approximately 4,000 feet east of plant facilities and borders the property on Franklin Boulevard.

SRWTP Service Area

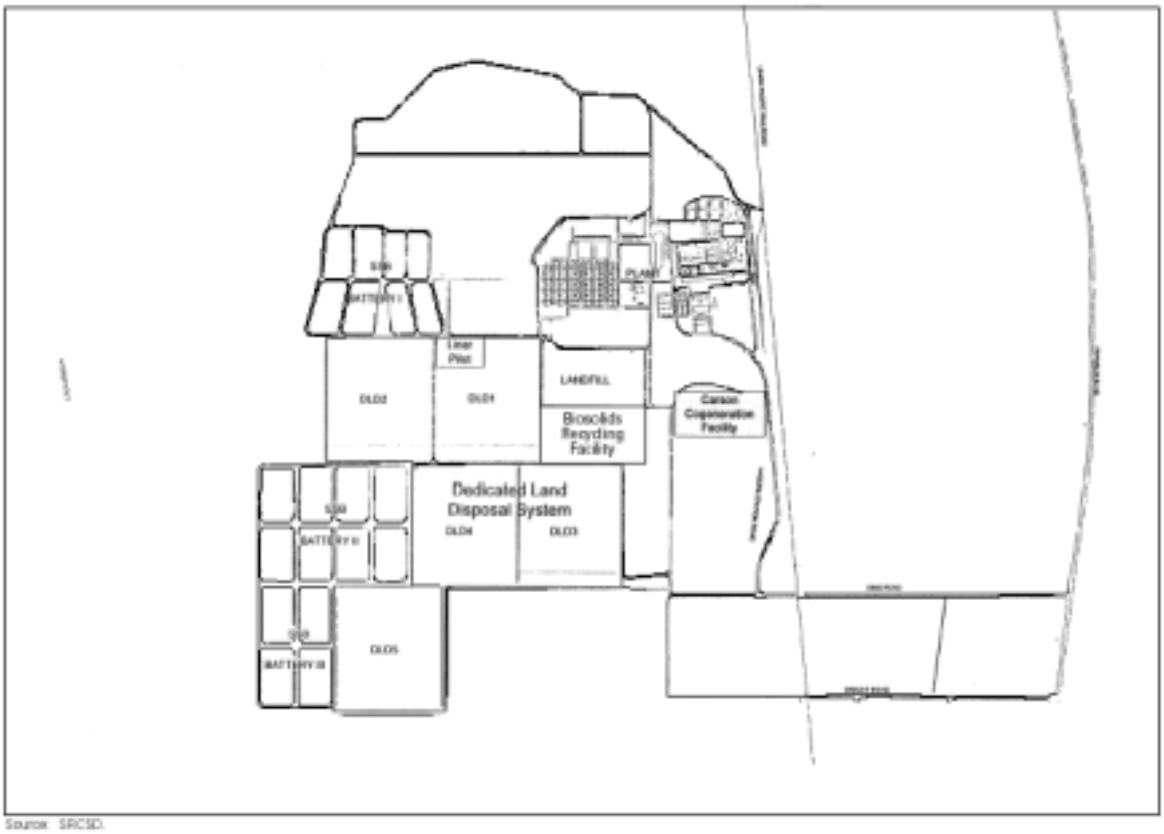
SRCSD provides wastewater services for the urbanized area of the County of Sacramento (Exhibit 3). Additionally, the District is proposing to expand its boundaries through a separate process (annexation) to provide wastewater service to the City of West Sacramento.

Exhibit 1



Source: EDAW, Inc. 2001.

Exhibit 2



Source: SRCSD.

