City of San José

San José/Santa Clara Water Pollution Control Plant Master Plan

TASK NO. 2
PROJECT MEMORANDUM NO. 2
ASSESS PAST AND ON-GOING STUDIES AND REPORTS

FINAL DRAFT
February 2009

carollo

in association with

BROWN AND CALDWELL SOM

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CITY OF SAN JOSÉ

SAN JOSÉ/SANTA CLARA WATER POLLUTION CONTROL PLANT MASTER PLAN

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ASSESS PAST AND ON-GOING STUDIES AND REPORTS

1.0 PURPOSE

The purpose of this Project Memorandum (PM) is to provide brief summaries of major past studies and reports that provide information regarding the overall facilities and condition of the San José/Santa Clara Water Pollution Control Plant (WPCP) and assess the relevance of each study and report to the master planning process. This process will identify key documents necessary to support the development of the PMs throughout the progress of the San José/Santa Clara WPCP Master Plan (Master Plan).

2.0 STUDIES AND REPORTS

2.1 CMMS Project Plan

Westin Engineering

In Progress

The City has executed a contract with Westin Engineering to develop a Computer Maintenance Management System (CMMS) Project Plan. This CMMS Project Plan document is currently in development and will be reviewed by Carollo pending its completion.

The information contained in this project plan will be included as part of the asset management recommendations that are developed in the Master Plan. In addition, the data management framework that is developed will be used to organize and manage other data systems at the WPCP. The CMMS system data will enable the Master Plan to develop better recommendations for optimization of the operations and maintenance of the WPCP facilities.

Key words: asset management, data management, optimization, prioritization, operations, maintenance.

2.2 San José-Santa Clara WPCP Process Piping Assessment

CH2M HILL

February 2008

This study assesses and evaluates the condition of the process piping at WPCP by developing an initial piping database and formulating criteria to prioritize the piping with the highest level of risk. Based on the assessed condition and associated risk, rehabilitation

and replacement of the process piping was prioritized and recommendations were provided.

The recommendations developed in this report are key to the asset management portion of the Master Plan as they address the condition and risk of the process piping. Based on this information, ongoing maintenance and assessment practices will be developed as part of the asset management implementation plan. In addition, the prioritized list of needed repairs and replacement will be included in the development of capital planning projects for the Master Plan, which will be integrated into project timing and funding.

Key words: piping, assessment, risk, asset management, prioritization.

2.3 Ultraviolet Disinfection Bench Scale Data Analysis and Full Scale System Cost Estimates

Carollo Engineers

September 2007

Evaluation of the ultraviolet (UV) dose-response data at the WPCP was used to determine an appropriate level of disinfection required to meet regulatory standards. The report provides a planning level cost estimate to implement a full-scale disinfection facility at the WPCP. The three main results provided in the report are the key design parameters, evaluation and analysis of the UV dose-response data, and cost estimates for implementation of disinfection.

The Master Plan will address implementing UV disinfection versus the existing chlorine disinfection system as part of the treatment alternatives, both from a regulatory and a “best technologies” perspective. The evaluation provides capacity and sizing information that will be required as part of the treatment alternatives development, in addition to capital planning. The cost analysis will help in decision-making, as well as project scheduling, depending on funding mechanisms that are used.

Key words: UV, disinfection, cost estimates, treatment alternatives.

2.4 Field Investigation and Site Development Feasibility Summary Report

SCS Engineers

September 2007

This report is also referred to as the Preliminary Feasibility Report: Land Use Study for the Nine Par Landfill Site (SCS Engineers) as stated in the Scope of Services. This report focuses on the Nine Par Landfill site located north of the Primary Operations Center of the WPCP adjacent to Los Esteros Road. A field investigation of the 96-acre property included

soil testing and identifying soil properties, seismic considerations, site grading and drainage, and environmental and geotechnical evaluations. The investigation included research on historical landfill operations, site conditions, and evaluating mitigation strategies for potential landfill settlement. The study recommended a conceptual project design and construction of the landfill improvements.

This report provides information that is important to the disposal of dried solids while optimizing landfill opportunities as part of the Master Plan. Although the potential for landfill gas generation is relatively low, the combustible gas can be considered as a potential source for cogeneration, which is a key component to developing sustainable alternatives. Projects that are needed to improve the landfill and provide combustible gas protection will be accounted for in capital planning and maintenance estimates in the Master Plan.

Key words: geotechnical, seismic, landfill, land use, cogeneration.

