BOARD PACKETS 2006

Discussions/Action Items 5.2	with the addition of $7500 for Rip Rap
Motion Fields	
Second Russell	
Vote 5/0	
Discussions/Action Items 5.3	
Motion Ricci	Prepare + ~~Present~~
Second Russell	
Vote 5/0	
Discussions/Action Items 5.4	Bring back numbers that ~~substantiate~~ billings
Motion	Policies ~~&~~ regarding disputes - Rob
Second	
Vote Direction only	12 months Billing History
Discussions/Action Items	
Motion	
Second	
Vote	
Next Meeting Agenda Items	
1	
2	
3	
4	
Notes	Ricci - nominated ~~Chairman~~ Lambeth as chair Second
	Lambeth - ~~nominated~~ Russell as V Chair Second
	Possible ~~Close~~ Closed
Adjournment Time 7:37	

← Mark for Agenda Item in Jan

Jan

Meeting Date 12-13.06	
Meeting Type Regular	
Call to Order Time 6:01	
Director Roll Call P=Present A= Absent	
Lambeth P	
Ricci P	
Russell P	
Fields P	
Mirabal-Boubion P	
Staff	
O'Neill P	
Schultz P	
Facility Manager Daniels P	
District Manager A	
Other	
Approval of Minutes for: Nov 8, 06	
Motion Fields	
Second Russell	
Vote 5/0	
Approval of Minutes for:	
Motion	
Second	
Vote	
Approval of Warrants for: Nov 2006	
Motion Russell	AS amended
Second Lorraine	
Vote 5/0	

Board of Directors – Regular Meeting
San Simeon Community Services District
AGENDA
Wednesday December 13, 2006 6:00 PM
Cavalier Banquet Room

Note: All comments concerning any item on the agenda are to be directed to the Board Chairperson.

1. 6:00 PM – REGULAR SESSION
   - 1.1 Roll Call
   - 1.2 Pledge of Allegiance

2. PUBLIC COMMENT:
   Any member of the public may address and ask questions of the Board relating to any matter within the Board's jurisdiction, provided the matter is not on the Board's agenda, or pending before the Board. Presentations are limited to three (3) minutes or otherwise at the discretion of the Chair.

   - 2.1 Sheriff's Report
   - 2.2 Public Comment

3. STAFF REPORTS
   - 3.1 General Manager Report
     - 3.1.1 Current Project Report
       - 3.1.1.1 Water Master Plan
       - 3.1.1.2 WWTP Tertiary Upgrade Preliminary Design Report
       - 3.1.1.3 Results of Water Meter Accuracy Test for 540 Pico Ave. Unit #103.
     - 3.1.2 Superintendent Report
       - 3.1.2.1 Water & Wastewater Operation Report
     - 3.1.3 Other Reports
       - 3.1.3.1 District Financial Summary
   - 3.2 District Counsel Report

4. ITEMS OF BUSINESS
   - 4.1 Swearing in of Elected Board Members
   - 4.2 Approval of Minutes – November 8, 2006
   - 4.3 Approval of Warrants –November 1, 2006 – November 30, 2006

5. DISCUSSION/ACTION ITEM
   - 5.1 Discussion Regarding SSCSD Board Members Interaction with Local Businesses
   - 5.2 Discussion/Action Regarding State of California Share of Costs Associated with the Wastewater Treatment Plants Repair and Upgrade

5.3 Discussion/Action Discussion with SLO County Supervisor's Representative Regarding Required Funding for San Simeon Community Services District Capital Improvement Projects
5.4 Discussion/Action Direction from the Board Regarding Item 3.1.1.3 of the General Managers Report
5.5 Board Committee Reports.
5.6 Board Reports.

6. BOARD/STAFF GENERAL DISCUSSIONS AND PROPOSED AGENDA ITEMS

7. ADJOURNMENT

General Manager's Report
December 13, 2006

3.1.1.1 Water Master Plan – They water master plan will be delayed until late January. The plan was delayed because of problems in obtaining a surveyor with the District required insurance. The Water Master will be presented by Boyle Engineering at the February regular meeting

3.1.1.2 WWTP Tertiary Upgrade Preliminary Design Report – Included in the board packets is the Boyle Engineering PDR. The information in this report is technical and comprehensive and will require time for all to review. This report is presented now to allow the Board time to review before the open discussion which is scheduled for the January meeting. At that time staff will also be prepared to discuss an alternative to the Boyle Report.

3.1.1.3 – Results of Water Meter Accuracy Test for 540 Pico Ave. Unit #103 – Included in the board packet is a letter to the General Manager from Dan Daniels explaining the results of the accuracy test. The accuracy of the original meter was determined to be 100.08% accurate, well within the guidelines of the national standards of the American Water Works Association. Staff's recommendation to the Board will be addressed in the Discussion/Action Items section.

San Simeon CSD
Wastewater Treatment Plant
Tertiary Treatment Upgrade

Preliminary Design Report

San Simeon Community Services District

Client Representative Tom O'Neill

Client Staff Charles Grace

Boyle Engineering Corporation

Project Manager Jon Hanlon, PE

Project Engineer Kirk Gonzalez, EIT

20020.01

October 2006

BOYLE 1194 Pacific Street, Suite 204 San Luis Obispo, CA 93401

1.0 Introduction

1.1 Background

The San Simeon Community Services District (District) manages a secondary wastewater treatment plant (WWTP), operated under contract by Eco Resources, Inc. The WWTP is located at 9245 Balboa Avenue, and serves the community of San Simeon and the Hearst San Simeon State Historical Monument. The facility operates under National Pollutant Discharge Elimination System (NPDES) permit No. CA0047961 and Waste Discharge Requirements (WDR) Order No. R2-2002-0046. The plant's design capacity is 0.2 million gallons per day (MGD) on an average dry weather basis. The NPDES permit allows discharge of secondary treated municipal wastewater to the Pacific Ocean via outfall and diffuser not to exceed a monthly average of 0.2 MGD. Sludge is disposed of off-site.

Recent violations of effluent limitations have resulted in significant mandatory minimum penalties (MMPs) imposed by the Regional Water Quality Control Board (RWQCB). A portion of the total MMPs imposed by the RWQCB was directed toward the construction of tertiary treatment upgrades. The Tertiary Treatment Facilities Construction project is an approved Supplemental Environmental Project (SEP) and will improve effluent quality (particularly total suspended solids and coliform reduction). Tertiary treatment is not required by regulation but was selected by District staff as the preferred treatment method, regardless of disposal location. Construction of tertiary treatment facilities is to be completed no later than September 25, 2007 (30 months from issuance of SWRCB Order No. R3-2005-0032). Upon the request of the District, the RWQCB may extend the completion date if delays are determined to be beyond the District's reasonable control.

Several WWTP deficiencies were identified in previous reports. Recommendations made by Boyle in Technical Memorandum 6-05 (Recommendations for Immediate Improvements to the San Simeon Community Services District Wastewater Treatment Plant, November 16, 2005) are completed. Improvements to headworks outlined in the memo were part of the original scope of work for this project, but the District has since chosen to defer headworks improvements to a later date.

1.2 Project Objectives

The objectives of the project include:

1. Develop a beneficial project for use of the District's SEP funds;
2. Provide tertiary treatment at the District wastewater treatment plant to benefit water quality above and beyond the District's discharge permit requirements;
3. Improve plant performance in order to reduce exceedances of the existing WDR Order; and
4. To the extent feasible, include provisions for future equipment and appurtenances necessary for Title 22 compliance should the District choose to provide reclaimed water.

1.3 Scope of Work

The Scope of this project includes preliminary design, permitting, and final design services associated with the upgrade of the District's wastewater treatment plant to tertiary treatment. The project focuses on designing and selecting tertiary treatment equipment that achieve the goals of the project while remaining within the district's budget.

The Scope of Work includes:

- Review of initial reclaimed water user survey and, if necessary, prepare and conduct an additional survey. Organize and analyze responses in coordination with the District Administrator. Potential reuse options, water quality requirements, and estimation of reclaimed water demands for potential uses under Title 22 criteria will be based on survey results.

- Review of plant performance and monitoring data to identify necessary improvements to existing processes for enhancement of tertiary treatment.

- Evaluation of options for treatment configuration and tertiary treatment technology and development of conceptual cost estimates for treatment alternatives.

- Meeting with regulatory agencies to discuss requirements for Title 22 compliance.

- Determination of agency jurisdiction, identification of potential constraints, and develop list of required permits.

- Preparation of an implementation schedule for design, permitting, and construction of the proposed project.

- Preparation of a technical document formally requesting a revised NPDES permit description from the RWQCB.

- Coordination of permit applications associated with improvements.

2.0 Existing Conditions

2.1 Existing Plant Treatment Process

The existing treatment plant utilizes a conventional activated sludge/extended aeration process. Specific features include:

- Headworks – Raw sewage flows through a grinder and a series of diversion gates located in a splitter box near the entrance to the plant. The gates allow operators to some or all influent to the equalization (EQ) basin. Currently, 100% of the plant flow is diverted to the EQ basin. There is no screen at the headworks.

- EQ Basin – 100% of the plant influent is routed to the EQ basin. The basin has a capacity of approximately 100,000 gallons. Sewage is then pumped back towards the headworks with variable frequency drive (VFD) controlled pumps. Pump speed is manually adjusted to maintain a relatively constant water level in the EQ basin.

- Flow Metering – A Palmer-Bowlus flowmeter records flow to the aeration basins (flow from the headworks, if any, plus flow from the EQ basin). This flowmeter is discussed in detail in Section 2.2.

- Aeration Basins and Primary Clarifiers – There are four aeration basins and associated clarifiers operating in parallel. Each treatment train has a design capacity of approximately 50,000 gpd.

- Solids Handling – Waste activated sludge (WAS) is pumped to a sludge holding tank. Sludge is periodically pumped from the tank and is disposed of offsite.

- Disinfection – Prior to ocean discharge, sodium hypochlorite is added to the clarifier effluent stream upstream of the chlorine contact chamber (CCC). Sodium bisulfite is added at the discharge weir to remove residual chlorine prior to ocean discharge.

2.2 Historic Flow

Average Daily Flow (ADF) is defined as the average flow over the course of one year expressed in gallons per day, and is the base flow for the sewer system. ADF for the District is 77,500 gpd based on flow records for 24 consecutive months from January 2004 through December 2005.

Maximum month flow (MMF) is defined as the average daily flow rate for the month with the maximum flow in the period evaluated. MMF is an important design flow rate in Waste Discharge Requirements (WDRs), and is used when determining the permitted capacity for a WWTP. Flow records indicate that the MMF for the past two years was 151,300 gpd, occurring in the dry season (August 2004).[1] The permitted dry weather flow for San Simeon is 200,000 gpd.

[1] Historically, annual MMF for San Simeon occurs during the summer months as a result of increased tourism. For areas with less significant impacts from tourism, MMF generally occurs during the wet season.

Peak Day Flow (PDF) is the maximum flow entering the WWTP during a single day. Typically this flow is used for design of clarifier capacity, aeration requirements, and pump stations since it is the largest extended flow the collection system is anticipated to experience. Flow records indicate PDF was 248,000 gpd in February 2005.

Historic flow data (ADF, MMF, and PDF) are summarized in Table 2-1.

Table 2-1: Historic WWTP Flows

Month	PDF (gpd)	ADF (gpd)
Jan-04	123,000	64,000
Feb-04	149,000	74,000
Mar-04	113,000	71,000
Apr-04	108,000	77,000
May-04	113,000	70,000
Jun-04	152,210	77,081
Jul-04	127,230	89,046
Aug-04	226,170	114,830
Sep-04	185,800	103,161
Oct-04	230,000	101,485
Nov-04	113,030	80,195
Dec-04	235,140	77,416
Jan-05	185,430	88,120
Feb-05	248,060	86,691
Mar-05	138,910	84,613
Apr-05	99,300	57,858
May-05	90,910	64,787
Jun-05	120,930	71,939
Jul-05	200,130	99,440
Aug-05	149,186	84,424
Sep-05	143,420	61,029
Oct-05	149,118	59,213
Nov-05	137,611	54,316
Dec-05	92,874	48,985
PDF =	*248,060*	
ADF =		*77,526*
MMF =		*114,830*

Discrepancies were noted between flow measurements conducted by Boyle Engineering as part of the December 2005 Interim Flow Metering Project, and flow records from the existing flume. Measurements taken by Boyle with a level-velocity type flowmeter were approximately 30% higher than measurements taken at the flume during the same time period.

2.3 Infiltration and Inflow

Infiltration and Inflow (I/I) represents water entering the wastewater collection system resulting from leaking joints, junctions, and drainage connections to the system. Infiltration results from groundwater entering defective subsurface pipes. Infiltration may be evident following a lag period after a storm as a relatively consistent increase in wastewater flow over a period of days, weeks, or even months as high groundwater conditions persist. In contrast, inflow results from stormwater runoff entering the collection system directly. Inflow from storm events usually affects wastewater flow immediately, although delayed inflow due to sump pumping, slow entry in ponded areas, and latent inflow at far reaches of the collection system may occur.

According to plant operators, significant spikes in influent flows have been observed during wet weather conditions. With the existing data, it is not possible to determine if the District has an infiltration problem. However, temporary flows as high as 0.3 MGD (208 gpm) during rain events have been reported by operators, indicating a possible inflow problem. Infiltration and inflow notwithstanding, MMF for San Simeon typically occurs during the summer months as a result of increased tourism.

2.4 Organics and Solids Loading

Influent and effluent wastewater characteristics were summarized for evaluation of the existing treatment processes at the WWTP. Effluent results are based on 24-hour composite sampling, and influent results are from 8-hour composite samples. Both influent and effluent results for BOD_5 and TSS vary significantly over the 2-year observation period.

Influent and effluent BOD_5 and TSS results from January 2004 through December 2005 are summarized in Table 2-2.[2]

Table 2-2: Influent and effluent BOD_5 and TSS.

	BOD_5 (mg/L)		TSS (mg/L)	
	Influent	Effluent	Influent	Effluent
Jan-04	260	4.0	120	10
Feb-04	--	10.0	--	14
Mar-04	--	12.0	--	11
Apr-04	270	8.0	140	6
May-04	--	11.0	--	14
Jun-04	300	7.0	--	na
Jul-04	650 *	5.5	na	10
Aug-04	--	5.0	--	na
Sep-04	--	370.0 *	--	320
Oct-04	na	na	na	na
Nov-04	--	nd	--	nd
Dec-04	--	nd	--	nd
Jan-05	620 *	6.0	840 *	5
Feb-05	--	6.0	--	27
Mar-05	--	<3.0	--	14
Apr-05	300	4.0	200	<5
May-05	--	5.0	--	8
Jun-05	--	5.0	--	12
Jul-05	240	4.0	210	11
Aug-05	--	>180.0	--	15
Sep-05	--	7.0	--	10
Oct-05	170	5.0	170	8
Nov-05	--	na	--	na
Dec-05	--	4.7	--	10
Average	*351*	*28*	*280*	*31*
Maximum	*650*	*370*	*840*	*320*

BOD and TSS results based on 24-hour composite samples for effluent and 8-hour composite samples for influent

*Influent BOD and TSS values are expected to be in the 150-350 mg/l range.

[2] From District quarterly monitoring reports and monthly effluent monitoring.

Corresponding estimates of influent BOD_5 and TSS loading rates are summarized in Table 2-3 below.

Table 2-3: Influent BOD_5 and TSS loading

	BOD_5 (lbs/ day)	TSS (lbs/ day)
Average daily flow	227	181
Max.month flow	337	268
Peak day flow	727	580
Permitted ADWF	586	467
Permitted AWWF	1319	1052

2.5 Provisions to Improve Permit Compliance

Recent violations of effluent limitations have resulted in significant mandatory minimum penalties (MMPs) imposed by the RWQCB. A portion of the total MMPs imposed by the RWQCB was directed toward the construction of tertiary treatment facilities. Tertiary treatment is above and beyond the obligations of the Discharger, but is an approved Supplemental Environmental Project (SEP) because it is recognized to be beneficial to water quality.[3]

Since March 4, 2004, the majority of the violations have been exceedances of total coliform and settleable solids (SS) limitations.[4] Table 2-4 summarizes the type and frequency of violations that occurred between March 4, 2004 and June 28, 2005.

Table 2-4 – WDR Violations (3/4/04 – 6/28/05)

Constituent	Number of violations
Total Coliform	21
Settleable Solids	34
Total Residual Chlorine	3

[3] RWQCB meeting minutes, March 2005.

[4] There were three violations of total residual chlorine limitations. It is our understanding that District staff has implemented operational and equipment improvements to address this issue.

Reducing the number of exceedances has been addressed in a number of ways:

- In a previous report, Boyle evaluated the performance of the existing secondary process and made recommendations to improve clarification, process flow, sludge handling, skimming, etc. These improvements have been completed.

- Screening and headworks improvements were recommended in the Draft Headworks and Tertiary Treatment Upgrade Preliminary Design Report to further optimize the performance of the existing secondary treatment process. With the addition of improved secondary skimmers, the District has chosen to defer improvement of screening and headworks to a later date.