Site Facilities Map

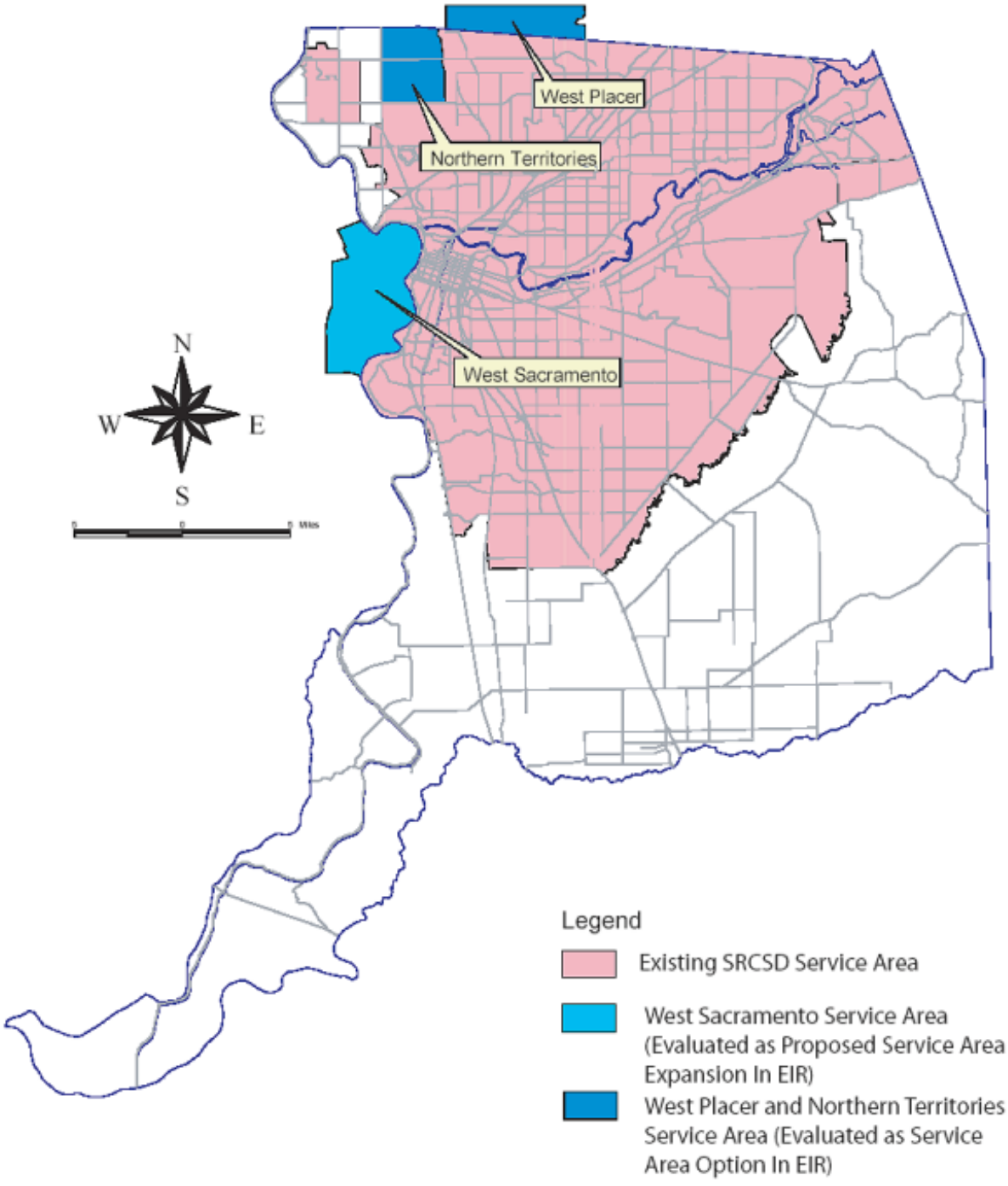
EXHIBIT 2

SRCSD

0' 500' 1000' 2000'

EDAW

Exhibit 3



SRCSD Current and Proposed Service Areas

SRWTP Process Overview

The SRWTP treats wastewater to a "secondary" level using a series of mechanical and biological systems to remove wastes. Processes employed at the plant include raw influent and effluent pumping, primary clarification, secondary treatment with high-purity oxygen activated solids (HPOAS), cryogenic oxygen production, disinfection, solids thickening, and anaerobic solids digestion. The treatment processes convert raw wastewater into treated wastewater effluent, which is discharged primarily to the Sacramento River via an outfall diffuser. A simplified treatment process flow schematic is shown in Exhibit 4.