2.5 City Council Policy on Use of San José/Santa Clara Water Pollution Control Plant Lands

City of San José

May 2007

This memorandum addresses the validation of selected policies contained in the City Council Policy Manual. These policies provide a framework for guiding City staff decision-making based on the City Council's direction. The policy presents eight Council policies that are pending validation. The main policy topics include billboards on City-owned land, City boundary changes in existing urbanized areas, a transmission facility for wireless communication, a post construction urban runoff management, and land use.

These policies from the City Council dictate some of the land use constraints on the WPCP site that will need to be taken into account during the development of the land use alternatives for the Master Plan. If the selected policies are validated, they can directly affect the use of the WPCP lands. It is critical that these policies and their acceptance by the City Council be closely monitored throughout the development of the Master Plan.

Key words: land use, policy, urban areas, City Council.

2.6 Infrastructure Condition Assessment

CH2M HILL

May 2007

This report presents a detailed assessment and evaluation of the condition of the WPCP's assets and facilities, organized by treatment process area. Each asset in the process is identified, its functionality summarized, and location highlighted on a Main Processes Map

provided in the report. At the conclusion of each process description, the civil, architectural, structural, mechanical, and electrical condition of each asset is stated. Recommendations for repair and replacement projects are included in each section as well. This document serves as one of the keystones for the WPCP's Asset Management Program.

Asset management is a critical component of the Master Plan because it identifies assets–mechanical, electrical, and structural, including those with seismic vulnerabilities–that are in need of repair and replacement. This report provides data that also helps to optimize WPCP performance, as well as address repair and replacement considerations needs to be taken into account for facility improvements and expansions, and integrate high-priority and long-term facility needs to effectively manage risk and achieve Master Plan goals. The projects that have been identified, and their associated costs, will be used to develop the capital implementation timing and funding needs in the Master Plan.

Key words: asset, condition, assessment, infrastructure, prioritization.

2.7 WPCP/Pond A18 Master Planning: Pond A18 Existing Conditions and Opportunities and Constraints Assessment

H.T. Harvey

January 2007

This report outlines the existing conditions and land use constraints and opportunities for Salt Pond A18. The existing site conditions assessment includes discussions on hydrology, geomorphology, levee conditions, infrastructure, sediment, water quality, and biology. The land use constraints and opportunities for Salt Pond A18 are identified and discussed in detail. Potential opportunities include tidal marsh restoration, flood protection improvements, wetlands mitigation banking, pulse-discharge wastewater wetlands, conventional wastewater wetlands, managed pond for shore birds, relocate/expand biosolids lagoons and drying beds, and public access and environmental education. In addition, various figures, maps, and aerials of Salt Pond A18 are provided in this report.

This report provides critical land use factors that influence Salt Pond A18, such as biotic, climatic, and hydrologic, as well as human activities and land encumbrances. These factors are the key to understanding the land use constraints and opportunities for Salt Pond A18, which will greatly impact the viable land use and treatment alternatives that are developed for the Master Plan for this area of the WPCP site.

Key words: Salt Pond A18, land use, habitat restoration, levee, hydrology, constraints, opportunities.

2.8 WPCP/Pond A18 Master Planning: Plant Lands Opportunities and Constraints Assessment

H.T. Harvey

January 2007

In this report, the existing land uses for the WPCP site are identified, the primary land use constraints are outlined, and opportunities are presented and evaluated. Constraints include existing encumbrances, land use plans and policies, surrounding land uses, hydrology, geomorphology, levee conditions and infrastructure, and biology. Land use opportunities presented include: WPCP expansion, water recycling facility expansion, interim land uses for the bufferlands and treatment area, biosolids odor reduction, riparian corridor widening along Coyote Creek, restoration of riparian to tidal habitat transition zone along Lower Coyote Creek-Coyote Slough, flood protection improvements, co-composting facility, regional biosolids processing facility, biosolids monofill, biosolids and or co-compost for tidal marsh restoration, solar power generating facilities, soil stockpiling for construction projects, and public trails and environmental education. Aerial maps of the WPCP lands are also included in the document.

The land use constraints and opportunities for the WPCP site presented in this report will be the foundation for understanding and developing viable land use and treatment alternatives as part of the Master Plan. The rating work for each land use opportunities has been categorized by flexibility, regulatory compliance, worker and community safety, habitat protection and restoration, good neighbor/public value, economic opportunities, and capital cost, and this analysis will greatly increase the efficiency of viable alternative development, analysis, and prioritization.

Key words: land use, constraints, opportunities, biosolids, expansion, habitat, restoration.