- The tertiary treatment process alternatives described in this report have been selected to further improve the plant effluent quality. Filtration will assist in the removal of settleable solids and much of the biological matter associated with BOD_5 and total coliform, reducing chlorine demand and increasing the effectiveness of the disinfection process.

Provisions for emergency overflow and bypass have been included in the design of the proposed tertiary equipment in accordance with the WDR requirements. We have not evaluated emergency provisions, alarms, SCADA or reporting for existing processes since these items were outside of the scope of this work.

Previous violations and operational difficulties have demonstrated a need for a community grease control program. There is no scum box or other mechanism to eliminate floating grease from the treatment processes. Currently, much of the grease enters the plant and coagulates and floats in the EQ basin, allowing operators to remove it before the treatment facilities. If at some point in the future the operating scenario is changed in such a way that flow bypasses the equalization basin and enters the treatment processes directly, additional grease control may be necessary.

2.6 Previous Wastewater Treatment Facilities Plan

According to the Wastewater Treatment Facilities Plan (Kennedy/Jenks, February 2003), the existing treatment plant has a limiting flow capacity of approximately 147,000 gallons per day.[5] The report recommended additional clarification to reach the projected peak tourist season flow of 171,000 gpd. The report also included recommendations for the following improvements:

- Division of the existing EQ basin to provide reclaimed water storage and aerobic digestion;

- Expanded disinfection capacity; and

- Additional clarification.

[5] Assuming no equalization, and only three aeration basins online.

With proper equalization, full use of at least three aeration basin/clarifier trains, and the addition of the recommended tertiary filtration equipment, it is our opinion that the permitted plant capacity of 200,000 gpd can be achieved.

The existing chlorine contact chamber can provide approximately 37 minutes of contact time at the historic PDF of 248,060 gpd (30 minutes detention time was the design criteria for disinfection in the report). Additional contact time would be required to meet Title 22 requirements, and is discussed further in Section 5.

Boyle recommends that the major improvements outlined in the Kennedy/Jenks report be re-evaluated when the Average Daily Flow begins to approach 150,000 gpd, or if the existing secondary treatment process no longer meets treatment objectives.

3.0 Design Criteria

3.1 Reuse and Disposal Options

An initial survey of non-residential water customers in San Simeon was conducted to identify potential recycled water users and to estimate demands. Hotels and motels were considered to be the most likely users of reclaimed water. Residential customers were not considered for recycled water planning due to low residential irrigation needs. According to District staff, only two responses to the initial survey were received, both indicating that they would be interested in reclaimed water for irrigation and other uses such as toilet water and laundry. One user indicated that a portion of the property was irrigated (1/3 acre). However, at the time of the survey, neither reported a willingness to install dual plumbing required for domestic reclaimed water use.

In anticipation of reclaiming part or all of the WWTP effluent at some point in the future, the District has requested that this preliminary design report include an option for tertiary filtration and associated equipment capable of producing Title 22 compliant recycled water for uses such as irrigation, toilet flushing, or commercial laundry. Thus, in addition to proposing tertiary treatment for ocean disposal, this preliminary design report includes the provisions necessary to produce Title 22 compliant disinfected tertiary recycled water as optional equipment which is discussed in Chapter 5.

The two treatment options are described below.

Tertiary Filtered Effluent for Ocean Discharge

Since a viable reuse option for reclaimed water has not been identified, the District may choose to continue discharging all plant effluent via the existing ocean outfall under the current discharge permit.[6] Under this operating scenario, upgrades will be designed to improve effluent water quality, but will not meet all Title 22 requirements for irrigation, toilet flushing, or commercial laundry. Purchase and installation of additional equipment required for Title 22 compliance can be deferred until a time when supplying reclaimed water is more favorable.

Title 22 Disinfected Tertiary Recycled Water

If the District chooses to pursue production of Title 22 compliant disinfected tertiary recycled water for irrigation, toilet flushing, or commercial laundry, additional equipment will be required. Specific equipment requirements are dependent on the treatment process reliability and the availability of emergency storage or disposal. Preliminary discussions with California Department of Health Services (CDHS) staff has indicated that since ocean discharge is available as a less-demanding disposal alternative, 100% redundancy would not be required for process equipment. Accordingly, this preliminary design report has assumed the minimum amount of equipment required for tertiary treatment, and ocean discharge will be continue to be available for disposal of secondary treated wastewater.

Additional requirements may include regulatory coordination for certification of the reclaimed water system; filing and approval of an engineering report; reclaimed water storage and distribution facilities

[6] Tertiary filtered effluent is not a permit requirement, but has been selected by the District as the preferred treatment method regardless of disposal location.

and infrastructure; WWTP staffing requirements; and operation and maintenance programs for ancillary equipment.

3.2 Peaking Factors

Peak Hour Flow

Peak Hour Flow (PHF) represents the maximum flow entering the wastewater treatment facility over a one-hour period. PHF can sometimes be derived from WWTP flow records. If hourly flow records are not available, empirical equations must be used to estimate PHF.

One method commonly used to estimate PHF is to multiply the ADF by a Peaking Factor (PF).

$$PHF = P.F. \times ADF$$

The following formula was used to calculate the peaking factor, where P is population (in thousands).[7]

$$P.F. = \frac{18 + P^{0.5}}{4 + P^{0.5}}$$

For San Simeon's existing population estimate of 250 persons[8], the calculated peaking factor is 4.1. Metcalf and Eddy (2003), recommends using a peaking factor of 4.0 for communities with populations less than 4,000. A peaking factor of 4.0 was used for this project.[9]

Peak hour flow is summarized in Table 3-1.

Table 3-1 – Peaking Factor and Calculated Design Flow Estimates

Existing ADF (gpd)	Peaking Factor	Calculated PHF, Existing Conditions (gpd)
77,500	4.0	310,000

Applied to the ADF of 77,500 gpd, the Peak Hour Flow was estimated to be 0.31 MGD (215 gpm). This flow correlates with reports from operators suggesting flows in the 0.30-0.35 MGD range during high tourism periods, or wet weather.

---

[7] Fair, G.M., and Geyer, J.C., "Water Supply and Waste-Water Disposal." 1st Ed., John Wiley & Sons, Inc., New York (1954).

8 Based on Draft Cambria and San Simeon Acres Community Plan, November 2005.

[9] Boyle installed a temporary influent flowmeter at the plant during December, 2005. The resulting diurnal patterns indicate that a design peaking factor of approximately 4.0 correlates well with existing conditions.

3.3 Design Flow

Since expansion of the treatment plant capacity was not considered for this project, the RWQCB has indicated that the existing WDR will not be modified. Capacity of the tertiary treatment processes and associated modifications to the existing facility was based on the plant's existing permitted average dry weather flow design capacity of 200,000 gpd. Peak flows greater than 200,000 gpd would be buffered by the equalization basin.

4.0 Tertiary Treatment for Ocean Discharge

4.1 Tertiary Filtration Equipment Alternatives

Tertiary treatment is not a permit requirement, but has been selected by the District as the preferred treatment method to reduce WDR exceedances. Two tertiary filtration technologies were evaluated and were sized for the permitted flow. Membrane bioreactor (MBR) technologies were also evaluated in the initial phase of this project and in the Kennedy/Jenks study, but were not selected as a viable alternative due to high capital and operational costs.

To the extent possible, designs for tertiary treatment for ocean discharge will provide flexibility for future treatment equipment to produce reclaimed water. Additional equipment for the production of Title 22 compliant disinfected tertiary recycled water is discussed in Chapter 5.

Alternative 1 - Advanced Sand Filtration (Parkson Dynasand):

The Dynasand filter system consists of modular sand filters and is a proven and reliable tertiary filtration technology for treatment of municipal wastewater at very low to high flow rates. Each filter is continuously backwashed and no downtime is required for backwashing cycles, (a common disadvantage of other technologies). The continuous backwash would produce a waste stream of approximately 5 gpm per filter, which would be directed to the EQ basin. Each filter vessel for this application would be approximately 5 feet in diameter, and 12.3 feet tall. A ladder would be provided for access to the top of each unit. Conceptual Plan and Profile views are attached as Figure 4-2.

Two filtration vessels arranged in parallel would be appropriate for ocean discharge with both units operating or with one temporarily out of service. At the design flow of 0.2 MGD, the filter flux rate with two filtration vessels would be 3.65 gpm/ft^2.[10] With one unit out of service in a two-vessel configuration, the loading rate would be 7.3 gpm/ft^2. This is higher than the maximum allowable filter flux rate for Title 22 compliance (5 gpm/ft^2), but on a temporary basis would still improve effluent quality. For production of Title 22 compliant disinfected tertiary recycled water, both units would need to be operational. Additional components required for Title 22 compliance are discussed in Section 5.

Alternative 2 - Rotating Disk Filtration (Aqua-Aerobic Aquadisk):

Aquadisk rotating disk filter systems use nylon pile cloth media to filter the feedwater. Backwashing occurs without interrupting the treatment processes and backwash water and filtered solids would be periodically drained to the EQ basin. Aquadisk filtration systems are used in both municipal and industrial applications. Each four-disk unit includes vacuum backwash, a hopper-bottom tank and a solids removal manifold system. Each unit is approximately 6 feet wide, 9 feet long, and 6.5 feet tall. Conceptual Plan and Profile views are attached as Figure 4-3.

[10] The maximum allowable filter flux rate for Title 22 compliance is 5 gpm/ft^2.

One rotating disk filter unit with four vertically mounted cloth disks would be appropriate for improving effluent water quality for ocean discharge. Filter selection was based on 20 mg/l average influent TSS and a 34 mg/l maximum influent TSS. At maximum flow (0.2 MGD) the filter rate would be 4 gpm/ft^2. A single-unit design would have no provision for taking one or more disks offline while continuing to operate the remaining filters. Therefore, it would be necessary to take the entire tertiary filter unit offline for repair or maintenance. For Title 22 compliance, one filter unit and appurtenances would be adequate for providing disinfected tertiary recycled water under normal operating conditions but with the single unit offline, secondary treated effluent would need to be discharged via ocean outfall. Additional components required for Title 22 compliance are discussed in Section 5.

4.2 Tertiary Filter Design Parameters

The tertiary filtration process will be supplied with secondary effluent from the existing clarifiers. In the past, suspended solids have ranged between 5 and 15 mg/ L and average 11.6 mg/ L.[11] Plant operators characterized the secondary effluent with 24 hour composite sampling on two consecutive weeks. This data was used as the design loading rate for the tertiary filtration units, and is summarized in Table 4-1.[12]

Table 4-1 – Secondary Effluent Water Quality Data

	BOD_5	TSS	Turbidity
Week 1 (3/16/06)	6 mg/l	12 mg/l	8 NTU
Week 2 (3/23/06)	7.8 mg/l	9.8 mg/l	1.1 NTU
Average	**6.9 mg/l**	**10.9 mg/l**	**4.6 NTU**

4.3 Modifications to Existing Facilities

A facility hydraulic profile is included as Figure 4-1.

To optimize equalization, an ultra-sonic level sensor is recommended in the EQ basin to pace the VFD controlled pumps, and to alert operators if the basin is near capacity. Performance specifications will be provided by Boyle so a contractor can program PLCs to pace pumping off of the level sensor.

To divert flow from the secondary clarifiers to the tertiary filtration system, a removable stop gate is recommended in the effluent channel downstream of the clarifiers. Effluent from the clarifiers will flow by gravity to a wet well located near the existing EQ basin. A pair of alternating VFD controlled pumps are recommended to pump feedwater from the wet well to the proposed tertiary filtration system at a rate

[11] Based available effluent data for 24 consecutive months, excluding outlier. Data summarized in Table 2-2.

[12] According to plant operators, these values are consistent with "normal" operating conditions. Filter equipment will be selected to accommodate variable loading rates.

less than or equal to the design flow rate (0.2 MGD). Effluent from the clarifiers can also be diverted to the EQ basin (through the wet well via the wet well overflow) for maintenance of the chlorine contact chamber, the tertiary filters, or during upsets of the secondary treatment process.

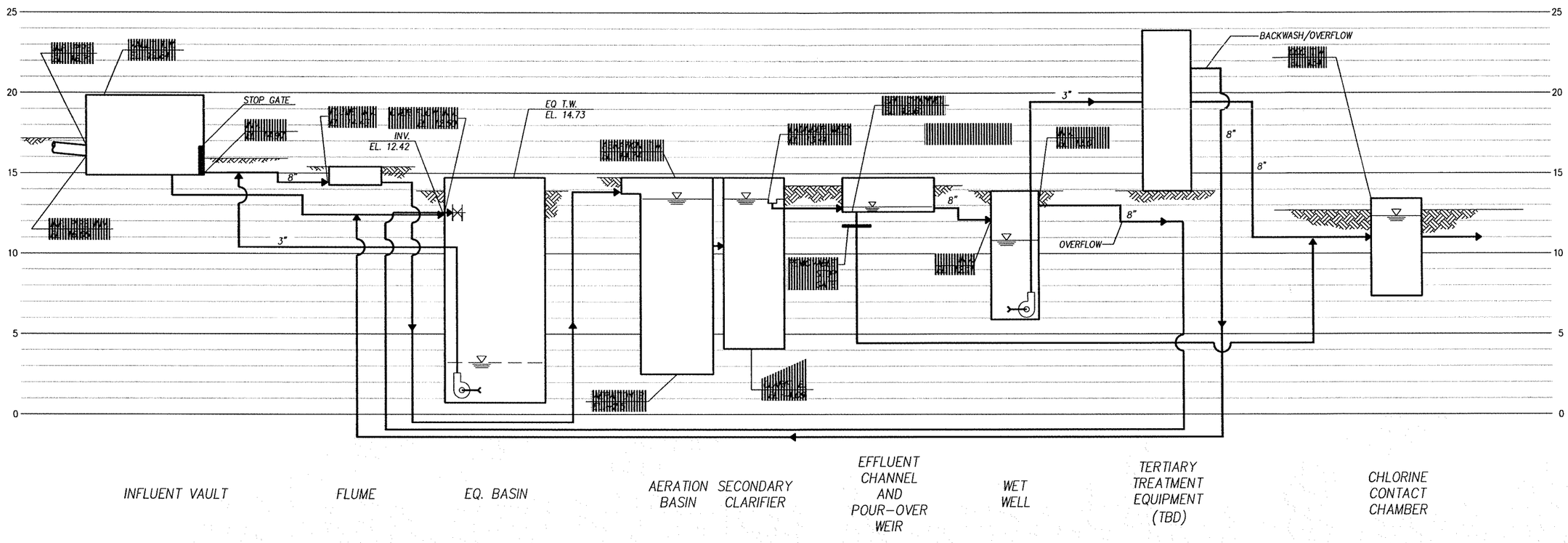
Tertiary equipment is expected to be installed above grade, near the wall bordering the plant to the south. Backwash from the filters will flow by gravity to the EQ basin.[13] Treated effluent from the tertiary filtration process will proceed to the chlorine contact chamber.

Two emergency overflow provisions have been included in the design:

- **Automatic primary overflow to the EQ basin** – In the event of wet well pump failure, tertiary equipment failure, or feedwater flows in excess of 0.2 MGD, water in the wet well can overflow to the EQ basin through a high water level overflow. A Tide-Flex valve on the discharge of the overflow pipe will prevent water from the EQ basin from backing up into the wet well. An alarm on the wet well level sensor would alert operators of high water levels.

- **Manual bypass of tertiary process** – If the EQ basin has reached capacity or bypassing the wetwell and the tertiary filters is desired, a stop gate can be removed to allow secondary treated effluent to proceed directly to the chlorine contact basin.

[13] Valves and Cam-Lok fittings can be provided on the equipment to allow temporary diversion of the backwash to the reactors so that the EQ basin can be drained for maintenance.