2020 Capacity Needs

In 2000, wastewater flows at the plant averaged approximately 154 mgd for average dry weather flow (ADWF) conditions. The existing permitted capacity of the plant is 181 mgd ADWF. Expected 2020 ADWF within the SRCSD boundaries, including the City of West Sacramento, would be 218 mgd.

As wastewater flows and loads increase, additional treatment facilities would be required. Additionally, potentially more restrictive future discharge requirements may require additional treatment facilities for removal of specific pollutants. The existing plant capacity is insufficient to accommodate the projected 2020 ADWF of 218 mgd. In addition, the existing primary sedimentation process is operating in excess of the long-term master plan design criteria and will require major renovation. Exhibit 5 presents the layout of the proposed new facilities to meet projected 2020 flow demands.

Master Plan Facilities

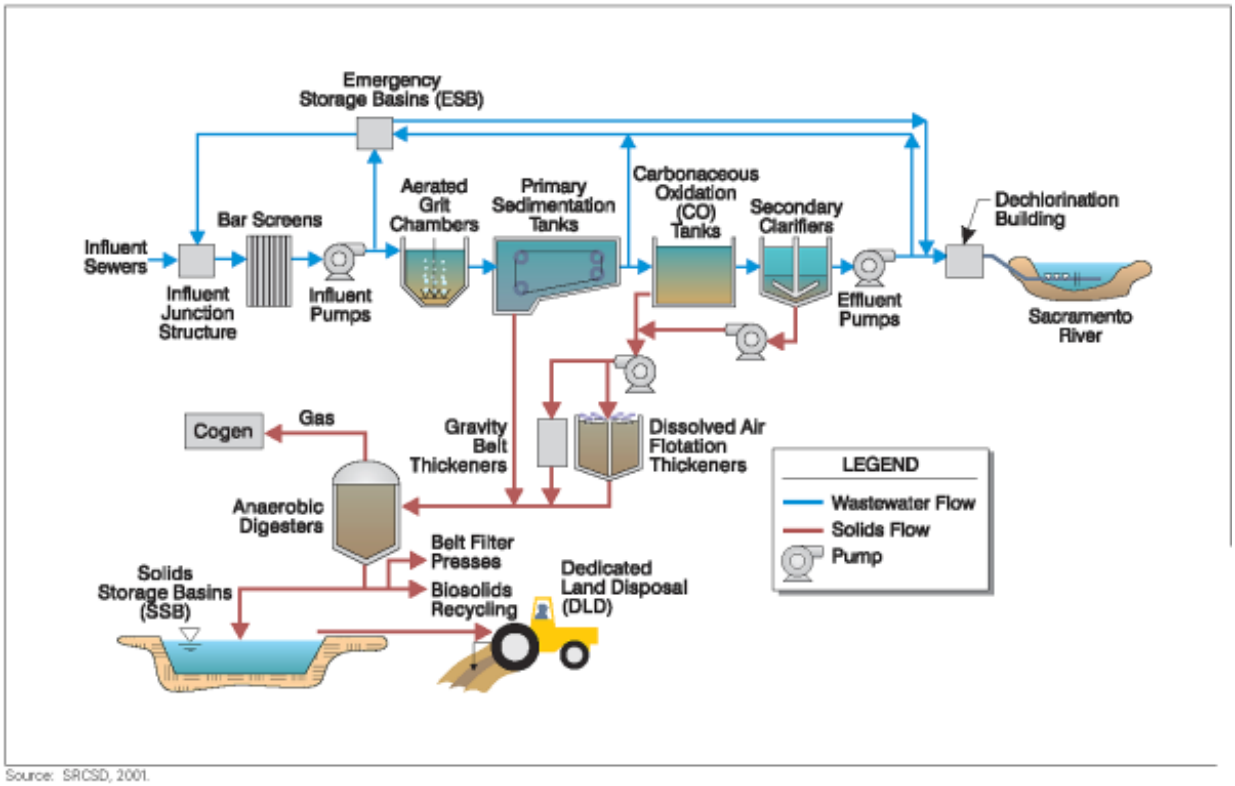
Liquid Treatment Facilities

Influent and effluent pumping capacity, primary treatment capacity, secondary treatment and clarification capacity, and effluent disinfection, conveyance and storage facilities would be expanded to accommodate increased wastewater flows and loads.

Preliminary Treatment

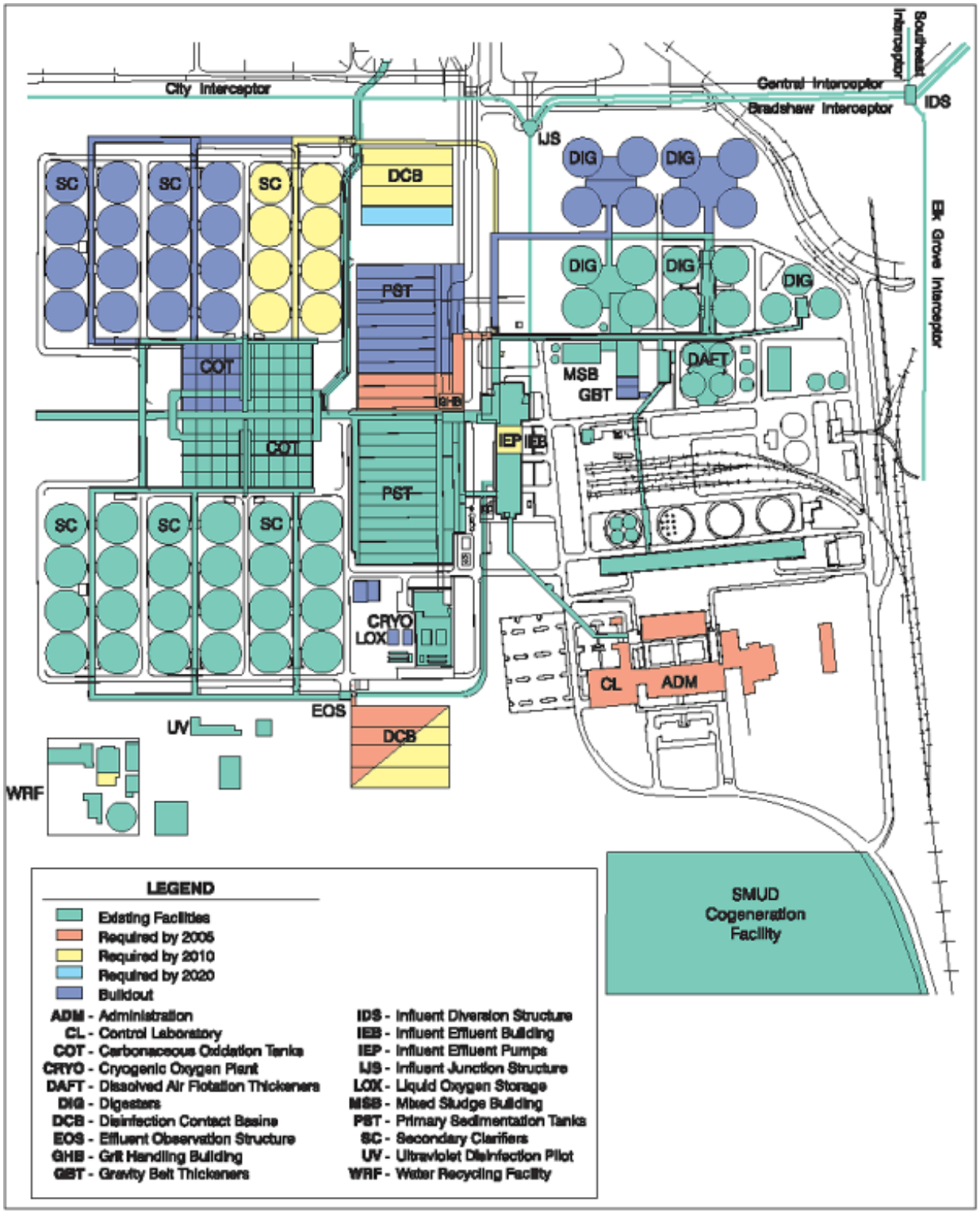
The existing preliminary treatment system consists of the influent junction structure, influent conduit, bar screens, and five influent pumps. One new influent pump and upgrade of the existing five influent pumps would be required to accommodate projected 2020 flows and loads. Two existing manually cleaned bar racks would be upgraded to mechanically cleaned bar racks by the year 2003. The existing influent conduit and head works structure would be adequate under future conditions. The new facilities would be located to the north of existing plant facilities.