2.9 Record Drawing and Asset Tagging Report

CH2M HILL

November 2006

This report outlines a project to collect, manage, and organize the master set of record drawings for the WPCP. WPCP assets were labeled and a comprehensive “tagging” system was developed and implemented. The steps and processes used are described, however, the information from the study remains archived in both electronic and physical drawings at the WPCP. Access is available through the WPCP staff and the majority of the data and schematics are housed at the WPCP.

The information contained in this report is important for the asset management recommendations and implementation plans that will be developed as part of the Master Plan. In addition, this report develops a framework for better data management, which will

be a critical outcome of the Master Plan. Access to this information will help accurately determine how to optimize the current operations as well increase the knowledge base of the WPCP's existing facilities and physical parameters.

Key words: drawing, record, asset, tagging, data management, maintenance.

2.10 Scum Digestion Pilot

Black & Veatch

March 2006

This study provides a summary of the pilot study of a proposed process for the disposal of WPCP scum and addresses the feasibility and practicality of anaerobic digestion of scum. Comparing the digester performance between a digester with and without scum addition suggests that the scum can be successfully anaerobically digested. In addition, this report includes a study investigating the addition of restaurant fats, oils, and grease (FOG) to a digester. Several figures confirm the viability of adding restaurant FOG to the digestion process. The study recommends a phased implementation plan and provides some vendor quotes.

Energy efficiency, cogeneration, and sustainability are key components of the Master Plan analyses. In addition to increased cogeneration capabilities, and therefore more energy production, increasing the efficiency of the digester performance under various conditions can make the solids processing more sustainable. Evaluation of these processes will be used to optimize the overall performance of the digestion process. This study will be used to form treatment alternatives and meet the Master Plan goals.

Key words: scum, digestion, FOG, cogeneration, energy efficiency.

2.11 City of Cupertino General Plan

General Plan Task Force, City of Cupertino

November 2005

The General Plan for the City of Cupertino introduces a comprehensive strategy for achieving long-term goals, daily decision-making, and planned future development. Extending to 2020, this plan contains the City of Cupertino's official policies on land use and community design, transportation, housing, and environmental resources. The report is split into five parts; land use, housing, circulation, environment and health and safety.

The City of Cupertino and the WPCP have similar goals including health and safety, environment and sustainability, and fiscal self-reliance. Since the WPCP services the entire City of Cupertino, the WPCP must consider their goals, concerns, and policies in the development of alternatives and long range planning as part of the Master Plan. Projected populations and development allocations will be used in part to calculate the future WPCP

population served and anticipated projected influent flows and loads, which will effect capacity and regulatory requirements that will be addressed in the development of treatment alternatives.

Key words: general plan, Cupertino, population projections, flows, loads, policy.

2.12 North San José Area Development Policy

City of San José

June 2005

This document establishes a policy framework to guide the ongoing development of the North San José area; specifically, north of US Highway 101, west of Interstate 880 or Coyote Creek and south of State Route 237. The core area is referred to as the "Innovation Triangle" for the several high-tech industries. The property characteristics and the average value of the existing industrial square footage are provided. The document introduces the proposed infrastructure improvements and implementation strategy of the policy regarding the industrial development of the area described.

This policy helps to lay the foundation for a key component of the Master Plan with respect to the development of land use alternatives. If the WPCP utilizes the land adjacent to Highway 237 for commercial or industrial space for lease, the potential revenue could be based on the values developed for industrial square footage provided in this document. In addition, this policy states goals to promote economic activity, livability, and long-term vitality that coincide with the WPCP plans for community parks and trails north of this area. It is important for the success of the Master Plan that the WPCP goals are aligned with adjacent land use goals.

Key words: policy, development, land use, industrial.

2.13 Electrical System Master Plan

YEI Engineers, Inc.

October 2004

This report documents the master plan that was developed for the electrical system at the WPCP, and included a facilities assessment, power system analysis, overall system redesign, equipment replacement prioritization, schedule and costs, and a cogeneration feasibility study. Specifically, this document addressed operations and maintenance issues associated with the electrical power distribution system, an investigation of the cable feeder, an evaluation of the substations and generators, a harmonic analysis of variable frequency drives, adequacy of insulation, an assessment of the protective relay system, an evaluation of the Main and Loadcenter switchgears, and an assessment of the cogeneration equipment, including generators and engines. Recommendations for each

area were developed into projects and prioritized. Costs and scheduling were included as part of the project development.