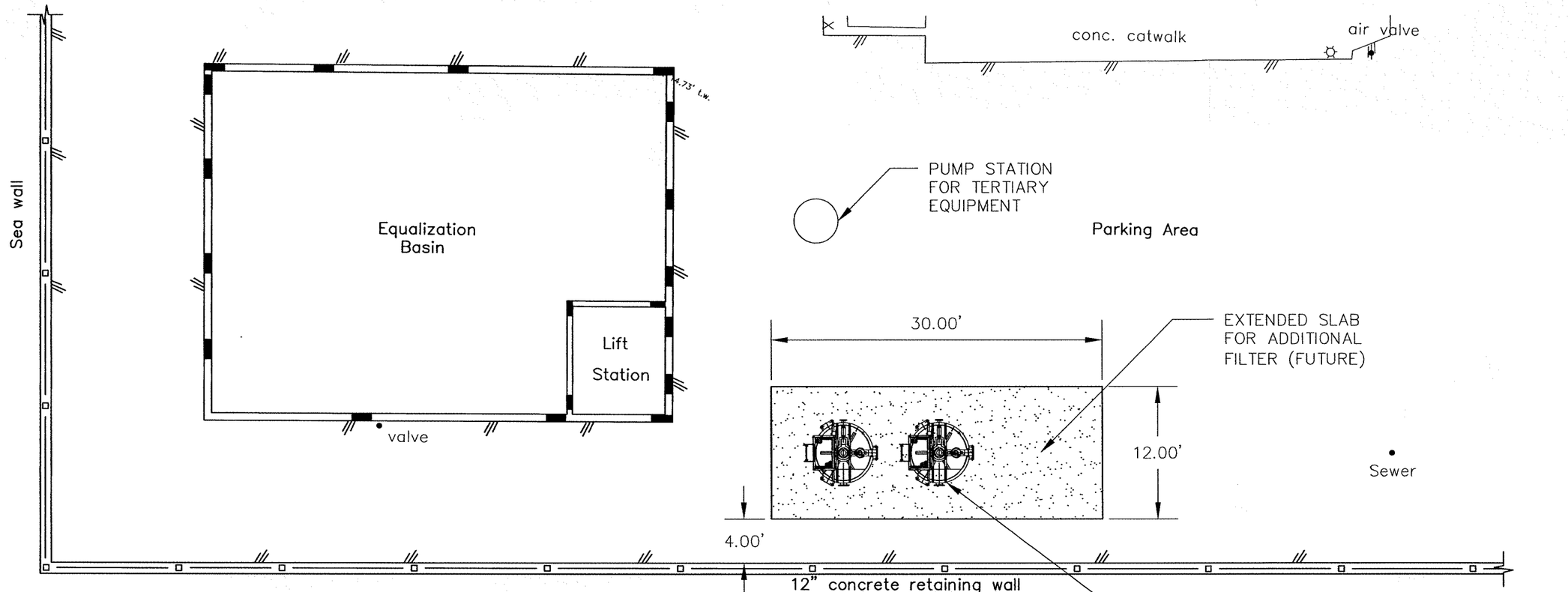
BOYLE ENGINEERING CORPORATION
1194 Pacific St., Suite 204 Tel. 805-542-9840
San Luis Obispo, CA. 93401 Fax 805-542-9990
WWW.BOYLEENGINEERING.COM

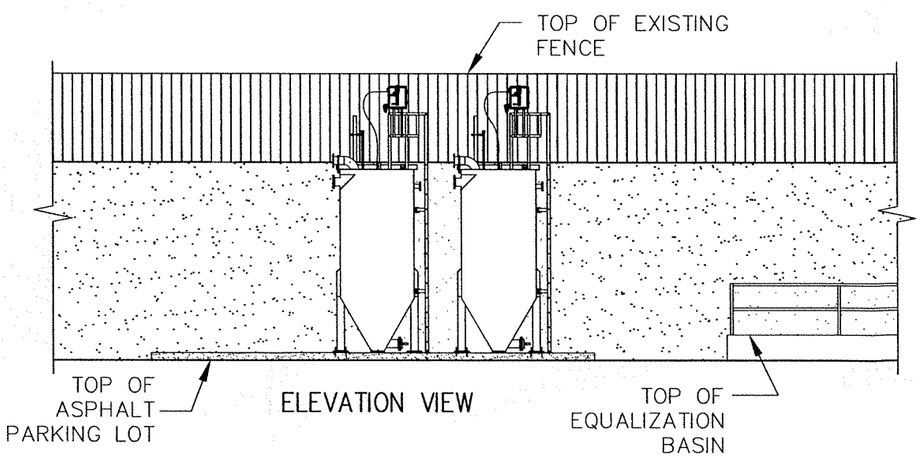
FIGURE 4-1

SAN SIMEON WWTP TERTIARY UPGRADE
HYDRAULIC PROFILE WITH IMPROVEMENTS

BEC PROJECT NO.
S43-100-04

DWG: \\Slofilesrv\work\San Simeon CSD (20020)\S4310004 (SSWWTP Tertiary Upgrade)\Exhibits\Dwgs\Hydraulic Profile Exhibit-Revised.dwg USER: jhanlon
DATE: Sep 12, 2006 3:58pm XREFS: IMAGES:





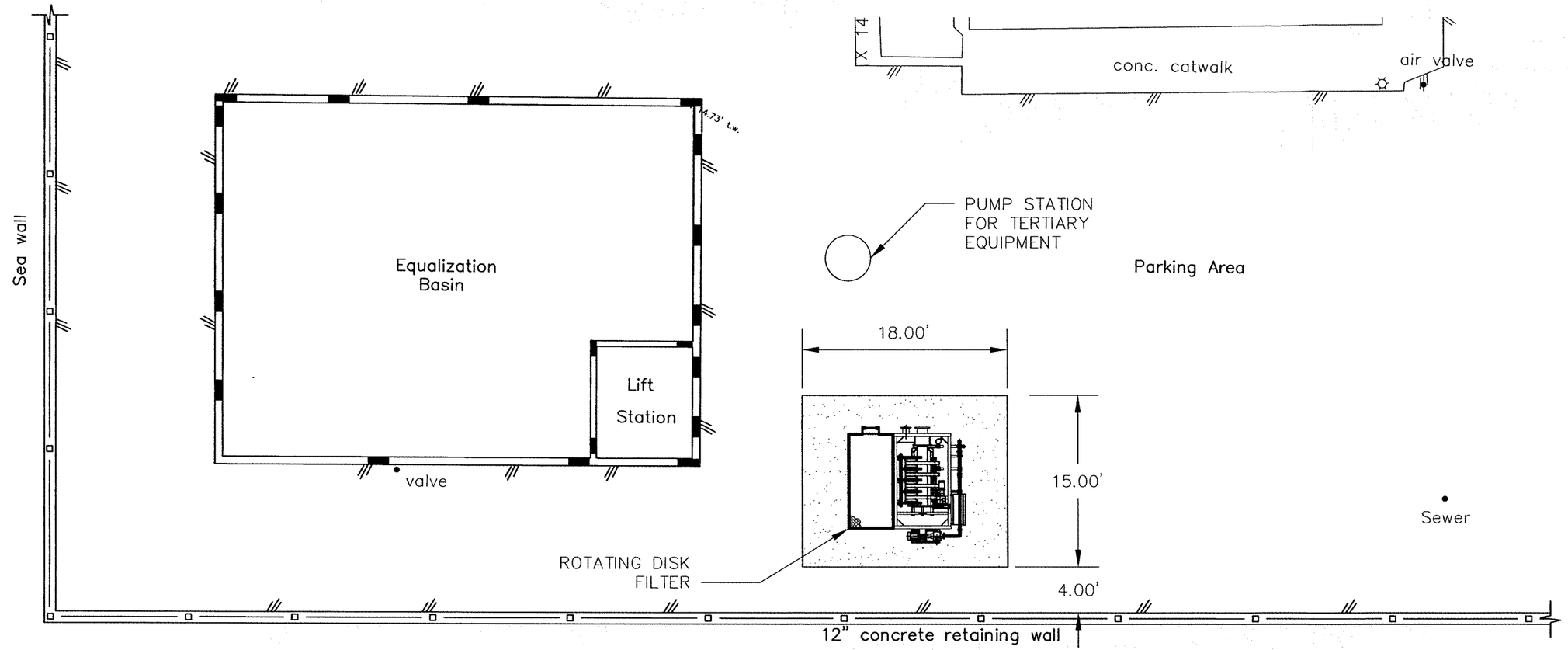
BOYLE ENGINEERING CORPORATION
1194 Pacific St., Suite 204 Tel. 805-542-9840
San Luis Obispo, CA. 93401 Fax 805-542-9990
WWW.BOYLEENGINEERING.COM

FIGURE 4-2
SAN SIMEON WWTP TERTIARY UPGRADE

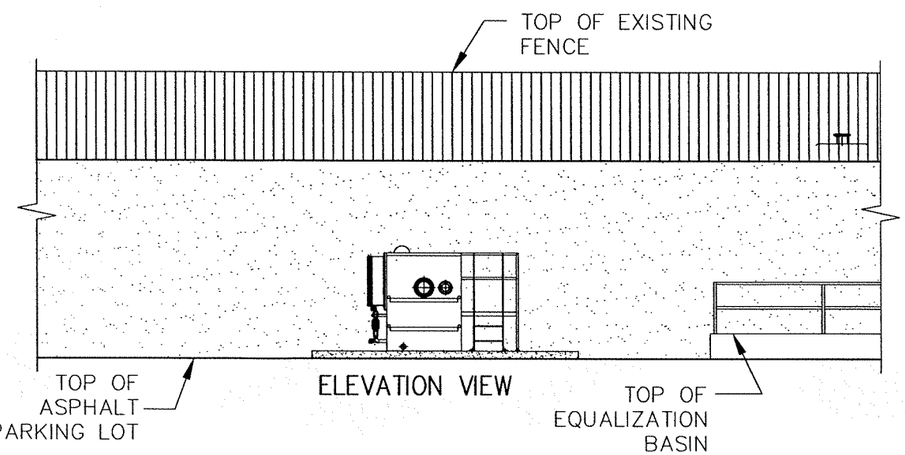
DYNASAND FILTER ALTERNATIVE

BEC PROJECT NO. S43-100-04

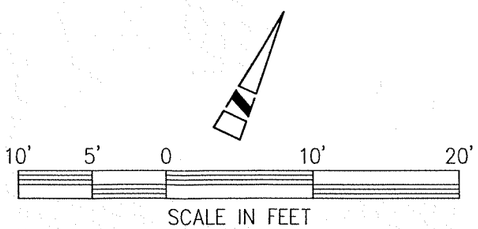
DWG: \\Slofilesrv\work\San Simeon CSD (20020)\S4310004 (SSWWTP Tertiary Upgrade)\Exhibits\Dwgs\Tertiary Filtration Exhibit.dwg USER: jhanlon
DATE: Sep 12, 2006 4:01pm XREFS: IMAGES:



PLAN VIEW



ELEVATION VIEW

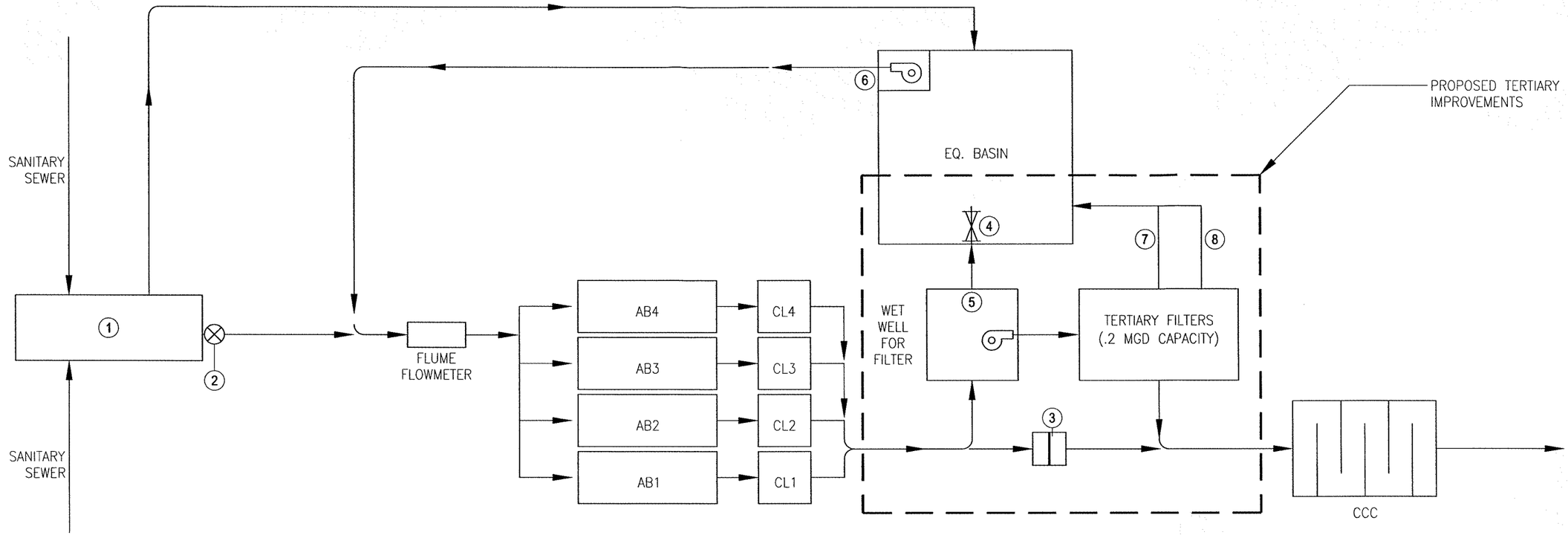


BOYLE ENGINEERING CORPORATION
1194 Pacific St., Suite 204 Tel. 805-542-9840
San Luis Obispo, CA. 93401 Fax 805-542-9990
WWW.BOYLEENGINEERING.COM

FIGURE 4-3
SAN SIMEON WWTP TERTIARY UPGRADE
ROTATING DISK FILTER ALTERNATIVE

BEC PROJECT NO.
S43-100-04

DWG: \\Slofilesrv\work\San Simeon CSD (20020)\S4310004 (SSWWTP Tertiary Upgrade)\Exhibits\Dwgs\Tertiary Filtration Exhibit.dwg USER: jhanlon
DATE: Sep 12, 2006 4:01pm XREFS: IMAGES:



LEGEND:

(1) EXISTING HEADWORKS
(2) STOP PLUG
(3) REMOVABLE STOP GATE
(4) TIDE–FLEX CHECK VALVE
(5) WET WELL OVERFLOW
(6) EQ. PUMP PACED BY LEVEL SENSOR (.2 MGD MAX.).
(7) FILTER BACKWASH
(8) OVERFLOW

BOYLE ENGINEERING CORPORATION

FIGURE 4-4
SAN SIMEON WWTP TERTIARY UPGRADE

FLOW LINE SCHEMATIC

BEC PROJECT NO.
S43-100-04

5.0 Additional Requirements for Title 22 Compliant Reclaimed Water

As requested by the District, additional equipment required for Title 22 compliance has been identified and is discussed below. Additional requirements such as regulatory coordination for certification of the reclaimed water system; filing and approval of an engineering report; reclaimed water storage and distribution facilities and infrastructure; WWTP staffing requirements; and operation and maintenance programs for ancillary equipment are not addressed in this report.

At a minimum, the Title 22 compliant reclaimed water treatment system would require the following additional equipment:

Turbidity Monitoring

Continuous turbidity monitoring for tertiary filter effluent is required by Title 22 to ensure that reclaimed water produced is compliant with daily average operating standards for disinfected tertiary recycled water. Turbidity monitoring for the tertiary filter effluent would be necessary to allow automatic diversion of any "non-spec" effluent to the ocean outfall.

Continuous turbidity monitoring of tertiary filter influent is also required by Title 22 when human contact is possible. Influent turbidity monitoring allows automated activation polymer feed for coagulation, discussed below.

Polymer Feed

An automated polymer feed system would be necessary to meet the requirements of Title 22 since disinfected tertiary recycled water could be used in applications were human contact is possible. The polymer feed system would be paced by the continuous turbidity monitoring equipment for tertiary filter influent to automatically dose feed water and enhance solids removal.

Disinfection

The existing chlorine contact chamber (CCC) provides adequate detention time for disinfection of secondary effluent but does not meet Title 22 requirements.

For chlorine disinfection processes, 90 minutes of modal contact time is required (at PDF) to comply with Title 22 requirements. To provide this level of disinfection, the existing chlorine contact chamber would need to be expanded to approximately three-times its current size, and chlorine dosing and monitoring equipment would be needed. Chlorine dosing would be automated, and would be paced off the existing influent flow meter. PLC programming could prevent over-dosing of effluent during emergency conditions where flow is being diverted to the EQ basin. Based on the availability of the less demanding ocean discharge, it is assumed that full redundancy of the disinfection would not be required.[14]

[14] Based on discussion of alternatives to reliability requirements with CDHS, 8/22/06.

6.0 Construction Permitting

The purpose of this project was to improve performance of the secondary treatment facility so that it can more effectively comply with its discharge permit requirements. If County Planning staff determines that the project is considered repair and maintenance of the existing facility, an over-the-counter building permit could be issued, and would not require review by the California Coastal Commission (CCC). This would significantly expedite the permitting and construction of this project. Staff at the RWQCB also expressed a desire to see the tertiary upgrades proceed under a County Building Permit, and has sent a letter to County Planning staff expressing this. Boyle will discuss the option of an over-the-counter building permit with County staff at the pre-application meeting.

If the County determines that the tertiary treatment improvements cannot be considered repair and maintenance, the permitting process could proceed in one of the following ways:

Process 1:

A Development Plan (DP)/Coastal Development Permit (CDP) may be required per the Coastal Zone Land Use Ordinance for wastewater treatment facilities. If a DP/CDP is required, the application must include a full project description, project plans, and construction details. Environmental documentation per the California Environmental Quality Act (CEQA) would be required, and an archaeological surface survey may also be required. The permitting process could take six to eight months at the County level.