Exhibit 4



Source: SRCSD, 2001.

Exhibit 5


City Interceptor
Central Interceptor
Bradshaw Interceptor
Southeast Interceptor
IDS
IJS
Elk Grove Interceptor
SC
DCB
DIG
PST
COT
DAFT
MSB
GBT
GHB
IEP
IEB
CRYO
LOX
CL
ADM
EOS
UV
WRF
SMUD
Cogeneration
Facility
LEGEND
Existing Facilities
Required by 2005
Required by 2010
Required by 2020
Buildout
ADM - Administration
CL - Control Laboratory
COT - Carbonaceous Oxidation Tanks
CRYO - Cryogenic Oxygen Plant
DAFT - Dissolved Air Flotation Thickeners
DIG - Digesters
DCB - Disinfection Contact Basins
EOS - Effluent Observation Structure
GHB - Grit Handling Building
GBT - Gravity Belt Thickeners
IDS - Influent Diversion Structure
IEB - Influent Effluent Building
IEP - Influent Effluent Pumps
IJS - Influent Junction Structure
LOX - Liquid Oxygen Storage
MSB - Mixed Sludge Building
PST - Primary Sedimentation Tanks
SC - Secondary Clarifiers
UV - Ultraviolet Disinfection Pilot
WRF - Water Recycling Facility

Primary Treatment

The existing primary treatment system consists of four aerated grit chambers and twelve primary sedimentation tanks. Each aerated grit chamber feeds a battery of three primary sedimentation tanks, which are currently operating in excess of their long-term master plan design criteria. In addition, the mechanical components are rapidly approaching the end of their useful life, and significant rehabilitation of the solids removal and pumping equipment is required. SRCSD is currently in the process of expanding these facilities. One new battery of primary sedimentation tanks, which include one new grit tank and two new primary sedimentation tanks, would be constructed by 2005. (This battery of tanks is needed to resolve current reliability and redundancy issues and is undergoing separate environmental review.) Additionally, the existing primary sedimentation tanks will be upgraded. The equivalent of nine new primary sedimentation tanks would be required by 2020 Master Plan buildout. An additional three new aerated grit tanks would be required by 2020 Master Plan buildout. Existing grit tanks would be upgraded through the construction of new baffles, pumping and piping changes, modifications to the primary distribution channel, addition of access hatches, and various utility, electrical, and instrumentation modifications. The new primary sedimentation tanks and aerated grit tanks would be located north of the existing primary sedimentation tanks.

Secondary Treatment

The existing high-purity oxygen activated solids (HPOAS) process consists of 12 parallel carbonaceous oxidation (CO) tanks and 24 circular secondary clarifiers. High purity oxygen is generated on the site by two cryogenic oxygen plants, each with a rated capacity of 150 tons per day (tpd). The existing CO tanks are sufficient to accommodate anticipated future flows and loads, but would need to be converted to surface aeration because the existing submerged turbine sparger equipment is nearing the end of its useful life and will require replacement. No additional CO tanks would be required by 2020. One secondary clarifier battery, which consists of eight clarifiers, would be required by the year 2010. A second and third battery of eight clarifiers would be required by plan buildout. All new clarifiers would be located adjacent and north of the existing CO tanks.