The electrical power system is critical to the operation of the WPCP. Therefore, this report is key to the development Master Plan recommendations for repair, replacement, and upgrades to the WPCP's existing facilities in order to improve reliability and efficiency. The cogeneration section of the document will play an important role in the evaluation of the WPCP's ability to produce more green power, and use energy more efficiently. The projects, including prioritization, scheduling, and costs, that have been developed as a part of this report will directly feed into the capital planning component of the Master Plan.

Key words: cogeneration, electrical system, prioritization, assessment.

2.14 Wet Weather Reliability and Hydraulic Capacity Project

Carollo Engineers

March 2003

In this report, a collection of technical memorandums provide a review of the conceptual flow routing scheme used to develop a flow management concept for routing peak wet weather flows through the headworks. A preliminary hydraulic profile for average dry weather and peak hour wet weather flow conditions are presented for the recommended flow management concept. This document outlines the project design for the new headworks, the routing of influent flow, and schematics of alternative flow patterns.

Since the new headworks is a relatively recent addition to the WPCP, the hydraulic profile and design drawings will be utilized in the development of the Master Plan to determine hydraulic capacity needs as well as flow routing possibilities. This document provides specific design and standby criteria for the influent flow and preliminary treatment that will be used to improve WPCP reliability.

Key words: hydraulic capacity, dry weather, wet weather, headworks.

2.15 City of Milpitas General Plan

City of Milpitas

January 2002

This plan is organized into five sections; land use, circulation, open space and environmental conservation, seismic and safety, and noise. Housing is discussed in a separate document. Each section addresses Guiding Principles, which are statements of intent, and Implementing Policies, which are commitments to specific actions in order to achieve the Guiding Principles. The Midtown Specific Plan is also included in this document, which supports and provides detailed actions for 972 acres of land in the center

of Milpitas for each of the five elements. For example, the Midtown Specific Plan requires that any new residential development provide public parks at a ratio of 3.5 acres per 1,000 persons.

The City of Milpitas is expected to be the fastest growing city in the WPCP's service area in the future. Growth and land use changes could have significant impacts on the WPCP, not only in terms of capacity requirements and regulatory compliance associated with staying below the flow trigger, but also due to prospective land use and zoning. Large industries, in addition to their capacity needs, could possibly adversely affect the level of treatment necessary to meet permit requirements. It is important to the development of the Master Plan that future flow and load considerations from Milpitas are included in analysis of future projections, facility needs, timing, and costs.

Key words: general plan, Milpitas, land use, population projections, flows, loads.

2.16 Hydraulic Capacity and Bottleneck Summary - Plant Reliability and Hydraulic Capacity Study

Malcolm Pirnie

July 2001

This report identifies hydraulic capacity improvements and provides a detailed report of several alternatives that were developed for the WPCP. The report consists of four main sections that include development of the WPCP hydraulic profile, the hydraulic bottleneck analysis, development and evaluation of alternatives, and selection and implementation of the recommended alternative. Several hydraulic profiles, schematics, and diagrams are provided to outline the recommended improvements and alternatives. Attached to this report is a large compilation of appendices comprised of schematic drawings and data tables.

This report provides important hydraulic capacity information that will be used in the Master Plan to identify possible alternatives and determine if any and which facilities are necessary to improve the hydraulic capacity of the WPCP. The Master Plan will address ways to optimize operation based on this data and further analysis.

Key words: capacity, hydraulic profile, alternatives.

2.17 City Council Policy on Use of San José/Santa Clara Water Pollution Control Plant Lands

City of San José

October 2000

This policy statement offers a detailed description of WPCP facilities and buffer lands and guidelines for potential uses of WPCP lands. There are seven land use policies stating that the buffer lands must: 1) buffer odors and toxic releases, 2) support National Pollutant Discharge Elimination System (NPDES) permit compliance, 3) protect biological resources, 4) provide environmental benefits, 5) provide public benefits, 6) be consistent with the City of San José's (City) General Plan and the Alviso Master Plan, and 7) may provide "dual use" benefits.

These policies illustrate the triple bottom line (economic, social, and environmental) values that the WPCP site provides to the City and describes the land use restrictions in place to protect them. These policies will be used in conjunction with the development of the Master Plan goals, objectives, and policies, and the restrictions will be used to in the development of viable land use alternatives. The Master Plan will develop high quality project alternatives that not only meet these constraints but increase the public benefits that they support.

Key words: City of San José, policy, land use, buffer land, WPCP lands.