Once the County has approved a DP/CDP, the project would be sent to the CCC for review. The CCC would have ten working days to appeal the County's approval. If the Commission does not appeal within the ten days, the project is considered approved. If the Commission appeals the project, new measures may need to be incorporated for approval.

The California Coastal Commission has stated that they will not consider a DP/CDP application until the district has resolved an existing permitting issue with riprap surrounding the plant. Boyle is currently working on this issue with CCC staff. We anticipate that CCC staff will provide further clarification on their expectations and how to best proceed with obtaining permits for this important project during a meeting to discuss the riprap issue (currently scheduled for October, 2006),

Process 2:

Upon completion of the project description, a meeting with the County can occur to determine if the project may be processed under a Minor Use Permit (MUP). An MUP would be subject to a local hearing with a County Hearing Officer, whereas a DP hearing would be conducted before the County Planning Commission. Thus, an MUP could result in more rapid processing by the County.

An MUP application can be appealed to the CCC.

7.0 Engineer's Opinion of Probable Cost

Boyle has developed a preliminary Engineer's opinion of probable cost based on vendor estimates and typical construction costs. This opinion will be refined during detailed design of the treatment plant upgrades. Actual construction costs will vary with many factors including material cost fluctuations and prevailing bid climate.

Table 7-1 – Preliminary Engineer's Opinion of Probable Cost for Production of Tertiary Filtered Effluent for Ocean Discharge

Option 1A - Sand Filtration

Item	Description	Quantity	Unit	Amount
1	Mobilization (5%)	1	LS	$20,000
2	Demolition of Existing Facilities	1	LS	$5,000
3	Equipment	1	LS	$321,000
4	Electrical and Instrumentation	1	LS	$38,000
5	Earthwork/Structural	1	LS	$27,000
7	Temporary Pumping System	1	LS	$20,000
	Sub Total			$431,000
	Contingency (30%)			$130,000
	Total Option 1			**$561,000**

Option 1B - Rotating Disk Filtration

Item	Description	Quantity	Unit	Amount
1	Mobilization (5%)	1	LS	$18,000
2	Demolition of Existing Facilities	1	LS	$5,000
3	Equipment	1	LS	$283,000
4	Electrical and Instrumentation	1	LS	$38,000
5	Earthwork/Structural	1	LS	$27,000
7	Temporary Pumping System	1	LS	$20,000
	Sub Total			$391,000
	Contingency (30%)			$118,000
	Total Option 2			**$509,000**

ENR Construction Cost Index = 7692

Table 7-2 – Preliminary Engineer's Opinion of Probable Cost for Plant Equipment Required for Production of Disinfected Tertiary Recycled Water

Option 2A - Sand Filtration

Item	Description	Quantity	Unit	Amount
1	Mobilization (5%)	1	LS	$23,000
2	Demolition of Existing Facilities	1	LS	$5,000
3	Equipment	1	LS	$353,000
4	Electrical and Instrumentation	1	LS	$38,000
5	Earthwork/Structural	1	LS	$58,000
7	Temporary Pumping System	1	LS	$20,000
	Sub Total			$497,000
	Contingency (30%)			$150,000
	Total Option 1			**$647,000**

Option 2B - Rotating Disk Filtration

Item	Description	Quantity	Unit	Amount
1	Mobilization (5%)	1	LS	$21,000
2	Demolition of Existing Facilities	1	LS	$5,000
3	Equipment	1	LS	$315,000
4	Electrical and Instrumentation	1	LS	$38,000
5	Earthwork/Structural	1	LS	$58,000
7	Temporary Pumping System	1	LS	$20,000
	Sub Total			$457,000
	Contingency (30%)			$138,000
	Total Option 2			**$595,000**

ENR Construction Cost Index = 7692

8.0 Recommendations

Filtration Alternatives

Of the two proposed filtration technologies, the rotating disk system has significant advantages, which may make it the preferred treatment alternative. The rotating disk unit requires less floor space than the sand filtration units. The height of the rotating disk unit (~7 ft) is significantly less than the height of the sand filters, which stand approximately 20 ft and nearly reaches the height of the fence along the south-eastern wall of the plant. Because space is limited at the plant and the proposed tertiary equipment would be in close proximity to residences, the more compact rotating disk alternative may be better suited to the plant's layout.

The rotating disk system is also less expensive than the sand filtration alternative. The estimate for the sand filtration equipment ($156,700) is approximately 30% higher than the estimate for the rotating disk filter ($118,000).

Disposal and Reuse

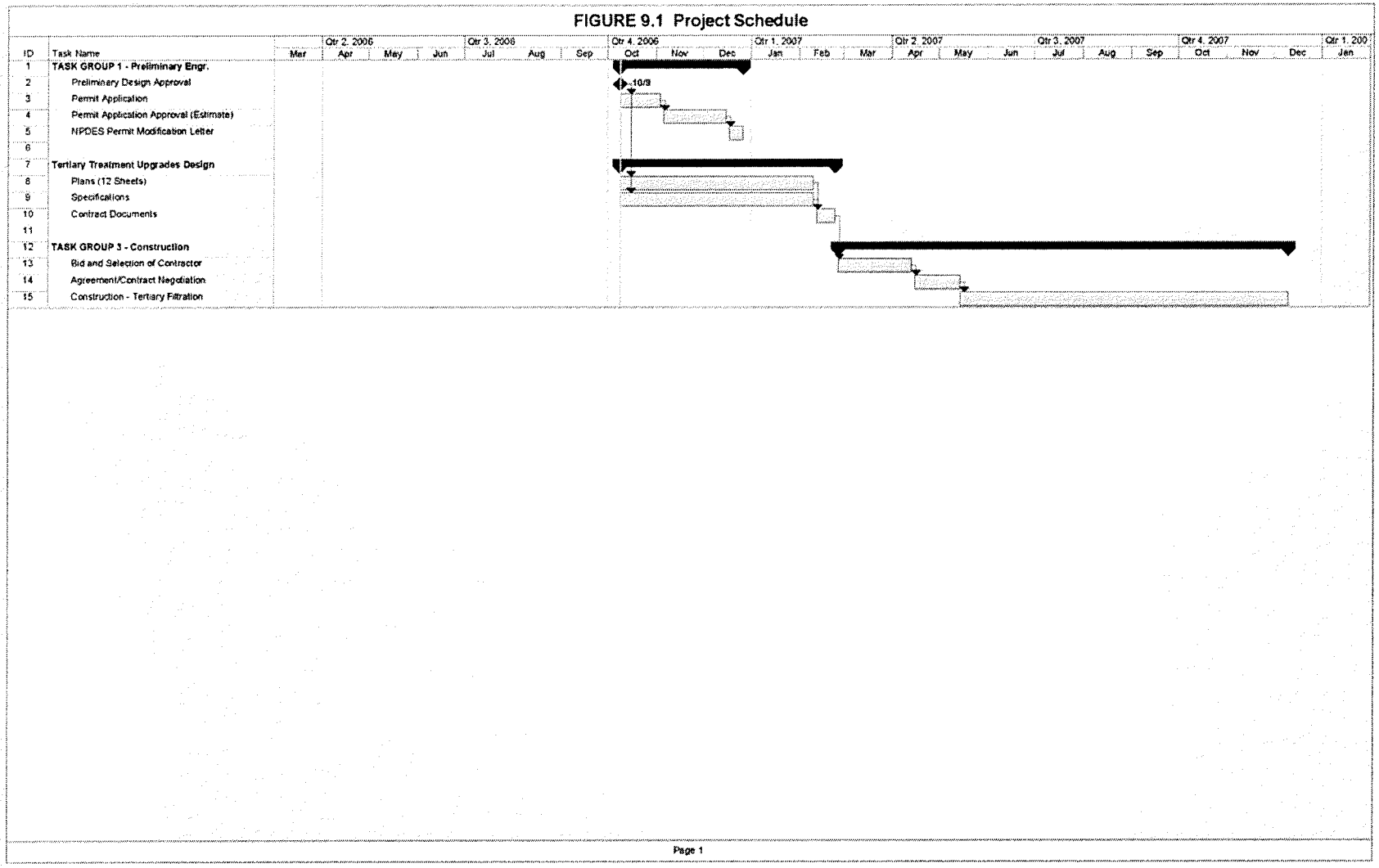
Additional components for producing Title 22 compliant tertiary disinfected recycled water were considered and included in the preliminary opinion of probable cost as Options 2A and 2B, and are discussed in Chapter 5. Since current demand for recycled water is minimal and a viable use of recycled water has not been determined, it is recommended that the district defer purchase of this additional equipment, and continue to discharge all effluent to the ocean outfall under the existing discharge permit. The additional equipment and requirements necessary for Title 22 compliance can be considered if a reuse alternative and recycled water distribution system becomes available.

9.0 Schedule

It is assumed that the County will issue an over-the-counter building permit for this project. If a Development Plan/Coastal Development Permit or a Minor Use Permit is required, the project schedule may be severely impacted.

A project schedule is provided as Figure 9-1.

FIGURE 9.1 Project Schedule



Appendix

Waste Discharge Permit
Rotating Disk Filter Design Report
Sand Filter Design Report

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2002-0046
NPDES NO. CA0047961
WDID#: ID#3 400110001

For

WASTE DISCHARGE REQUIREMENTS FOR SAN SIMEON COMMUNITY SERVICES DISTRICT AND LOCAL SEWERING ENTITY OF HEARST SAN SIMEON STATE HISTORICAL MONUMENT, SAN LUIS OBISPO COUNTY

The California Regional Water Quality Control Board, Central Coast Region, (hereafter "Board"), finds:

SITE OWNER AND LOCATION

1. San Simeon Community Services District (hereafter Discharger) operates a wastewater collection, treatment, and disposal system to provide sewerage service to the community of San Simeon and Hearst San Simeon State Historical Monument.

2. The Hearst San Simeon Historical Monument retains ownership and direct responsibility for wastewater collection and transport systems up to the point of discharge into interceptors owned and operated by the Discharger. It is incumbent upon this local sewering entity to protect the environment to the greatest degree possible and insure its local collection system, as well as the receiving sewerage system, are protected and utilized properly. This responsibility includes preventing overflows and may include restricting or prohibiting the volume, type, or concentration of wastes added to the system.

3. The Discharger's wastewater treatment facility is located on property owned by the Discharger in San Luis Obispo County, as shown on Attachment 3 of this Order.

PURPOSE OF ORDER

4. Existing Waste Discharge Requirements Order No. 97-15 expires May 30, 2002. These waste Discharge Requirements need to be modified and updated to reflect the new version of the Ocean Plan and to address ongoing nuisance and maintenance issues at the facility. An application for authorization to continue discharging wastes under the National Pollutant Discharge Elimination System (NPDES) was submitted on January 31, 2002 by the Discharger. NPDES Permit No. CA0047961 was last issued by the Board on May 30, 1997 (WDR Order No. 97-15).

FACILITY DESCRIPTION

5. **Design and Treatment Capacity-** The treatment system consists of comminution, activated sludge, sedimentation, disinfection, and dechlorination. Disposal of dewatered sludge is off-site at a landfill or by hauling of wet sludge off-site.. The treatment facility has an Average Dry Weather Flow design capacity of 0.20 MGD and peak wet weather capacity of 0.45 MGD.

6. **Discharge Type and Location** - Treated municipal wastewater is discharged to the Pacific Ocean through a 900-foot (244 m) outfall/diffuser system. The outfall terminates in the Pacific Ocean (35°36'32" N. Latitude, 121°09'05" W. Longitude) in approximately 20 feet (6.1 m) of water. The minimum initial dilution (seawater:effluent) of the discharge is 115:1. The outfall location is shown on Attachment A. Alternative locations and methods of disposal or recycling, including land based alternatives, were considered during planning under the Clean Water Grants Program.

7. The Environmental Protection Agency and this Board classify this discharge as a minor discharge (0.45 mgd).

8. Effluent is discharged to a portion of the Pacific Ocean designated as the Monterey Bay National Marine Sanctuary. The entire Monterey Bay was officially designated as a National Marine Sanctuary on September 15, 1992. The National Marine Sanctuaries Program is mandated by Title III of the Marine Protection, Research, and Sanctuaries Act of 1972. The Program protects areas of the marine environment that possess conservation, recreational, ecological, historical, research, educational, or aesthetic qualities of special national significance. The first priority of the Program is the long-term protection of resources within a sanctuary. The Monterey Bay Sanctuary has been recognized for its unique and diverse biological and physical characteristics.

9. **Ocean Plan** - The State Water Resources Control Board (State Board) most recently adopted the "Water Quality Control Plan, Ocean Waters of California-California Ocean Plan" (California Ocean Plan) on December 3, 2001. The Ocean Plan contains objectives and requirements governing discharges to the Pacific Ocean.

10. **Basin Plan** - The Water Quality Control Plan, Central Coast Basin (Basin Plan) was adopted by the Board and approved on September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State waters including the Pacific Ocean.

11. **Surface Water Beneficial Uses** - Existing and anticipated beneficial uses in the vicinity of the discharge include:

    a. Water Contact recreation;
    b. Non-contact water recreation;
    c. Preservation of Rare, Threatened, and Endangered Species;
    d. Navigation;
    e. Marine habitat;
    f. Shellfish harvesting;
    g. Ocean commercial and sport fishing; and,
    h. Wildlife habitat.

12. The shellfishing beneficial use (finding 10.f) exists wherever mussels, clams or oysters may be harvested for human consumption. To the knowledge of this Regional Board: 1) Mussels are present at most shoreline locations near the discharge; 2) clamming activity is minor although a resource may exist for little-neck clams on local cobble beaches; and, 3) oyster harvesting is nonexistent in the vicinity of the discharge at this time. Because mussels are available and may be harvested, the shellfishing beneficial use is existing and the shellfish harvesting bacterial limits specified in paragraph C.2. of this order apply.

13. The California Water Code Section 13263.6 requires this Permit include effluent limitations for all substances that are reported in toxic chemical release data reports prepared pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 USC section 11023). There are no industries in the San Simeon Community Services District service area and no toxic chemical release reports have been submitted to the San Simeon Community Services District. Therefore, there are no substances to report that fall under this rule.

14. Wastewater treatment facilities have the potential for a wide variation in pollutant loading. Potential exists for pollutants to be discharged at a level that may cause or contribute to an excursion above effluent limitations. For example, intermittent

disposal of household pesticides, detergents, and other toxics may not be captured by infrequent monitoring (and thus not be accounted for in a statistical analyses of the effluent), but may cause, or contribute to, an excursion above effluent limitations.

15. **CEQA** Waste discharge requirements for the existing discharge are exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with section 13389 of the California Water Code.

16. **Stormwater** from the treatment facility is directed to the wastewater treatment plant headworks and treated along with the wastewater.

17. **California Water Code (CWC) §13263.6(a).** This section was added to the CWC by the enactment of SB709 (Migden). The section requires the Regional Board to prescribe effluent limitations as part of the waste discharge requirements of a Publicly Owned Treatment Works (POTW) for all substances that the most recent chemical release data reported to the State Emergency Response Commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec.11023) (EPCRKA) indicate as discharged into the POTW, "for which the state board or the regional board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective."

18. **Anti-backsliding.** Effluent limitations included in Order No. RB3-2002-0021 the same as or more stringent to those in Order No. 96-21. Therefore, the proposed effluent limitations do not constitute backsliding in accordance with U.S.C. § 1342(O)(2)(b)(I).

19. **Reasonable Potential Analysis.** The Regional Board staff did not require nor did the Discharger propose to conduct a Reasonable Potential Analysis (RPA), identifying the potential for the Ocean Plan's Table B constituents to exceed an effluent limitation. Therefore, the proposed Order continues to specify effluent limitations for all Ocean Plan constituents.

GENERAL FINDINGS

20. A permit and the privilege to discharge waste into waters of the State is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or supplemented by implementing guidelines and regulations) and with any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act and as Waste Discharge Requirements pursuant to the California Water Code. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality due to the project.

CHANGES TO ORDER

21. This Order contains provisions requiring the Discharger to take measures to control the longstanding odor problems at the facility. Provision D.1 requires a full evaluation and date-specific plan of action for controlling odors and addressing ongoing maintenance and safety issues at the plant.

22. The proposed Order also incorporates wording and effluent limits from the newest version of the Ocean Plan. The State Water Resources Control Board State Board most recently adopted the "Water Quality Control Plan, Ocean Waters of California-California Ocean Plan" (Ocean Plan) on December 3, 2001. The Ocean Plan contains objectives and requirements governing discharges to the Pacific Ocean. The changes affect the effluent limits and/or classification of 12 constituents. Limits derived from the previous ocean plan and the 2001 version differ as shown in below:

* Changed to a carcinogen in 2001 Ocean Plan

	30-day average	30-day average
Constituent	**1997 OP**	**2001 OP**
thallium	162	0.2
chlorodibromomethane	---	998
1,2-dichloroethane	151	3.2
1,1-dichloroethylene*	823	0.1
dichlorobromomethane	--	7.9
heptachlor	83.5	0.006
heptachlor epoxide	--	0. 002
isophorone*	150,000	730
N-nitrosidi-N-propylamine	--	0.38
1,1,2,2-tetrachloroethane*	1,200	2.3
tetrachloroethylene	99	2.0
1,1,2 trichloroethane*	43,000	9.4

The Ocean Plan requirements for Toxicity have also changed slightly in the 2001 version.