Effluent Conveyance and Storage

The existing plant effluent pumping system consists of four effluent pumps. Space is currently available on-site for the addition of two pumps. Two additional effluent pumps with a rated capacity of 140 mgd would be required (one by the year 2007 and one by 2010) to meet projected effluent pumping requirements. These tanks would be located in available on-site space adjacent to the existing effluent pumps.

Effluent Disinfection

Two new disinfection contact basins (north and south) would be required to meet existing and future disinfection needs. The south disinfection basin would be brought on-line between the year 2005 and 2010. The addition of the second disinfection basin (the north disinfection basin) would coincide with the addition of the battery of eight new secondary clarifiers by the year 2010. The secondary effluent from the clarifiers and disinfection basin on the north side would return to the influent-pump building via a new effluent conveyance conduit. The proposed disinfection contact basins would be located adjacent to the existing effluent observation structure and north of the proposed secondary effluent channel.

Odor Control/Air Toxics

The existing odor control program consists of steps to prevent the formation of odorous gases where possible and containment of odors followed by collection and treatment of the odorous gases. Presently, all odor-producing treatment process tanks are covered, except for the secondary clarifiers. Collected gases that contain odors are treated through packed tower scrubbers, mist towers, and carbon adsorption units. As treatment facilities are expanded, additional odor control equipment would be required to accommodate the increased treatment capacity.

Air quality regulations governing the release of volatile organic compounds (VOCs) and reactive organic gases (ROGs) must be met for new and existing facilities. Source control is the most cost-effective method of meeting air quality regulations. If source control is not effective, containment followed by off-gas scrubbing may be necessary. Various treatment alternatives, including existing facilities for odor control (i.e., packed tower wet scrubbers, mist towers, etc.) may be applicable for air quality control, depending on the specific compounds to be controlled and allowable emissions levels. Because future permit requirements are not presently known and because of the lack of information available on the use of treatment alternatives for air quality control, specific off-gas scrubbing requirements for air toxics were not developed in the Master Plan but would be implemented during permitting pursuant to applicable air district requirements.

Chemical Supply/Storage

Chemicals presently used at the SRWTP include ferrous chloride, sodium hydroxide (caustic soda), sodium bisulfite, chlorine, sulfur dioxide, sodium hypochlorite, and polymer. Of these chemicals, chlorine and sulfur dioxide are used in the greatest quantity. The SRWTP would continue using chlorine and sulfur dioxide throughout the 20-year planning period. The existing chemical supply and storage facilities would be adequate to accommodate increased quantities of chemicals required to treat increased wastewater flows through the year 2020.

Hydraulic Conveyance Facilities

Exhibit 6 presents a simplified schematic that identifies the four major hydraulic segments of existing hydraulic conveyance facilities. The limiting hydraulic segments are Segments 2 and 3, which include the primary sedimentation tanks, CO tanks, secondary clarifiers, and effluent channel. As discussed above, two primary sedimentation tanks would be constructed by the year 2005, and eight secondary clarifiers (one battery) would be constructed by 2010. These proposed facilities would provide sufficient hydraulic capacity to meet 2020 wet weather flows. Two multi-tank disinfection contact basins would be constructed to the north of the future primary sedimentation tanks and to the south of the existing primary sedimentation tanks. Four tanks for the south disinfection contact basin would be constructed between the years 2005 and 2010. Three tanks for the north disinfection contact basin would be constructed by the year 2010. At 2020 Master Plan buildout, a fourth tank would be constructed in the north disinfection contact basin. Hydraulic capacities of the influent and effluent pumping facilities would also be expanded over the 20-year planning period with the addition of an influent pump by 2005 and two effluent pumps by the year 2010.