2.18 Flow Audit Study

Environmental Services Department, City of San José

July 2000

This study provides flow audit summaries of each facility studied, chronicling the method, protocol, and implementation for auditing facilities discharging greater than 100,000 gallons per day (gpd). This study also addresses the flow from non-permitted dischargers, and investigates flow reduction opportunities in the industrial sector as well as other sectors. The purpose of the audit was to identify feasible opportunities to reduce flow routed to the WPCP in an effort to reduce effluent flows discharged via the outfall.

The Master Plan will address and present solutions for possible alternatives to reduce influent flow in an effort to reduce the effluent flow discharged to the outfall and stay below the flow trigger, in part based on the opportunities provided in this study. Identifying opportunities to reduce influent flow will result in delayed WPCP capacity expansions as well, which saves on capital and operations and maintenance costs.

Key words: flow trigger, flow audit, flow reduction.

2.19 Alviso Master Plan: A Specific Plan for the Alviso Community

Department of Planning, Building and Code Enforcement, City of San José

August 1998

This document establishes the location, intensity, and character of land uses; necessary infrastructure improvement to support development; the location and configuration of parks and community facilities within the area; and the actions required to implement the plan for the Alviso community. Several maps are provided to communicate concepts presented in the report, such as land use, planned roadways and lighting, trails, community facilities, energy facilities, and water system maps. This comprehensive plan is meant to guide community improvements until 2020.

The Alviso community is located adjacent to the WPCP site, and therefore the community's policies, goals, and overall opinion expressed in this report are key to the development of viable land use and treatment alternatives, as well as community amenities and impacts, developed in the Master Plan. Coordination with the Alviso community planning efforts is important to the acceptance and support of the Master Plan.

Key words: Alviso, master planning, land use, development, policy, goals.

2.20 Development of Site-Specific Water Quality Criterion for Copper in South San Francisco Bay

Environmental Services Department, City of San José

May 1998

This documents outlines the established water quality criteria for copper in the San Francisco Bay, namely the water-effect ratio (WER) of 1.7. The report also discusses the establishment, implementation, and protection of the site-specific copper criterion for the WPCP. Earlier results of WER tests suggested statically higher WER have been found in the local area, and that the increasing total copper WER values correspond to the increasing total suspended solids and total organic carbon values. The dissolved WERs were less variable over time and were not influenced by the local effects of changing wind velocities and total suspended solids (TSS) concentration.

Copper WER levels are important to monitor to maintain the water quality of the effluent discharged to the San Francisco Bay. Along with providing the historical background on the regulations for copper WER values, the study and data provide a basis for the future site-specific criterion for copper. This data will also determine if any measures need to be implemented to comply with a possible copper criterion. The compliance with current and potential future regulatory requirements are key to the Master Plan, in terms of meeting NPDES requirements, possibly providing higher levels of treatment, and potentially incurring additional capital and operations and maintenance costs.

Key words: heavy metals, copper, water quality, San Francisco Bay, WER.

2.21 Facilities Condition Assessment Study

Black & Veatch

August 1997

This report is a comprehensive condition assessment of the WPCP facilities. An assessment of each asset is provided as part of its respective treatment process and is displayed on a Main Processes Map at the beginning of each section. For each treatment process section, the study addresses the facility history, a description of the structure and equipment, the investigation and testing completed to date, the current asset condition, cost estimates, and recommendations. Photos of each asset are provided in the assessment to display condition issues.

Understanding this assessment, along with the CH2M HILL Infrastructure Condition Assessment (May 2007) study, gives important details related to the condition and maintenance of the assets at the WPCP facilities. This information is crucial to developing repair and replacement recommendations, capital planning for future improvement and expansion projects, maximizing the existing facilities, and developing asset management program recommendations, all of which are included in the development of the Master Plan.

Key words: condition, assessment, assets, cost estimates.

2.22 Review of Geological/Geotechnical Condition and Constraints: Alviso Master Plan Study

Woodward-Clyde

January 1995

Focused on the Alviso community, which is located adjacent to the WPCP property, this report is an outline of the geological, soils (geotechnical), and seismological conditions for the area. This report also addresses the attendant potential development constraints associated with the local site. This area includes the flat-lying natural flood plain adjacent to the Guadalupe River and the Coyote Creek. The report reviews past seismic activity and addresses major fault lines running close to or through the Alviso community.

This document will be utilized during the development of the Master Plan project alternatives. The Alviso community is located adjacent to the biosolids area, and the condition of the soils and the southern limits of San Francisco Bay mud may pose constraints on future development of the WPCP site. The review of the seismic activity is essential information for planning future buildings and structures on the site, as well as retrofitting existing facilities, to be able to withstand possible earthquakes.