- Acute Toxicity requirements have changed from an effluent limitation to a water quality objective of 0.3 TUa Daily Maximum
- A dilution credit of 10% of the zone of initial dilution is also granted for San Simeon.

This change slightly increases the acute toxicity limit for San Simeon and provides the Regional Board with more discretion in the application of acute toxicity limits.

The Newly adopted Ocean Plan includes new standards for minimum detection limits, which are detailed in the Monitoring and Reporting Program.

THE CLEAN WATER ENFORCEMENT AND POLLUTION PREVENTION ACT OF 1999

23. The Clean Water Enforcement and Pollution Prevention Act of 1999 (amendments to Water Code section 13385) became effective January 1, 2000. The Act requires the Board to impose mandatory penalties for certain violations. Failure to comply with NPDES Permit effluent limitations and certain other requirements and conditions may result in significant enforcement action by the Board.

24. On February 19, 2002, the Board notified the public and interested agencies of its intent to reissued waste discharge requirements for the Discharger, provided them with an opportunity to submit their written views and recommendations, and scheduled a public hearing.

25. In a public hearing on May 31, 2002 in San Luis Obispo, the Board heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.

IT IS HEREBY ORDERED, pursuant to authority in Section 13263 of the California Water Code, San Simeon Community Services District, its agents, successors, and assigns, may discharge waste at its San Simeon Treatment Facility, providing compliance is maintained with the following.

All technical and monitoring reports submitted pursuant to this Order are required pursuant to Sections 13267 and 13383 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the Discharger to enforcement action pursuant to Sections 13268 and 13385 of the California Water Code. The Regional Board will base all enforcement actions on the date of Order adoption.

(Note: General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for National Pollutant Discharge Elimination System Permits," dated January, 1985. Applicable paragraphs are referenced in paragraph E.5 of this Order.)

The following references are used throughout this Permit to indicate the source for the Permit condition:

OP	Water Quality Control Plan, Ocean Waters of California
84-78	State Water Resources Control Board Resolution No. 84-78
ROWD	The Discharger's Report of Waste Discharge
APM	Administrative Procedures Manual

[E] =40 CFR 122

[F] 40 CFR 419

[BP] Basin Plan

A. DISCHARGE PROHIBITIONS

1. The discharge of any radiological, chemical, or biological warfare agent or high-level radioactive waste into the ocean is prohibited. [OP]

2. Federal law prohibits pipeline discharge of sludge to the ocean; the discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, is prohibited. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited. [OP]

3. Discharge to the Pacific Ocean at a location other than 35° 36' 32" N. Latitude, 121° 09' 05" W. Longitude, shown on Attachment "A", is prohibited. [ROWD]

B. EFFLUENT LIMITATIONS

1. "Removal efficiencies" for Total Non-Filterable Residue (Suspended Solids) and Biochemical Oxygen Demand (BOD) shall not be less than 85 percent (40 CFR 133). In addition, effluent concentrations shall not exceed the following limits:

Constituent	Units	30-Day Average	7-Day Average	Daily Maximum
BOD_5	mg/l lbs/day kg/day	30 50* 23*	45 75* 35*	90 150* 70*
Total Non-Filterable Residue (Suspended Solids)	mg/l lbs/day kg/day	30 50* 23*	45 75* 35*	90 150* 70*

*For flows les than 0.2 MGD, mass emission rates shall not exceed the "Maximum Allowable Emission Rate"

2. Effluent shall not exceed the following limits:[B]

Constituent	Units	30-Day Average	7-Day Average	Daily Maximum
Grease and Oil	mg/l lbs/day kg/day	25 42* 19*	40 67* 31*	75 125* 52*
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75	100	225

*For flows les than 0.2 MGD, mass emission rates shall not exceed the "Maximum Allowable Emission Rate"

3. Effluent shall maintain pH within limits of 6.0 to 9.0 pH units at all times.[OP]

4. Effluent shall not exceed the following limits (minimum initial seawater:effluent dilution ratio equals 115:1):[OP, ROWD]

a. **PROTECTION OF MARINE AQUATIC LIFE**

Constituents	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	mg/l	0.58	3.37	8.94
Cadmium	mg/l	0.12	0.46	1.16
Chromium(Hex)[1]	mg/l	0.23	0.93	2.32
Copper	mg/l	0.12	1.16	3.25
Lead	mg/l	0.23	0.93	2.32
Mercury	µg/l	4.58	18.50	46.34
Nickel	mg/l	0.58	2.32	5.80
Selenium	mg/l	1.74	6.96	17.40
Silver	mg/l	0.08	0.31	0.79
Zinc	mg/l	1.40	8.36	22.28
Cyanide[2]	mg/l	0.12	0.46	1.16
Total Chlorine Residual	mg/l	0.23	0.93	6.96
Ammonia (as N)	mg/l	69.60	278.40	696.00
Acute Toxicity	TUa	N/A	3.75	N/A
Chronic Toxicity	TUc	N/A	116	N/A
Phenolic Compounds (non-chlorinated)	mg/l	3.48	13.92	34.80
Chlorinated Phenolics	mg/l	0.12	0.46	1.16
Endosulfan[3]	µg/l	1.04	2.09	3.13
Endrin	µg/l	0.23	0.46	0.70
Total Coliform Bacteria	MPN/100ml		230	2400
HCH[4]	µg/l	0.46	0.93	1.39
Radioactivity[5]	Not to exceed limits specified in California Code of RegulationsTitle 22, Chapter 15, Article 5, Section 64443.			

b. **PROTECTION OF HUMAN HEALTH -- NONCARCINOGENS**

Constituent	Units	30-Day Average
Acrolein	mg/l	25.520
Antimony	mg/l	139.200
bis(2-chloroethoxy) methane	mg/l	0.510
bis(2-chloroisopropyl) ether	mg/l	139.200
chlorobenzene	mg/l	66.120
chromium (III)	g/l	22.040
di-n-butyl phthalate	mg/l	406.000
dichlorobenzenes[6]	mg/l	591.600
diethyl phthalate	mg/l	3828.000
Dimethyl phthalate	g/l	95.120

[1] The chromium limit may be met as Total Chromium if the Discharger chooses.

[2] The cyanide limit may be met by the combined measurements of free cyanide, simple alkali metal cyanides and weakly complexed organometallic complexes upon approval of the Regional Board and the U.S. Environmental Protection Agency.

[3] Endosulfan shall mean the sum of endosulfan-alpha and –beta and endosulfan sulfate.

[4] HCH shall mean the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

[5] Effluent limitation on radioactivity shall apply to the undiluted combined effluent.

[6] Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Constituent	Units	30-Day Average
4,6-dinitro-2-methylphenol	mg/l	25.520
2,4-dinitrophenol	mg/l	0.464
ethylbenzene	mg/l	475.600
fluoranthene	mg/l	1.740
hexachlorocyclopentadiene	mg/l	6.728
nitrobenzene	mg/l	0.568
Thallium	mg/l	0.232
Toluene	g/l	9.860
tributyltin	ug/l	0.162
1,1,1-trichloroethane	g/l	62.640

c. **PROTECTION OF HUMAN HEALTH -- CARCINOGENS**

Constituent	Units	30-Day Average
acrylonitrile	ug/l	11.600
Aldrin	ng/l	2.552
Benzene	ug/l	684.400
benzidine	ug/l	0.008
beryllium	ug/l	3.828
bis(2-chloroe-thyl) ether	ug/l	5.220
bis(2-ethylhexyl) phthalate	ug/l	406.000
carbon tetrachloride	ug/l	104.400
chlordane*	ng/l	2.668
chlorodibromomethane	ug/l	997.600
chloroform	ug/l	15080.000
DDT*	ng/l	19.720
1,4-dichlorobenzene	ug/l	2088.000
3,3'-dichlorobenzidine	ug/l	0.940
1,2-dichloroethane	mg/l	3.248
1,1-dichloroethylene	mg/l	0.104
dichlorobromomethane	mg/l	0.719
dichloromethane	mg/l	52.200
1,3-dichloropropene	mg/l	1.032
Dieldrin	ng/l	4.640
2,4-dinitrotoluene	ug/l	301.600
1,2-diphenylhydrazine	ug/l	18.560
halomethanes*	mg/l	15.080
heptachlor*	ug/l	0.006
heptachlor epoxide	ug/l	0.002
hexachlorobenzene	ng/l	24.360
hexachlorobutadiene	ug/l	1624.000
hexachloroethane	ug/l	290.000
isophorone	g/l	0.085
N-nitrosodimethylamine	ug/l	846.800
N-nitrosodi-N-propylamine	ug/l	44.080
N-nitrosodiphenylamine	ug/l	290.000
PAHs*	ug/l	1.021

Constituent	Units	30-Day Average
PCBs*	ng/l	2.204
TCDD equivalents*	pg/l	0.452
1,1,2,2-tetrachloroethane	mg/l	0.267
tetrachloroethylene	mg/l	0.232
toxaphene	ng/l	24.360
trichloroethylene	ug/l	3132.000
1,1,2-trichloroethane	mg/l	1.090
vinyl chloride	ug/l	4176.000

* Based on California Ocean Plan criteria using a minimum initial dilution ratio of **115:1** (seawater:effluent). If the actual dilution is found to be less than this value, it will be recalculated and the Order revised. The chromium limit may be met as total chromium as the Discharger chooses. The cyanide limit may be met by the combined measurements of free cyanide, simple alkali metal cyanide and weakly complexed organometallic complexes upon approval of the Regional Board and the U.S. Environmental Protection Agency.

d. During any 24-hour period, the effluent mass emission rate shall not exceed the "Maximum Allowable Mass Emission Rate".

e. The Discharger shall report violations of the "Instantaneous Maximum" or "Maximum Allowable Daily Emission Rate" to the Executive Officer within 24 hours after discovery.

f. During any six-month period, the effluent mass emission rate shall not exceed the "Maximum Allowable Six month Median Mass Emission Rate."

5. Effluent daily dry weather flow shall not exceed a monthly average of 0.2 MGD (757 m^3/day).

6. Effluent shall be essentially free of materials and substances that:[OP]

a. float or become floatable upon discharge.

b. may form sediments which alter benthic communities or other aquatic life.

c. accumulate to toxic levels in marine waters, sediments or biota.

d. decrease the natural light to benthic communities and other marine life.

e. materials that result in aesthetically undesirable discoloration of the ocean surface.

C. RECEIVING WATER LIMITATIONS

(Receiving water quality is a result of many factors, some unrelated to the discharge. This permit considers these factors, and is designed to minimize the influence of the discharge in the receiving water.)

1. Floating particulates and grease and oil shall not be visible on the ocean surface.[OP]

2. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.[OP]

3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.[OP]

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.[OP]

5. The dissolved oxygen concentrations shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.[OP]

6. The pH shall not be changed at any time more

than 0.2 units from that which occurs naturally. [OP]

7. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions. [OP]

8. The median Total coliform density of receiving water shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml. [OP]

9. The concentration of substances set forth in Table B of the Ocean Plan shall not increase in marine sediments to levels that would degrade indigenous biota. [OP]

10. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life. [OP]

11. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota. [OP]

12. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded. [OP]

13. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered. [OP]

14. The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health. [OP]

15. Discharge of radioactive waste shall not degrade marine life. [OP]

D. COLLECTION SYSTEM MAINTENANCE AND RENOVATION PROGRAM

The Discharger shall implement a Collection System Maintenance and Renovation Program (Program). The Program shall operate, maintain, and replace the collection system to achieve the following goals:

1. Reduce overflows caused by, but not limited to the following:

   a. Blocked sewer laterals and mains; high flows caused by excessive inflow and infiltration exceeding manhole and pump station capacity;

   b. Inadequate pipeline capacity; and/or poor location of pipelines, lift stations, and manholes such that overflow occurs.

2. Increase reliability of system operations by means of, but not limited to, backup power generators, failure alarms, and/or computerized system monitoring and control.

3. In its annual report to the Executive Officer, the Discharger shall describe the following:

   a. The Program components, including short-term and long-term goals to:

      i. Replace and renovate sewer pipelines and lift stations,
      ii. Reduce illegal discharges into the sewer system, and
      iii. Finance the Program.

   b. Describe actions taken in the prior year according to the Program to achieve the goals specified above. The actions shall include, as appropriate and not limited to, the following: pipeline flushing, visual inspections, pipeline repair and replacement, lift station upgrades, and/or control system improvements.

   c. Summarize the prior year's overflows and actions taken in response.

E. PROVISIONS

1. The Discharger shall submit a report for Executive Officer approval no later than **August 1, 2002**. The report shall contain date specific milestones to address and control the persistent odors from the facility and to address the maintenance and safety concerns previously noted by Regional Board staff. The workplan shall at a minimum include:

a. A full consideration of all solutions (new and previously proposed) to the excessive odors at the treatment plant;

b. A summation of all safety and maintenance inadequacies at the treatment facility;

c. A full consideration of foreseeable changes of waste volume, process operation, effluent character, or reclamation opportunities that the San Simeon Community Services District expects over the next 5 years.

d. A conclusion and action plan to address the modifications and improvements identified in the above analysis; and

e. A date-specific timeline for the completion of system changes and improvements which this study determines necessary to address the odor and maintenance problems at the plant.

2. If the discharge consistently exceeds an effluent limitation based on a toxicity objective in Table 1, a toxicity reduction evaluation (TRE) is required. The Executive Officer will determine whether enforcement action will be initiated or whether the discharger will be required to implement the toxicity reduction evaluation (TRE) requirements. Discharger shall implement a toxicity reduction evaluation as outlined below: [EPA's Toxicity Reduction Evaluation Procedures; Phases 1, 2, and 3, EPA document Nos. EPA 600/6-91-003, 600/3-88/035 and 600/3-88/036, respectively, and TRE Protocol for Municipal Wastewater Treatment Plants (EPA 600/2-88/062) shall be the basis for this plan]

TOXICITY REDUCTION EVALUATION

Upon identifying noncompliance, in accordance with the reporting requirement noted above, the discharger shall initiate a TRE according to the following schedule:

	TASK	DEADLINE
1.	Take all reasonable measures necessary to immediately reduce toxicity, where source is known;	Within 24 hours of the identification of noncompliance
2.	Submit a TRE study plan detailing the toxicity reduction procedures to be employed to the Executive Officer (EO);	Within 60 days of the identification of non-compliance
3.	Initiate the TRE;	Within 7 days of notification by the EO
4.	Conduct the TRE following the procedures in the plan;	One year period or as specified in the plan
5.	Submit results of the TRE; include summary of findings, corrective action required, and data generated;	Within 60 days of completion of the TRE
6.	Complete TRE implementation to meet permit limits and conditions;	To be determined by the EO
7.	Return to regular monitoring upon final implementation of controls and approval	To be determined by the EO

of the EO.

3. The Discharger shall comply with "Monitoring and Reporting Program No. R3-2002-0046," as ordered by the Executive Officer.

4. The Discharger shall comply with all items of the attached "Standard Provisions and Reporting Requirements for National Pollutant Discharge Elimination System Permits," dated January 1985, (also referred to as "Standard Provisions"). Paragraph (a) of item E.1. shall apply only if the bypass is for essential maintenance to assure efficient operation.

5. The Discharger may request Permit modification should the Ocean Plan be revised during the term of the Permit. All requests shall be in writing and shall contain facts or reasons supporting the request.

6. This permit may be modified in accordance with the requirements set forth at 40 Code of Federal Regulations, Part 122 and 124, to include appropriate conditions on limits based on newly available information, or to implement an EPA-approved new state water quality objective.

7. This Order expires ***May 31, 2007***, and the Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code, not later than September 23, 2006, if it wishes to continue the discharge.

IT IS FURTHER ORDERED, that Hearst San Simeon State Historical Monument shall:

8. Comply with all applicable sections of the attached "Standard Provisions and Reporting Requirements".

9. Cooperate with the Discharger in implementing its pollutant source control program.

I, **Roger W. Briggs**, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on May 31, 2002.

Ordered By: _____
Roger W. Briggs, Executive Officer

Date: _____

S:\WB\Coastal Watershed\Staff\-Scott-\San Simeon\r3-2002-0046permit.doc

PROCESS DESIGN REPORT

SSWWTP TERTIARY UPGRADE, CA

Design#: 27759

Option: ADFP54x2/1EPC

Designed by Lenka Dixon on Tuesday, March 28, 2006

The enclosed information is based on preliminary data which we have received from you. There may be factors unknown to us which would alter the enclosed recommendation. These recommendations are based on models and assumptions widely used in the industry. While we attempt to keep these current, Aqua-Aerobic Systems, Inc. assumes no responsibility for their validity or any risks associated with their use. Also, because of the various factors stated above, Aqua-Aerobic Systems, Inc. assumes no responsibility for any liability resulting from any use made by you of the enclosed recommendations.