There is the potential that a second outfall to the Sacramento River may be required within the 20-year planning horizon to accommodate effluent discharge requirement.

<u>Biosolids/Residuals Management Facilities</u>

Biosolids/residuals management facilities include solids thickening, digestion, stabilization, reuse and disposal facilities.

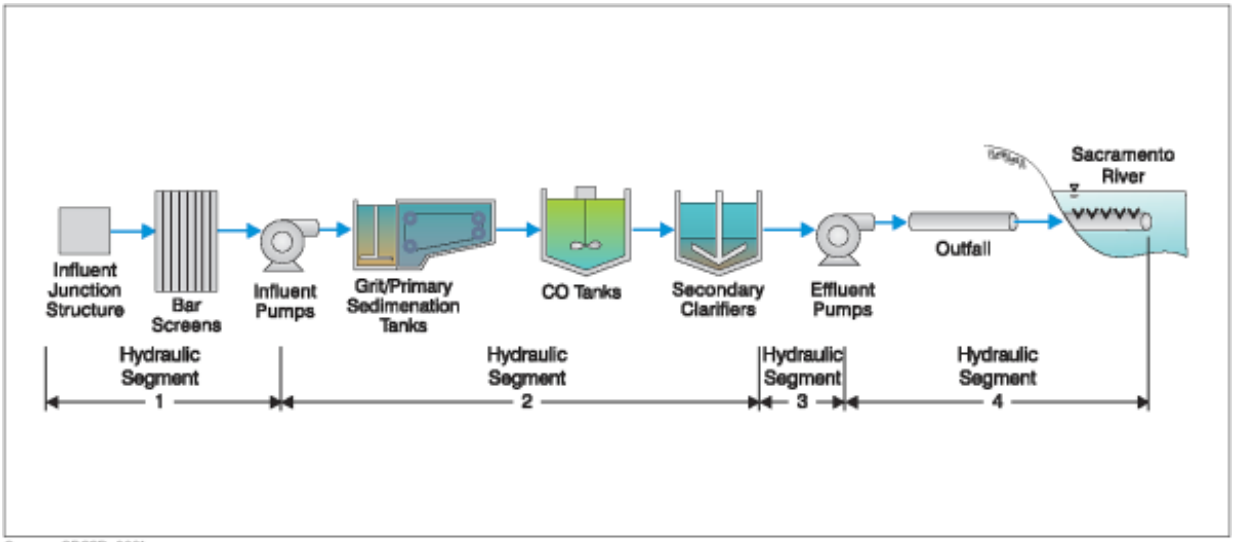
Solids Thickening/Digestion

The existing solids thickening and digestion facilities have adequate capacity to accommodate increased wastewater flows through the year 2020. The facilities that would require expansion to handle buildout conditions include dissolved air floatation thickeners (DAFTs), gravity belt thickeners (GBTs) and anaerobic digestion. To handle projected solids quantities through buildout, six additional GBTs and eight additional digesters would be required and would be located north of the existing digesters**.**

Biosolids Treatment/Disposal

The biosolids management system would be designed to accommodate year 2020 production rates. This coincides with the design year for the draft Master Plan. However, the biosolids management system was considered separately (including evaluation under CEQA) from the rest of the 2020 Master Plan because: (1) its operation can occur independent of other Master Plan improvements; (2) it is needed to respond to a current regulatory requirement; and (3)

Exhibit 6



Source: SRCSD, 2001.

lining of the DLD units and construction of the BRF would not, by themselves, create additional capacity at the plant.

The SRWTP currently uses solids storage basins (SSBs) and dedicated land disposal (DLD) facilities for all biosolids treatment and disposal. However, in response to regulatory compliance requirements, District staff has pursued an alternative biosolids management approach. The proposed biosolids management system approach consists of the following elements: 1) lining three of the five existing unlined DLD units, 2) closing the remaining two DLD's in accordance with RWQCB requirements, and 3) selection of a contractor to design, build, own, and operate a Biosolids Recycling Facility (BRF) to process a fixed amount of biosolids per day for a 15 year period. The District is currently in the process of lining the DLDs and anticipates completion of construction by 2003. The proposed Biosolids Recycling Facility would be located north of DLD Unit 3 (DLD-3) and would be completed by 2004.