Key words: Alviso, seismic activity, geologic conditions, soil conditions.

2.23 In-Plant Metals Removal Study at the San José/Santa Clara Water Pollution Control Plant

Environmental Services Department, City of San José

November 1994

Samples of influent and effluent flows for each treatment process were analyzed to determine several aspects of the water characteristics. The influent loadings and concentration of heavy metals were used to assess the treatment process performance, and the removal mechanism for each treatment process was identified. In particular, the report determined the major sources of copper and nickel, namely industrial loadings, as well as the mechanism for removal of dissolved copper and nickel through each stage of treatment.

The historical trends of influent and effluent concentrations and removal efficiencies of heavy metals will be used in the development of the Master Plan for treatment performance and future projections of concentrations of these metals. The present effectiveness of removal for each treatment process can be used to extrapolate future performances under different concentrations, which will aid in analysis of regulatory compliance. In addition, specific information for copper and nickel is key since those metals are closely monitored and could trigger future treatment needs.

Key words: metals, copper, nickel, treatment performance, concentrations, projections.

2.24 City of San José 2020 General Plan

Department of Planning, Building and Code Enforcement, City of San José

August 1994

This report provides general planning information for the City through 2020 and contains important background material for the development of the Master Plan, including the City's overall and specific strategies, goals, and policies. Population and land usage are reported, and in the services and facilities section of the report, the basic policies for the sanitary sewer system, wastewater treatment, and solid waste handling are provided. The land use for residential, commercial, and industrial portions of the City are also identified and discussed. There is a general overview of several environmental issues, ranging from air and water quality to the specific land use of local habitats.

This plan provides key goals, strategy, and policy direction that directly affect the goals, objectives, and planning criteria and parameters of the Master Plan. The document addresses several environmental concerns that are relevant to WPCP operations and performance, and affect the development of potential treatment alternatives that will be

identified in the Master Plan. In addition, the plan sets forth recommendations on land use that are key to the development of the land use alternatives in the Master Plan.

Key words: master plan, projections, strategy, policy, goals, land use, wastewater treatment.

2.25 A Comprehensive Study of the Waste Treatment Requirements for the Cities of San José and Santa Clara and Tributary Agencies

Consoer, Townsend and Associates

December 1968

This report is the second and final phase of a comprehensive study developed in 1968 for the projected requirements for wastewater treatment for the WPCP service area. Population projections for the San José-Santa Clara service area are given, as well as possible future annexations, to project wastewater volume and characteristics. This report presents a 2-stage plan for expansions in 1970 and 1985 to handle the projected influent loading conditions.

The master planning process requires projections of population, flows, and loads for the time horizon being considered to determine the needs of the treatment facility to support future conditions. Included in this report are various figures and data tables containing information about projected population, industrial growth, groundwater, and projected costs and estimated annual costs. This study was reviewed to understand the methodology undertaken to develop population, flow and loads projections, for consideration in the Master Plan.

Key words: projections, flows, loads, population.

3.0 SUMMARY AND ADDITIONAL REMARKS

The studies and reports described above (in addition to a complete listing provided in Table 1) were collected and reviewed in association with the Master Plan. This PM briefly summarizes the studies and reports listed in the Scope of Services or otherwise deemed relevant to the Master Plan. Studies and reports that are included in Table 1 but were not summarized in this PM are available upon request.

Table 1 List of Technical Studies, Reports, and Policy Documents
San José/Santa Clara Water Pollution Control Plant Master Plan
City of San José

Title	Author	Date	In Scope	Summary	Relevance to Master Plan	Keyword
CMMS Project Plan	Westin Engineering	In progress	Yes	Yes	Management	Asset management
Infeasibility Analysis	City of San José	May 2008	No	No	Regulatory Requirement	Compliance
Pollutants with Reasonable Potential and Effluent Limits Compliance Strategy	San Francisco Bay Region Regional Water Quality Control Board	May 2008	No	No	Regulatory Requirement	Compliance
San José-Santa Clara WPCP Process Piping Assessment	CH2M HILL	February 2008	No	Yes	Repair and Replacement	Asset management
2007 Self Monitoring Report and Annual Report	City of San José	January 2008	No	No	Regulatory Requirement	Compliance
WPCP Regulatory Compliance Evaluation	Eisenberg, Olibieri & Associates	October 2007	No	No	Regulatory Requirement	Compliance
Ultraviolet Disinfection Bench Scale Data Analysis and Full Scale System Cost Estimates	Carollo Engineers	September 2007	No	Yes	Improvement	Treatment
Field Investigation and Site Development Feasibility Summary Report City	SCS Engineers	June 2007	Yes	Yes	Background Materials	Land use
Major Facility Review Permit (Air Permit)	Bay Area Air Quality Management District	June 2007	No	No	Regulatory Requirement	Compliance
Counsel Policy on Use of San José/Santa Clara Water Pollution Control Plant Lands	City of San José	May 2007	No	Yes	Background Materials	Land use
Infrastructure Condition Assessment	CH2M HILL	May 2007	Yes	Yes	Repair and Replacement	Asset management