Design Notes

Filtration

- The following filter recommendation has been designed in accordance with the State of California Title 22 Code of Regulations related to recycled water.

A. The AquaDisk filters shall:
1. Provide a 24-hour average filtered effluent of < 2 NTU.
2. Provide a filtered effluent not to exceed 5 NTU for more than 5% of the time within a 24-hour period.
3. Provide a filtered effluent not to exceed 10 NTU at any time.

B. Filter influent turbidity is continuously measured, and shall not exceed 5 NTU for more than 15 minutes and never shall exceed 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater from the filter should the filter influent turbidity exceed 5 NTU for more than 15 minutes.

- The filter recommendation is based upon the following assumptions (as shown on the design sheet): 20 mg/l daily average Influent TSS, 34 mg/l maximum Influent TSS, 2 NTU Effluent TSS, and an acceptable upstream process such as an activated sludge plant with a minimum SRT of 10 days.

- The anticipated effluent quality is based upon filterable influent solids.

- Aqua-Aerobic Systems recommends covering cloth media filters in environments where bright sunlight is expected to cause excessive algae growth.

- For this application, pile cloth media filter cloth is recommended.

- The AquaDisk filter will only remove BOD5 that is associated with the TSS removed by the filter . Therefore, it is assumed that the secondary biological process will reduce the soluble fraction of the BOD5 to a concentration sufficiently less than the effluent total BOD5 requirement so as to allow the effluent BOD5 requirement to be met.

Pricing

- Pricing includes freight, installation supervision and start-up services.

- Pricing is based upon Aqua Aerobic Systems standard materials of construction and electrical components.

AquaDISK Tertiary Filtration - Design Summary

DESIGN INFLUENT CONDITIONS

Pre-Filter Treatment: Secondary

Avg. Design Flow	= 0.2 MG/day	= 138.9 gpm	= (756 m^3/day)
Max. Design Flow	= 0.2 MG/day	= 138.9 gpm	= (756 m^3/day)

			Effluent			
DESIGN PARAMETERS	**Influent**	**mg/l**	**Required**	**<= mg/l**	**Anticipated**	**<= mg/l**
Avg. Total Suspended Solids:	TSSa	20	TSSa	10	TSSa	10
Max. Total Suspended Solids:	TSSm	34	--	--	--	--
***Turbidity:**	NTU	5	NTU	2	NTU	2
Bio/Chem Oxygen Demand:	BOD5	10	BOD5	5	BOD5	5

*Note: Tubidity represented in Nephelometric Turbidity Units (NTU's) in lieu of mg/l.

AquaDISK FILTER SIZING CRITERIA

Filter Type:

Vertically Mounted Cloth Media Disks featuring automatically operated vacuum backwash . Tank shall include a hopper-bottom and solids removal manifold system.

Average Flow Conditions:

Average Hydraulic Loading = 4 gpm per square foot of filter area at Avg. Flow.
= (2.72 L/s per square meter of filter area at Avg. Flow.)

Filter Area Required = Avg. Design Flow (gpm) / Avg. Hydraulic Loading (gpm/ft^2) = 34.7 ft^2 = (3.23 m^2)

Maximum Flow Conditions:

Maximum Hydraulic Loading = 4 gpm per square foot of filter area at Max. Flow.
= (2.72 L/s per square meter of filter area at Max. Flow.)

Filter Area Required = Max. Design Flow (gpm) / Max. Hydraulic Loading (gpm/ft^2) = 34.7 ft^2 = (3.23 m^2)

Solids Loading:

Solids Loading Rate = 3.25 lbs TSS per square foot of filter area per day.
= (15.87 kg TSS per square meter of filter area per day.)

Filter Area Required = (lbs TSS/day) / Solids Loading Rate (lbs TSS/ft^2/day) = 17.5 ft^2 = (1.62 m^2)

AquaDISK FILTER RECOMMENDATION

Qty Of Filter Units Recommended = 1

Number Of Disks Per Unit = 1

Total Number Of Disks Recommended = 1

Total Filter Area Provided = 53.8 ft^2 = (5 m^2)

Filter Model Recommended = AquaDisk Package Model 54: 2 Disk Unit w/1 Disk

Equipment Summary

Cloth Media Filters

AquaDisk Tanks/Basins

1 Aquadisk model # ADFP-54x2/1E-PC package filter painted steel tank(s) consisting of:

- 2 disk tank(s) will be painted steel, estimated dry weight is 8,400 lbs., and estimated operating weight is 37,300 lbs..
The tank finish will be:
Interior: near white sandblast (SSPC-SP10), painted with Tnemec 66 polyamide epoxy (color "safety blue") 2 coats 4-6 mils each for 8-12 mils DFT.
Exterior: commercial sandblast (SSPC-SP6), painted with Tnemec 66 polyamide epoxy (color "safety blue") 2 coats 3-4 mils each, 1 coat Tnemec 175 endurashield 2-3 mils for 8-11 mils DFT.
- Effluent seal plate weldment.
- 3" ball valve(s).

AquaDisk Centertube Assemblies

1 Centertube Assembly(ies) consisting of:

- Centertube.
- Centertube carrier assembly.
- Centertube position maintainer.
- Centertube end support bearing kit(s).
- Effluent centertube lip seal.
- Centertube drive sprocket(s).
- 5/8" diameter 316 stainless steel media support rods.
- Neoprene media sealing gaskets.
- Effluent port cover plates.
- Pile cloth media and non-corrosive support frame assemblies.

AquaDisk Drive Assemblies

1 Drive System Assembly(ies) consisting of:

- Gear reducer and drive motor.
- Drive chain(s) with pins.
- Chain guard weldment(s).
- Warning label(s).
- Adjustable drive bracket weldment.
- Stationary drive bracket weldment.
- Drive spocket(s).

AquaDisk Backwash/Sludge Assemblies

1 Backwash Support Assembly(ies) consisting of:

- Backwash support weldment(s).
- 304 stainless steel temporary end angles.

1 External Piping Assembly(ies) consisting of:

- 2" wire reinforced flexible hose.

1 Backwash Hose Assembly(ies) consisting of:

- 3.75" O.D. high pressure hose.
- Pressure gauge(s).

1 Backwash System Assembly(ies) consisting of:

- Backwash collection nozzle.
- 304 stainless steel backwash collection manifold(s).
- 304 stainless steel threaded union(s).
- Sludge manifold(s).
- Combination nipple(s) for hose to pipe connection(s).

- Stainless steel backwash nozzle springs.
- 1 1/2" PVC flexible hose.
- 2" wire reinforced flexible hose.
- Stainless steel hose clamps.

1 Backwash Pump installation(s) consisting of:

- Backwash and sludge pump(s).
- Backwash pump throttling gate valve(s).
- 2" bronze 3 way ball valve(s).

AquaDisk Instumentation

1 Pressure Transducer Assembly(ies) consisting of:

- Level sensing pressure transducer(s).
- Schedule 80 PVC stilling tube(s).
- Float Switch(es).

AquaDisk Valves

1 Influent Valve(s) consisting of:

- 8" manual butterfly valve(s).

1 Set(s) of Backwash Valve(s) consisting of:

- 2" full port, three piece, stainless steel body ball valve(s), grooved end connections with single phase electric actuator(s). Valve / actuator combination shall be manufactured by TCI / Nibco or equal.

1 Sludge Valve(s) consisting of:

- 2" full port, three piece, stainless steel body ball valve(s), grooved end connections with single phase electric actuator(s). Valve / actuator combination shall be manufactured by TCI / Nibco or equal.

AquaDisk Controls w/Starters

1 Controls Package(s) will be provided as follows:

- NEMA 4X fiberglass enclosure(s).
- Starter 18 AMP 3-Pole.
- Allen Bradley Panelview 550 touch screen display(s).
- Panelview 550 operational cable.
- Allen Bradley SLC 5/04 integral programmable controller.
- Analog input card(s).

PROCESS DESIGN REPORT

SSWWTP TERTIARY UPGRADE, CA

Design#: 27728

Option: ADFP12x4EPC

Designed by Lenka Dixon on Friday, March 24, 2006

Design Notes

Filtration

- The following filter recommendation has been designed in accordance with the State of California Title 22 Code of Regulations related to recycled water.

A. The AquaDisk filters shall:
1. Provide a 24-hour average filtered effluent of < 2 NTU.
2. Provide a filtered effluent not to exceed 5 NTU for more than 5% of the time within a 24-hour period.
3. Provide a filtered effluent not to exceed 10 NTU at any time.

B. Filter influent turbidity is continuously measured, and shall not exceed 5 NTU for more than 15 minutes and never shall exceed 10 NTU, and that there is the capability to automatically activate chemical addition or divert the wastewater from the filter should the filter influent turbidity exceed 5 NTU for more than 15 minutes.

- The filter recommendation is based upon the following assumptions (as shown on the design sheet): 20 mg/l daily average Influent TSS, 34 mg/l maximum Influent TSS, 2 NTU Effluent TSS, and an acceptable upstream process such as an activated sludge plant with a minimum SRT of 10 days.

- The anticipated effluent quality is based upon filterable influent solids.

- Aqua-Aerobic Systems recommends covering cloth media filters in environments where bright sunlight is expected to cause excessive algae growth.

- For this application, pile cloth media filter cloth is recommended.

- The AquaDisk filter will only remove BOD5 that is associated with the TSS removed by the filter . Therefore, it is assumed that the secondary biological process will reduce the soluble fraction of the BOD5 to a concentration sufficiently less than the effluent total BOD5 requirement so as to allow the effluent BOD5 requirement to be met.

Pricing

- Pricing includes freight, installation supervision and start-up services.

- Pricing is based upon Aqua Aerobic Systems standard materials of construction and electrical components.

AquaDISK Tertiary Filtration - Design Summary

DESIGN INFLUENT CONDITIONS

Pre-Filter Treatment: Secondary

Avg. Design Flow	= 0.2 MG/day	= 138.9 gpm	= (756 m^3/day)
Max. Design Flow	= 0.2 MG/day	= 138.9 gpm	= (756 m^3/day)

			Effluent			
DESIGN PARAMETERS	**Influent**	**mg/l**	**Required**	**<= mg/l**	**Anticipated**	**<= mg/l**
Avg. Total Suspended Solids:	TSSa	20	TSSa	10	TSSa	10
Max. Total Suspended Solids:	TSSm	34	--	--	--	--
***Turbidity:**	NTU	5	NTU	2	NTU	2
Bio/Chem Oxygen Demand:	BOD5	10	BOD5	5	BOD5	5

*Note: Tubidity represented in Nephelometric Turbidity Units (NTU's) in lieu of mg/l.

AquaDISK FILTER SIZING CRITERIA

Filter Type:

Vertically Mounted Cloth Media Disks featuring automatically operated vacuum backwash . Tank shall include a hopper-bottom and solids removal manifold system.

Average Flow Conditions:

Average Hydraulic Loading = 4 gpm per square foot of filter area at Avg. Flow.
= (2.72 L/s per square meter of filter area at Avg. Flow.)

Filter Area Required = Avg. Design Flow (gpm) / Avg. Hydraulic Loading (gpm/ft^2) = 34.7 ft^2 = (3.23 m^2)

Maximum Flow Conditions:

Maximum Hydraulic Loading = 4 gpm per square foot of filter area at Max. Flow.
= (2.72 L/s per square meter of filter area at Max. Flow.)

Filter Area Required = Max. Design Flow (gpm) / Max. Hydraulic Loading (gpm/ft^2) = 34.7 ft^2 = (3.23 m^2)

Solids Loading:

Solids Loading Rate = 3.25 lbs TSS per square foot of filter area per day.
= (15.87 kg TSS per square meter of filter area per day.)

Filter Area Required = (lbs TSS/day) / Solids Loading Rate (lbs TSS/ft^2/day) = 17.5 ft^2 = (1.62 m^2)

AquaDISK FILTER RECOMMENDATION

Qty Of Filter Units Recommended = 1

Number Of Disks Per Unit = 4

Total Number Of Disks Recommended = 4

Total Filter Area Provided = 48 ft^2 = (4.46 m^2)

Filter Model Recommended = AquaDisk Package Model 12: 4 Disk Unit

Equipment Summary

Cloth Media Filters

AquaDisk Tanks/Basins

1 Aquadisk model # ADFP-12x4E-PC package filter painted steel tank(s) consisting of:

- MiniDisk tank(s) will be painted steel, estimated dry weight is 5,375 lbs., and estimated operating weight is 18,785 lbs. The tank finish will be:
Interior: near white sandblast (SSPC-SP10), painted with Tnemec 66 polyamide epoxy (color "safety blue") 2 coats 4-6 mils each for 8-12 mils DFT.
Exterior: commercial sandblast (SSPC-SP6), painted with Tnemec 66 polyamide epoxy (color "safety blue") 2 coats 3-4 mils each, 1 coat Tnemec 175 Endurashield 2-3 mils for 8-11 mils DFT.
- Effluent seal plate weldment.
- 3" ball valve(s).

AquaDisk Centertube Assemblies

1 Centertube Assembly(ies) consisting of:

- 304 stainless steel centertube weldment(s).
- Dual wheel carrier assembly(ies).
- Single wheel carrier assembly(ies).
- Centertube end support bearing kit(s).
- Effluent centertube lip seal.
- U.H.M.W. polyethylene multi-segment driven sprocket(s).
- 1/2" diameter 304 stainless steel media support rod(s).
- Neoprene media sealing gaskets.
- Pile cloth media and stainless steel support frame assemblies.

AquaDisk Drive Assemblies

1 Drive System Assembly(ies) consisting of:

- AGMA class I gearbox(es) with three phase 1/3 HP drive motor(s).
- Drive sprocket(s).
- Drive chain(s) with pins.
- Warning label(s).
- Chain guard.

AquaDisk Backwash/Sludge Assemblies

1 External Piping Assembly(ies) consisting of:

- Polypropylene quick coupler dust covers.
- Polypropylene quick couplers.
- 2" wire reinforced flexible hose.
- 2" bronze 3 way ball valve(s).
- 2" PVC angle globe pump throttling valve(s).
- 0 to 30 inches mercury vacuum gauge(s).
-Backflush hose assembly.
- Painted steel backwash and sludge discharge manifold(s).
- Pressure gauge(s).

1 Backwash System Assembly(ies) consisting of:

- Backwash collection nozzle.
- 304 stainless steel threaded union(s).
- PVC threaded coupling(s).
- Cam & Groove quick coupling(s) for hose to manifold.
- Stainless steel backwash nozzle springs.
- 1 1/2" PVC flexible hose.
- Combination nipple(s) for hose to pipe connection(s).

- 2" wire reinforced flexible hose.
- Stainless steel hose clamps.
- Sludge manifold(s).
- 304 stainless steel backwash collection manifold(s).

1 Backwash Pump installation(s) consisting of:

- Backwash and sludge pump(s).
- Backwash pump throttling gate valve(s).

1 Backwash Support Assembly(ies) consisting of:

- Backwash support weldment(s).

AquaDisk Valves

1 Set(s) of Backwash Valve(s) consisting of:

- 2" full port, three piece, stainless steel body ball valve(s), grooved end connections with single phase electric actuator(s). Valve / actuator combination shall be manufactured by TCI / Nibco or equal.

1 Sludge Valve(s) consisting of:

- 2" full port, three piece, stainless steel body ball valve(s), grooved end connections with single phase electric actuator(s). Valve / actuator combination shall be manufactured by TCI / Nibco or equal.

1 Influent Valve(s) consisting of:

- 6" manual butterfly valve(s).

AquaDisk Controls w/Starters

1 Controls Package(s) will be provided as follows:

- NEMA 4X fiberglass enclosure(s).
- Starter 18 AMP 3-Pole.
- Allen Bradley Panelview 550 touch screen display(s).
- Panelview 550 operational cable.
- Allen Bradley SLC 5/04 integral programmable controller.

1 Control Panel Accessories consisting of:

- Float Switch(es).
- 304 stainless steel float switch support bracket(s).