Non-Structural Master Plan Alternatives

The Master Plan evaluated a set of non-structural programs that would provide the District with additional options to treat wastewater under varying future regulatory conditions. The non-structural programs differ from the conventional "end-of-pipe" options in several ways. They focus on either reducing specific pollutants before they reach the SRWTP, or reducing pollutants in other sources in the watershed that would improve water quality in receiving waters. Non-structural programs were developed for source control, watershed offsets, and water conservation and are described in greater detail below.

Source Control Program

The Master Plan source control program focused on specific constituents of concern including TDS, temperature, mercury, and diazinon. Residential sources contribute the largest percentage of TDS to the plant, while commercial sources are the largest contributors of mercury. An example of a source control measure that could be implemented is educational and outreach programs for diazinon control in the watershed.

Watershed Offset Program

Watershed offsets are projects within the watershed, such as reducing constituent loads from an abandoned mine, which could reduce the base load of constituents in the Sacramento River. Offsets were evaluated for the reduction of mercury, nutrients (nitrogen and phosphorous), total organic carbon (TOC), diazinon, and TDS. Based on preliminary evaluation, watershed offsets may be a potential cost-effective solution for permit compliance for specific constituents. However, watershed offset feasibility needs further investigation.

Potential offset projects were developed and organized into major categories: land management, mine drainage, river restoration, urban storm water, and water augmentation (water rights). Based on the preliminary estimates of costs and load reductions achieved, such measures may help reduce constituent loads and concentrations in the receiving water more cost-effectively than through the implementation of treatment programs constructed at the plant. The Master Plan recommends a phased implementation program, beginning with conducting a feasibility study, in developing an offset program for the SRWTP.

Water Conservation Program

More than a dozen different water utilities and agencies provide services within the boundaries of the SRCSD. Many of these agencies receive water from the US Bureau of Reclamation (USBR) and are required to implement best management practices (BMPs) for urban water conservation. In addition, a region wide water planning effort, the Water Forum, recently concluded and established water conservation objectives for all participating water agencies. The Master Plan has utilized the work accomplished under the Water Forum process in developing a water conservation program.

The Water Forum identified 16 water conservation BMPs. Of those 16 BMPs, 11 addressed indoor water conservation, which, in turn, can reduce wastewater generation (i.e., indoor plumbing retrofits, residential metering, water efficient appliances, etc.). The Master Plan process, including stakeholder input, resulted in the recommendation to fully support the Water Forum Program. Based on the Water Forum agreement, local water agencies will implement the water conservation measures over the period of years to achieve a water use reduction.

Probable Environmental Effects

The EIR for the 2020 SRWTP Master Plan is both a project and a program EIR as defined by State CEQA Guidelines. To the degree possible, this EIR is intended to be used for consideration of construction of most facilities within the Master Plan. However, where sufficient detail is unavailable to fully evaluate the impacts of certain Master Plan facilities or elements, they will be programmatically evaluated here.

Review of the Master Plan draft project description, including treatment alternatives, and the environmental resources in the study area has resulted in the identification of probable environmental effects which will be addressed in detail in the Draft EIR. The EIR will be full scope, and will consider a full range of issues. Among the topics to be evaluated for potential adverse environmental effects are:

- Surface water hydrology and flooding;
- Surface and groundwater quality;
- Aquatic resources, including fish;
- Terrestrial vegetation and wildlife;
- Land use and growth inducement;
- Aesthetics;
- Cultural resources;
- Geology, soils and seismicity;
- Air quality;
- Noise;
- Hazardous materials and Public health;
- Traffic and circulation; and
- Public services and facilities.