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Title	Author	Date	In Scope	Summary	Relevance to Master Plan	Keyword
WPCP/Pond A18 Master Planning: Plant Lands Opportunities and Constraints Assessment	H.T. Harvey	January 2007	Yes	Yes	Background Materials	Land use
WPCP/Pond A18 Master Planning: Pond A18 Existing Conditions and Opportunities and Constraints Assessment	H.T. Harvey	January 2007	Yes	Yes	Background Materials	Land use
2006 Self Monitoring Report and Annual Report	City of San José	January 2007	No	No	Regulatory Requirement	Compliance
Record Drawing and Asset Tagging Report	CH2M HILL	November 2006	Yes	Yes	Management	Asset management
Soils Report for San José/Santa Clara WPCP Alternative Disinfection Project	Fugro	July 2006	No	No	Background Materials	Land use
Scum Digestion Pilot	Black & Veatch	March 2006	No	Yes	Improvement	Treatment
City of Cupertino General Plan	General Plan Task Force, City of Cupertino	November 2005	Yes	Yes	Background Materials	Capacity
North San José Area Development Policy	City of San José	June 2005	No	Yes	Background Materials	Land use
Waste Discharge Requirements For: Cargill Incorporated Pond A18 Low Salinity Salt Pond	San Francisco Bay Region Regional Water Quality Control Board	February 2005	No	No	Regulatory Requirement	Compliance
In-Plant Metals Removal Study at the San José/Santa Clara Water Pollution Control Plant	Environmental Services Department, City of San José	November 2004	No	Yes	Regulatory Requirement	Compliance

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Electrical System Master Plan	YEI Engineers, Inc.	October 2004	Yes	Yes	Repair and Replacement	Asset management
Soils Report for WPCP Reliability Improvement	URS	November 2003	No	No	Background Materials	Land use
Initial Study: WPCP Emergency Basin	RBF Consulting	May 2003	No	No	Expansion	Compliance
Wet Weather Reliability and Hydraulic Capacity Project	Carollo Engineers	March 2003	No	Yes	Expansion	Capacity
Due Diligence Investigation to Evaluate the Purchase of Salt Pond A18: Draft Report	Tetra Tech	April 2002	No	No	Background Materials	Land use
City of Milpitas General Plan	City of Milpitas	January 2002	Yes	Yes	Background Materials	Capacity
Wet Weather Reliability and Hydraulic Capacity Project - Design Development Report - Schedule 1 WPCP	Malcolm Pirnie	November 2001	No	No	Expansion	Capacity
City of San José Infiltration Reduction Study	V&A Consulting Engineers	September 2001	No	No	Regulatory Requirement	Compliance
Hydraulic Capacity and Bottleneck Summary - Plant Reliability and Hydraulic Capacity Study	Malcolm Pirnie	July 2001	No	Yes	Expansion	Capacity
San José/Santa Clara WPCP - Clean Bay Strategy (South Bay Watershed Activities) - Status Report	Environmental Services Department, City of San José	January 2001	No	No	Regulatory Requirement	Compliance
City Counsel Policy on Use of San José/Santa Clara Water Pollution Control Plant Lands	City of San José	October 2000	Yes	Yes	Background Materials	Land use

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City of San José

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City of Milpitas Streetscape Master Plan	Ambion Environmental, Inc.	September 2000	No	No	Background Materials	Compliance
Clean Bay Strategy: Status Report	Environmental Services Department, City of San José	July 2000	No	No	Regulatory Requirement	Compliance
Flow Audit Study	Environmental Services Department, City of San José	July 2000	No	Yes	Regulatory Requirement	Compliance
Soils Report for Monterey - Riverside Sanitary Sewer Improvement	HARZA	October 1999	No	No	Background Materials	Land use
Dry-Weather Infiltration Reduction Study for Basins X and W	PBS & J/Carollo Engineers	February 1999	No	No	Regulatory Requirement	Compliance
Alviso Master Plan: A Specific Plan for the Alviso Community	Department of Planning, Building and Code Enforcement, City of San José	August 1998	Yes	Yes	Background Materials	Land use
San José/Santa Clara WPCP - Economic Study of Wastewater Flow Reduction/Diversion Alternatives	Carollo Engineers	August 1998	No	No	Regulatory Requirement	Compliance
Development of Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Environmental Services Department, City of San José	May 1998	No	Yes	Regulatory Requirement	Compliance