PARKSON CORPORATION

DYNASAND® CONTINUOUS BACKWASH SAND FILTER

Preliminary BUDGET Sizing
San Simeon WWTP, CA

APPLICATION : Tertiary Filtration

DESIGN DATA

Flow: **139** gpm = **0.2** mgd
Influent Solids: **20** mg/L TSS
Effluent Criteria: **5** mg/L TSS

RECOMMENDATIONS:

2 DynaSand Model DSF38 SBTF Package units

Filtration Area per unit	**38** ft²		
Loading Rate:	**1.83** gpm/ft2, all units in service	Total filtration area	**76** ft²
	3.65 gpm/ft2, with 1 unit(s) out of service		
Filtration depth	**40** in.		
Sand required per unit	**9**	Total sand requirement	**18** tons
Design headloss across filter	**36** in. WC	Typical headloss across filter	**18** to **24** inches
Total air consumption	**5.2** scfm	Recommended Compressor Package:	**Reciprocating**
		Package #:	**4S**
		Ingersoll-Rand Model :	**2-2340N5-S**
		Motor horsepower:	**5** hp
		Qty:	**1**

Total reject flow per unit **7** to **14** gpm continuous (on average)
Package filter dimensions: **7.0** ft dia. x **15.42** ft high

MATERIALS

Feed Assembly and Hardware: **304SS**
Tank: **304SS**
FRP: **Reject compartment**
Airlift pump: **PVC**

SCOPE

All filter internals, sand in jumbo bags
Local headloss gauge, low level float switch, NEMA 4X air control panel.
Access Ladder & Platform
Compressor package for outdoor use supplied by Parkson. Approximate Air Compressor Deduct: **$ 9,900**
Start-up visit including travel & living expenses.

BUDGET PRICING **$209,000** USD, FOB factory - Equipment & sand freight allowed, taxes extra.

SHIPMENT

Submittals 5 weeks after receipt of written purchase order.
Shipment 13 weeks after receipt of approved drawings or submittal waiver.

Pavol Plecenik
RM: SDY
20-Mar-06

2727 NW 62nd Street, Fort Lauderdale, FL 33309
tel: (954) 974-6610 fax: (954) 974-6182

PARKSON CORPORATION

DYNASAND® CONTINUOUS BACKWASH SAND FILTER

Preliminary BUDGET Sizing
San Simeon WWTP, CA

APPLICATION : Tertiary Filtration

DESIGN DATA

Flow: **139** gpm = **0.2** mgd
Influent Solids: **20** mg/L TSS
Effluent Criteria: **5** mg/L TSS

RECOMMENDATIONS:

3 DynaSand Model DSF19 SBTF Package units

Filtration Area per unit	**19** ft^2		
Loading Rate:	**2.44** gpm/ft2, all units in service	Total filtration area	**57** ft^2
	3.65 gpm/ft2, with 1 unit(s) out of service		
Filtration depth	**40** in.		
Sand required per unit	**4.6**	Total sand requirement	**13.8** tons
Design headloss across filter	**36** in. WC	Typical headloss across filter	**18** to **24** inches
Total air consumption	**4.8** scfm	Recommended Compressor Package:	**Reciprocating**
		Package #:	**4S**
		Ingersoll-Rand Model :	**2-2340N5-S**
		Motor horsepower:	**5** hp
		Qty:	**1**

Total reject flow per unit **5** to **8** gpm continuous (on average)
Package filter dimensions: **5.0** ft dia. x **12.33** ft high

MATERIALS

Feed Assembly and Hardware: **304SS**
Tank: **304SS**
FRP: **Reject compartment**
Airlift pump:

SCOPE

All filter internals, sand in jumbo bags
Local headloss gauge, low level float switch, NEMA 4X air control panel.
Access Ladder & Platform
Compressor package for outdoor use supplied by Parkson. Approximate Air Compressor Deduct: **$ 9,900**
Start-up visit including travel & living expenses.

BUDGET PRICING **$235,000** USD, FOB factory - Equipment & sand freight allowed, taxes extra.

SHIPMENT

Submittals 5 weeks after receipt of written purchase order.
Shipment 13 weeks after receipt of approved drawings or submittal waiver.

Pavol Plecenik
RM: SDY
21-Mar-06

2727 NW 62nd Street, Fort Lauderdale, FL 33309
tel: (954) 974-6610 fax: (954) 974-6182

ECO Resources, Inc.

December 5, 2006

Mr. Tom O'Neill
General Manager
San Simeon Community Services District
111 Pico Ave.
San Simeon, CA 93452

Subject: Results of Accuracy Test on Water Meter

Dear Mr. O'Neill,

We tested the water meter for the residence of Mrs. Yvonne Hartnett, 540 Pico Ave., Unit # 103 as directed. Mrs. Hartnett had initially complained that her water meter could not be correctly recording the water used at her residence.

On Nov. 7, 2006 we removed Hersey meter serial # 5774089 from her residence and placed that meter into a meter test apparatus we had constructed. The accuracy of the meter being tested was checked by comparing the flow of water over a period of twenty-eight days (From 11/7/06 to 12/5/06) that was routed through a new meter (test meter) as well as through the meter for the WWTP.

The National standard for the accuracy of water meters is set by the American Water Works Association (AWWA) and is contained in ANSI/AWWA C700-02 Section 4.2.8.1 which states: "Normal flow limits At any rate of flow within the normal test-flow limits as listed in Table 1, the meter shall register not less than 98.5 percent and not more than 101.5 percent of the water that actually passes through it."

The attached spreadsheet gives the pertinent details including the water consumed during the test period and the accuracy of the meter being tested against a new meter. The accuracy of her meter was determined to be 100.08 percent, which is within the accuracy specified by the AWWA standard.

If you have any questions regarding this matter please let me know.

Sincerely,

C. R. "Dan" Daniels
Facility Manager, ECO Resources, Inc., /San Simeon Community Services District

Results of Water Meter Test
Meter Removed from Location: 540 Pico Ave., Unit #103
Test Began on Nov. 7, 2006 @ 13:00
Test Ended on Dec. 5, 2006 @ 10:00

Meter Test Conducted by: Dan Daniels
Meter Test Witnessed by: Jerry Copeland

Meter Description	Meter Serial #	Meter Manufacturer & Type of Meter		Reading 11/3/2006	Reading 12/5/2006	Total Gallons Used for Test	Accuracy In Percent	Acceptable Range	Pass/Fail Test
Meter being tested	5774089	Hersey Meter, 430, 5/8"	Cubic Feet	2193	6194	**4001**	**100.08**	98.5 to 101.5	
Test Meter	44477813	Rockwell Sensus, S/II, 5/8"	Cubic Feet	0	3998	**3998**	**100.00**	98.5 to 101.5	Pass
WWTP Meter	5909528	Hersey Meter, 452, 1"	Cubic Feet	11965	15955	**3990**	**99.80**	98.5 to 101.5	Pass

ANSI/AWWA C700-02
(Revision of ANSI/AWWA C700-95)

American Water Works Association

The Authoritative Resource for Safe Drinking Water℠

AWWA Standard

Cold-Water Meters—Displacement Type, Bronze Main Case

Effective date: Jan. 1, 2003.
First edition approved by AWWA Board of Directors June 9, 1921.
This edition approved June 16, 2002.
Approved by American National Standards Institute: Oct. 11, 2002.

6666 West Quincy Avenue
er, CO 80235-3098
0.926.7337
www.awwa.org

Table 1 Characteristics of displacement-type meters

Meter Size		Safe Maximum Operating Capacity		Maximum Pressure Loss at Safe Maximum Operating Capacity		Recommended Maximum Rate for Continuous Operations*		Minimum Test Flow†		Normal Test Flow Limits†		Maximum Number of Disc Nutations or Piston Oscillations per		
in.	(*mm*)	*gpm*	(m^3/h)	*psi*	(*kPa*)	*gpm*	(m^3/h)	*gpm*	(m^3/h)	*gpm*	(m^3/h)	*10 gal*	ft^3	($0.01 m^3$)
1/2	(13)	15	(3.4)	15	(103)	7.5	(1.7)	1/4	(0.06)	1–15	(0.2–3.4)	875	657	(231)
1/2 × 3/4	(13 × 20)	15	(3.4)	15	(103)	7.5	(1.7)	1/4	(0.06)	1–15	(0.2–3.4)	875	657	(231)
5/8	(15)	20	(4.5)	15	(103)	10	(2.3)	1/4	(0.06)	1–20	(0.2–4.5)	580	435	(154)
5/8 × 3/4	(15 × 20)	20	(4.5)	15	(103)	10	(2.3)	1/4	(0.06)	1–20	(0.2–4.5)	580	435	(154)
3/4	(20)	30	(6.8)	15	(103)	15	(3.4)	1/2	(0.11)	2–30	(0.5–6.8)	333	250	(88)
1	(25)	50	(11.4)	15	(103)	25	(5.7)	3/4	(0.17)	3–50	(0.7–11.4)	153	115	(40)
1 1/2	(40)	100	(22.7)	15	(103)	50	(11.3)	1 1/2	(0.34)	5–100	(1.1–22.7)	67	50	(18)
2	(50)	160	(36.3)	15	(103)	80	(18.2)	2	(0.45)	8–160	(1.8–36.3)	40	30	(11)

*See Sec. B.5.1.

†See Sec. 4.2.8.

4.2.8.1 Normal flow limits. At any rate of flow within the normal test-flow limits as listed in Table 1, the meter shall register not less than 98.5 percent and not more than 101.5 percent of the water that actually passes through it.

4.2.8.2 Minimum flow rate. At the minimum test-flow rate to the lowest normal test-flow rate as listed in Table 1, the meter shall register not less than 95 percent and not more than 101 percent of the water that actually passes through it.

4.2.9 *Plastic covers, top or bottom design.* The design of plastic covers, top or bottom (Sec. 4.1.9), shall meet the following requirements:

4.2.9.1 Fatigue limit. Covers, top or bottom, shall be designed to be watertight and capable of withstanding, without exceeding the fatigue limit of the material or being structurally damaged, a hydrostatic pressure of two times the rated maximum working pressure (300 psi [2,100 kPa] minimum) for a period of 15 min.

4.2.9.2 Burst pressure. Covers, top or bottom, not designed to break shall be designed to have a burst pressure of at least four times the rated maximum working-line pressure (600 psi [4,200 kPa] minimum). Breakable covers, top or bottom, shall be designed to have a burst pressure of at least three times the rated maximum working-line pressure (450 psi [3,100 kPa]). Components shall be watertight at 150 psi (1,050 kPa) after being subjected to a minimum of 100,000 pressure cycles of 100–300 psi (700–2,100 kPa) in 1.5 sec and a hold time of 1 min and followed by an immediate release of pressure to the 100-psi (700-kPa) lower limit.

Sec. 4.3 Detailed Design

4.3.1 *Main casing.* All meters shall have an outer case with separate, removable measuring chambers. Cases shall not be repaired in any manner. The inlet and outlet shall have a common axis. Connection flanges shall be parallel.

4.3.1.1 Small-size meter casings. Casings of meters in sizes 1/2 in. (13 mm) through 1 in. (25 mm) shall be of either frost-protection or split-case design, as designated by the purchaser's specifications.

4.3.2 *Connections.*

4.3.2.1 1/2-in. (13-mm), 1/2-in. × 3/4-in. (13-mm × 20-mm), 5/8-in. (15-mm), 5/8-in. × 3/4-in. (15-mm × 20-mm), 3/4-in. (20-mm), and 1-in. (25-mm) meters. Main-case connections for meters 1/2-in. (13-mm) through 1-in. (25-mm) sizes shall be meter-casing spuds having external straight threads (NPSM) conforming to ANSI/ASME B1.20.1. When a 1/2-in. (13-mm) or 5/8-in. (15-mm) meter is provided with

San Simeon Community Services District

Superintendent's Report

November 2006

Superintendent's Report

(For November 2006)

November 7, 2006

The Wastewater Treatment Plant performed well overall during the month and the quality of water leaving the plant was extremely high quality for a secondary treatment plant such as this. We experienced one exceedance for Total Chlorine Residual, due to an equipment malfunction. The chemical feed pump for the dechlorination chemical (Sodium Bisulfite) did not deliver the amount of sodium bisulfite it was set to deliver and we experienced a Total Chlorine residual of 1.04 mg/l (milli-grams per liter which is the same as parts per million), whereas our permit limitation is 0.93 mg/l.

A short version of the problem is that we are experiencing "short-circuiting" within the Chlorine Contact Chamber (CCC) due to the design configuration. The term "short-circuiting" as used here means that instead of the treated water being held long enough after chlorine has been added to provide ample disinfection to take place, some of the water takes a shorter route through the four chambers and does not receive adequate disinfection. The problem is compounded by the fact that both of the chemical feed pumps, for metering in the application rate for the disinfecting agent Chlorine (Sodium Hypochlorite or liquid bleach) and for the dechlorinating agent Sodium Bisulfite, currently have to be adjusted or set manually and must be increased or decreased as the flow changes or when the quality of water from the process changes and creates a higher or lower chlorine demand. We are studying the problem and exploring solutions. Our recommendation will likely include the addition of electronic equipment such as chlorine analyzers and flow pacing as well as modifications to the chlorine contact chamber. These changes would allow for automatically adjusting the amount of chemicals added to the flow stream and insure adequate disinfection.

Last month I reported that a timer would be installed at a later date on the pump used to empty and clean the CCC. With the current configuration of the CCC, most of the accumulated trace solids settle out before they get within reach of the pump and, until such time that physical changes are made to the CCC we have decided that the cost/benefit ratio does not warrant installing a timer at this time.

Report prepared and submitted by Dan Daniels, Facility Manager, ECO Resources, Inc.

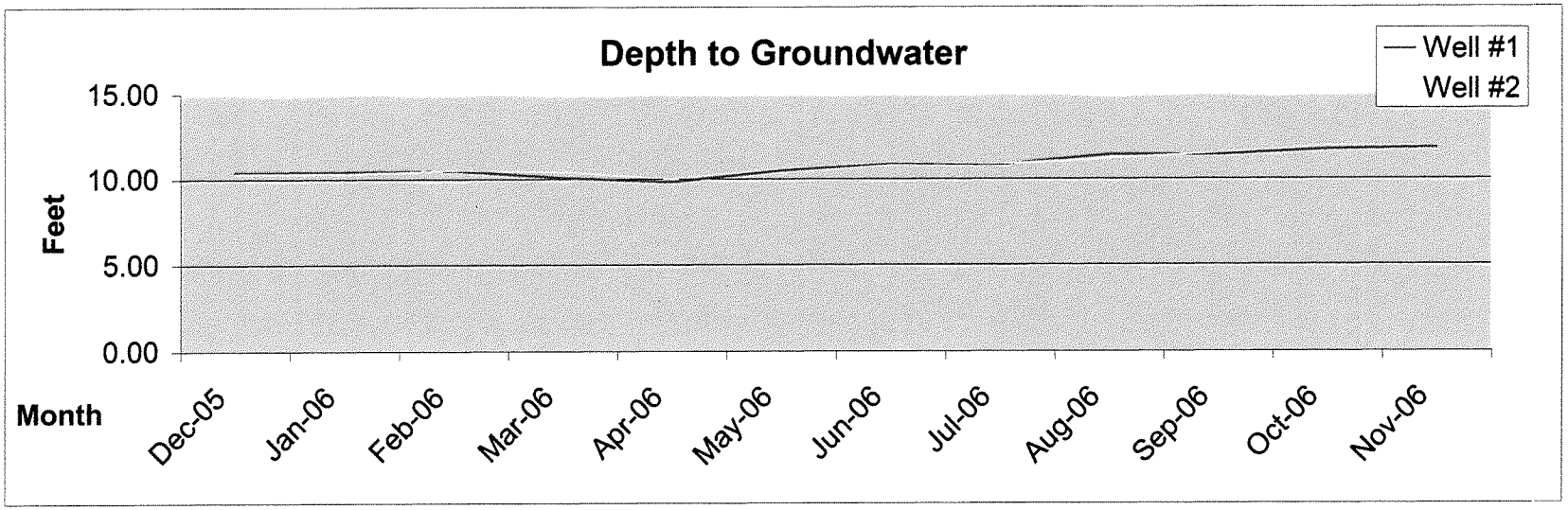
San Simeon Community Services District - Superintendent's Report - Monthly Data - November 2006