Table 1 List of Technical Studies, Reports, and Policy Documents
San José/Santa Clara Water Pollution Control Plant Master Plan
City of San José

Title	Author	Date	In Scope	Summary	Relevance to Master Plan	Keyword
Plant Optimization Program at the WPCP - Draft	Process Engineering	March 1998	No	No	Improvement	Treatment
Facilities Condition Assessment Study	Black & Veatch	August 1997	Yes	Yes	Repair and Replacement	Asset management
South Bay Action Plan - Proposed Revision	Environmental Services Department, City of San José	June 1997	No	No	Regulatory Requirement	Compliance
Final Environmental Impact Statement for the South Bay Water Recycling Program	Bureau of Reclamation, U.S. Department of the Interior	May 1996	No	No	Regulatory Requirement	Compliance
San José/Santa Clara WPCP - Regulatory Compliance Guidelines for the Biosolids Beneficial Use Program	Carollo Engineers	December 1995	No	No	Regulatory Requirement	Compliance
South Bay Water Recycling Program - Transmission Pump Station - Preliminary Design Memoranda	Carollo Engineers	June 1995	No	No	Regulatory Requirement	Compliance
Pilot Study of Biological Nutrient Removal (BNR) Process - Preliminary Report	City of San José	March 1995	No	No	Regulatory Requirement	Compliance
Order No. 95-117 Water Reclamation Requirements For: Cities of San José and Santa Clara South Bay Water Recycling Program	San Francisco Bay Region Regional Water Quality Control Board	February 1995	No	No	Regulatory Requirement	Compliance
Review of Geological/Geotechnical Condition and Constraints: Alviso Master Plan Study	Woodward-Clyde	January 1995	Yes	Yes	Background Materials	Land use

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WPCP Biosolids Production Facility - Production and Beneficial Use Annual Reports	Carollo Engineers	December 1994	No	No	Regulatory Requirement	Compliance
Water Reclamation Project - VE Response	Carollo Engineers	October 1994	No	No	Regulatory Requirement	Compliance
Downer-Canoas Chemical Injection Station - Preliminary Design	Carollo Engineers	October 1994	No	No	Improvement	Treatment
VE Report for the Water Reclamation Project	Montgomery Watson	September 1994	No	No	Regulatory Requirement	Compliance
City of San José 2020 General Plan	Department of Planning, Building and Code Enforcement, City of San José	August 1994	Yes	Yes	Background Materials	Land use
Nonpotable Water Reclamation Expanded Area Facility Plan	Carollo Engineers	June 1994	No	No	Regulatory Requirement	Compliance
WPCP Effluent Diversion Facilities - Preliminary Design	Metcalf & Eddy	February 1994	No	No	Regulatory Requirement	Compliance
WPCP Residual Sludge Management Program Annual Operations Reports	Carollo Engineers	December 1993	No	No	Improvement	Treatment
Draft EIR for the San José Nonpotable Reclamation Project	City of San José	September 1992	No	No	Regulatory Requirement	Compliance
San José/Santa Clara WPCP - Hydrogeologic Report - Residual Sludge Management Facility	Carollo Engineers	July 1992	No	No	Background Materials	Land use

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Golden Triangle Nonpotable Reclamation Project	CH2M HILL	January 1992	No	No	Regulatory Requirement	Compliance
Investigation of Un-Permitted Sources of Copper and Nickel in San José/Santa Clara WPCP Influent	Eisenberg, Olibieri & Associates	December 1991	No	No	Regulatory Requirement	Compliance
Sludge Characterization - Residual Sludge Management Facility	The Mark Group	July 1991	No	No	Improvement	Treatment
WPCP Sludge Processing Facilities Preliminary Value Engineering	Carollo Engineers	July 1982	No	No	Improvement	Treatment
A Comprehensive Study of the Waste Treatment Requirements for the Cities of San José and Santa Clara and Tributary Agencies	Consoer, Townsend and Associates	December 1968	No	Yes	Background Materials	Planning