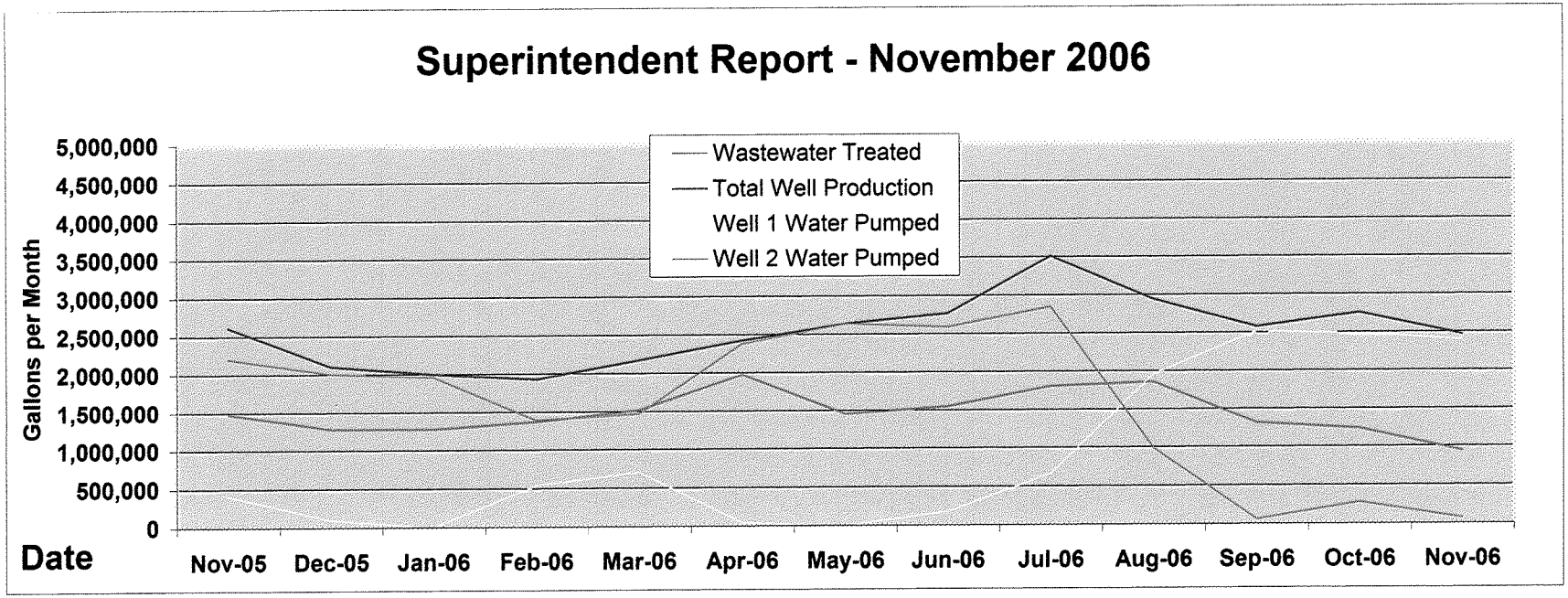
	INPUT Wastewater Inf Meter Tot	CALCULATED Wastewater Daily Flow	INPUT Well 1 Readings	CALCULATED Well 1 Total Pumped	INPUT Well 2 Readings	CALCULATED Well 2 Total Pumped	CALCULATED Total Daily Water Produced	INPUT Well 1 level	INPUT Well 2 level	INPUT State Sewer Daily Flow
31-Oct	514087		15168		35215					
11/1/06	543539	29,452	15375	155,285	35215	0	155,285	11.7	11.8	4,976
11/2/06	557542	14,003	15477	76,072	35215	0	76,072	11.7	11.8	5,396
11/3/06	569856	12,314	15577	74,576	35215	0	74,576	11.7	11.8	5,794
11/4/06	606490	36,634	15673	72,332	35215	0	72,332	11.8	11.9	6,990
11/5/06	631158	24,668	15779	79,288	35215	0	79,288	11.7	11.8	6,990
11/6/06	656000	24,842	15881	76,296	35215	0	76,296	11.7	11.8	6,089
11/7/06	680829	24,829	15982	75,398	35215	0	75,398	11.7	11.8	6,297
11/8/06	702090	21,261	16080	72,855	35215	0	72,855	11.7	11.8	4,893
11/9/06	716391	14,301	16170	67,694	35215	0	67,694	11.8	11.9	5,546
11/10/06	737989	21,598	16263	69,788	35215	0	69,788	11.8	12.0	5,410
11/11/06	752035	14,046	16375	83,626	35215	0	83,626	11.8	12.0	7,488
11/12/06	831029	78,994	16528	114,594	35215	0	114,594	On	11.8	10,023
11/13/06	872476	41447	16598	52,061	35215	0	52,061	11.7	11.8	7,376
11/14/06	886792	14,316	16698	74,875	35215	0	74,875	11.6	11.7	8,985
11/15/06	907418	20,626	16798	75,024	35215	0	75,024	11.7	11.8	4,909
11/16/06	930317	22,899	16891	69,265	35215	0	69,265	11.8	11.9	5,126
11/17/06	956195	25,878	16988	72,556	35215	0	72,556	11.8	11.9	4,841
11/18/06	987305	34,796	17066	58,494	35215	0	58,494	On	-	5,899
11/19/06	1016752	29,447	17115	36,577	35215	0	36,577	On	-	6,423
11/20/06	1053024	36,272	17224	81,158	35215	0	81,158	11.7	11.8	6,504
11/21/06	1094349	41,325	17336	84,000	35215	0	84,000	11.7	11.8	7,198
11/22/06	1122777	28,428	17353	12,866	35307	68,816	81,682	11.8	11.9	7,241
11/23/06	1127732	4,955	17465	83,776	35307	0	83,776	11.8	11.9	4,432
11/24/06	1164009	36,277	17667	150,872	35307	0	150,872	On	-	4,431
11/25/06	1247273	83,264	17804	102,700	35307	0	102,700	On	-	15,738
11/26/06	1345135	97,862	17965	120,204	35307	0	120,204	12.0	12.1	19,736
11/27/06	1417335	72,200	18073	80,634	35307	0	80,634	11.9	12.0	6,014
11/28/06	1425152	7,817	18176	77,642	35307	0	77,642	11.9	12.0	6,835
11/29/06	1454665	29,513	18278	75,922	35307	0	75,922	11.8	11.9	4,815
11/30/06	1496705	42,040	18370	69,115	35307	0	69,115	11.9	12.0	5,427
		Total Wastewater		Total Well 1		Total Well 2	Total Water Pumped			Total State WW
		986,304		**2,395,545**		68,816	2,464,361			207,822
			Average	**79,851**	Average	2,294	42,220	11.8	11.9	6,927
			Min	**12,866**	Min	0.00	36,577	11.6	11.7	4,431
			Max	**155,285**	Max	68,816.00	155,285	12.0	12.1	19,736

	San Simeon Community Services District - Superintendent's Report - Summary of Monthly Data - November 2006													
	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06	Total for 2006
Wastewater Treated	1,474,817	1,276,847	1,271,275	1,363,034	1,512,445	1,969,983	1,449,000	1,539,298	1,798,204	1,849,711	1,307,276	1,229,498	936,304	16,226,028
Total Well Production	2,610,520	2,099,786	1,995,888	1,926,324	2,167,480	2,418,658	2,633,708	2,767,600	3,509,616	2,940,538	2,571,699	2,755,408	2,464,361	28,151,280
Well 1 Water Pumped	411,101	97,016	0	540,654	701,474	43,758	0	177,276	663,476	1,955,721	2,514,327	2,479,919	2,395,545	11,472,151
Well 2 Water Pumped	2,199,419	2,002,770	1,955,888	1,385,670	1,466,005	2,374,900	2,633,708	2,590,324	2,846,140	984,817	57,372	275,488	68,816	16,639,128
Water Well 1 Avg Depth to Water	12.39	11.34	10.44	10.50	10.07	9.83	10.48	10.92	10.84	11.40	11.40	11.70	11.80	10.85
Water Well 2 Avg Depth to Water	12.51	11.51	10.34	10.53	10.44	10.02	10.61	10.97	10.87	11.20	11.50	11.90	11.90	10.93
State Wastewater Treated	445,552	614,742	705,247	397,658	292,804	456,107	315,899	315,831	429,805	417,679	285,432	239,387	207,822	4,063,671
State % of Total WW Flow	30.21	48	55.48	29.17	19.36	23.15	21.80	20.52	23.90	22.58	21.83	19.47	22.20	25.41
Biosolids Removal (Gallons)	18,000	0	6,000	6,000	12,000	6,000	12,000	*35,490*	*32,288*	28,223	25,180	24,607		187,788
WW Permit Exceed. Revised 12-7-06	***0***	***1***	***2***	***1***	***0***	***1***	***4***	***1***	***0***	***1***	***0***	***0***	***1***	***11***
Constituents Exceeded	*None*	*T Coliform*	*T Coliform*	*T Coliform*	*None*	*T Coliform*	*T Coliform*	*None*	*None*	*T Coliform*				
Sample Limit		***230***	***230***	***230***		***230***	***230***			***230***				
Sample Result		***240***	***240***	***500***		***900***	***300***			***240***				
			500				***1600***							
							350							
Constituents Exceeded							*Tot CL2*	*Tot CL2*					*Tot CL2*	
Sample Limit							***0.93***	***0.93***					***0.93***	
Sample Result							***7.1***	***52***					**1.04**	

Superintendent Report For November 2006

	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06
Well 1 Avg Depth	10.40	10.44	10.50	10.07	9.83	10.48	10.92	10.84	11.40	11.40	11.7	11.8
Well 2 Avg Depth	10.34	10.34	10.53	10.44	10.02	10.61	10.97	10.87	11.20	11.50	11.9	11.9




Superintendent Report - November 2006
Gallons per Month
5,000,000
4,500,000
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
Wastewater Treated
Total Well Production
Well 1 Water Pumped
Well 2 Water Pumped
Date
Nov-05
Dec-05
Jan-06
Feb-06
Mar-06
Apr-06
May-06
Jun-06
Jul-06
Aug-06
Sep-06
Oct-06
Nov-06

Other Reports
District Financials Summary

3.1.3.1 District Financials

November Billings	$34,261.18
October Billings	$41,638.26
Past Due	$3,027.43
LAIF Account	$900,400.64
SEP Account	$83,758.37
	$20,148.72
Accounts Payable	$82,389.04
Checking Account Balance	$39,276.61

Board of Directors-Regular Meeting
San Simeon Community Services District
MINUTES
Wednesday November 8, 2006 6:00 PM

1. Regular Session

1.1 Roll Call: All directors in attendance

1.2 Pledge of Allegiance

2. Public Comment: Dee Dee Ricci noticed soil samples being taken on some lots and inquired what the reason was. Chairperson Lambeth said that they were being taken on lots owned by a single person. No other information was known.

2.1 Sheriff's Report: No representative present

3. Staff Reports

3.1 General Manager's Report

3.1.1.1 Water Master Plan: General Manager Tom O'Neill stated that the completion of the plan will be delayed until December. It will be a month later than originally expected. Boyle Engineering had been looking for and found a surveyor that met their criteria for the Water System Evaluation.

3.1.1.2 Water System Evaluation: Staff is reviewing the Boyle Engineering draft evaluation. Presentation to the Board will be at the December meeting.

3.1.1.3 Wastewater Treatment Facility Upgrade: Staff is in the process of reviewing and commenting on the preliminary design from Boyle Engineering. Staff has been discussing the design with Boyle and will continue to refine some details. Once this is complete, sometime in January, staff will present it to the Board for review and comment.

3.1.1.4 Regional Water Quality Control Board Notice of Violation: Mr. O'Neill said there was an error in the original packet. It reads there were 60 exceedances and it should read only 20 exceedances. The fines for the violations amounted to $60,000. A hearing for the fines was scheduled December 1st and District Counsel Schultz has written a letter to the RWQCB requesting an extension until the February meeting so he may time to review the Notice of Violation.

3.1.2 Superintendent's Report: Facility Manager Dan Daniels said that in October the suction inlet pipes for equalization pumps #1 and 2 were replaced due to rust and the electrical components were replaced due to corrosion. One of the 60 Horsepower Blowers was serviced as called for by the manufacturer as well as two of the collector drive gear units. Wastewater flow was lower than summer months. The plant has performed well with no significant concerns arising.

3.1.3 District Financial Summary:

September Billings	$44,515.18
October Billings	$41,638.26
Past Due	$3,331.63
LAIF Account (new statement not available yet)	$918,746.91
SEP Account	$83,480.10
	$20,081.78
Accounts Payable	$42,496.99
Checking Account Balance	$35,639.56

3.2 District Counsel Report: District Counsel Schultz, besides his regular duties, sent a letter to the RWQCB requesting an extension on the hearing for the fines. A copy of the letter was not included in the packet so Mr. Schultz will provide copies to the Board. Mr. Schultz also created Resolution 06-312 recognizing David Kiech for his service to the community as Board Director.

4. Items of Business

4.1 Approval of Minutes- October 11, 2006: Director Russell requested the addition of the word "extraordinary" when describing the potential increase to the value of his property in section 5.4 of the minutes. Motion was made to approve the minutes with noted changes.

Motion made by Director Russell
Second by Director Fields
Approved 4-0 with changes. One abstention made by Director Mirabal-Boubion due to her absence at the previous meeting.

4.2 Approval of Warrants-October 1-31, 2006: Director Mirabal-Boubion would like to have the name of the Director who attended the Ethics Training noted on the warrant list. Mr. O'Neill suggests holding the check to CalPers for the unfunded liability until further description can be received.

Motion made by Director Russell
Second by Director Mirabal-Boubion
Approved 5-0 with removal of CalPers check for $2565

5. Discussion/Action Items

5.1 Resolution 06-312 recognizing David Kiech for his service to the San Simeon Community Services District:

Motion made to approve Resolution by Director Russell
Second made by Director Mirabal-Boubion
Approved 5-0 without exception

5.2 Board Committee Reports: None

5.3 Board Reports: None

6. Board/Staff General Discussions and Proposed Agenda Items: All board members have completed the required ethics training except Director Mirabal-Boubion who will be attending an ethics training class at the Community Center in Morro Bay before the end of the year.

Chairperson Lambeth asked resident Yvonne Hartnett if she wanted to make a comment regarding concerns of her water meter bill. Mr. O'Neill said that a second meter would be installed to test the accuracy of her meter. Until then, all late fees and dues in question would be waived until the accuracy of the meter can be determined.

Director Fields stated that the accountants at Crosby and Cindrich were not aware that the District pays for street cleaning and street lighting. This needs to be brought to their attention.

7. Adjournment 7:12 pm

San Simeon Community Services District
WARRANT REPORT
November 1-30, 2006

	Type		Date	Open Balance	Warrant #	Check #
Fields, Alan	Bill	DEC. Board Services	12/6/2006	$ 100.00	1312-001	5553
DeeDee Ricci	Bill	DEC. Board Services	12/6/2006	$ 100.00	1312-002	5571
Lambeth, Terry	Bill	DEC. Board Services	12/6/2006	$ 100.00	1312-003	5560
Mirabal-Boubion, Loraine	Bill	DEC. Board Services	12/6/2006	$ 100.00	1312-004	5558
Russell, John	Bill	DEC. Board Services	12/6/2006	$ 100.00	1312-005	5557
Schultz, Rob	Bill	District Counsel Services	12/6/2006	$ 1,575.00	1312-006	5559
ECO Resources	Bill	November Services	12/6/2006	$ 35,052.51	1312-007	5556
PERS Health	Bill	Health Insurance	12/6/2006	$ 313.22	1312-008	5554
Calif. Special Districts Assoc.	Bill	2007 Membership	12/6/2006	$ 591.00	1312-010	5563
Associated Pacific Constructors	Bill	Outfall Inspection	12/6/2006	$ 7,450.00	1312-011	5561
Bytes and Sites	Bill	Initial Domain Transfer/Site Configuration	12/6/2006	$ 400.00	1312-012	5562
PG and E	Bill	Street Lighting	12/6/2006	$ 1,275.41	1312-013	5564
Quinn Rental Services	Bill	Generator Rental	12/6/2006	$ 947.20	1312-014	5565
SWRCB	Bill	Annual fee for waste discharge requirements	12/6/2006	$ 3,008.00	1312-015	5567

Boyle Engineering	Bill	Task Order 1-06, 7-05, 3-05	12/6/2006	$	16,134.93	1312-016	5568
CA Larsen	Bill	Plant Upgrades	12/6/2006	$	13,849.77	1312-017	5569
SLO CO. Environmental Health	Bill	Hazardous materials and Groundwater fees	12/6/2006	$	1,292.00	1312-018	5566
Total:				**$**	**82,389.04**		

Discussion/Action Items
December 13, 2006

5.1 – SSCSD Board Members Interaction with Local Businesses – Director Russell requested staff supply the Board with information regarding the interaction of the Board with local business. Specifically staff was requested to submit answers to the following questions:

1) **What proportion of monies received by the District comes from local businesses?** Based on utility billing records revenue to the District is broken down as follows :

   Residential Billings $153,000
   Commercial Billings $357,000

2) **How many local business owners can vote in SSCSD elections?** Based on an unofficial survey it is estimated that approximately 3% to 4% of local business owners are eligible to vote in SSCSD elections.

3) **Is it appropriate for local business to participate in SSCSD elections**
   a) **Contribute funds to candidates**
   b) **Sponsor voters' meetings**
   c) **Sponsor mailings**

   District Counsel will address this question.

5.2 – State of California Share of Costs Associated with the Wastewater Treatment Plants Repairs and Upgrades – There are seven elements that makeup the majority of the costs associated with the District's repairs and upgrades of the wastewater treatment plant. They are:

1) New Plant Security Fencing
2) RWQCB Mandated Emergency Backup Generator
3) Engineering for State Mandated Immediate and Short Term Repairs
4) Engineering for State Mandated Plant Tertiary Treatment Upgrade
5) Development of a Water Master Plan
6) Implementation of Plant improvements as Defined in Gant Chart
7) Construction Costs Associated with Items 3 and 6 above

The total District funds spent on the seven items listed above so far is $325,000. The State of California has 25% stake in the Wastewater Treatment capacity and along with that capacity comes the responsibility for costs associated with the maintenance, repair and required upgrades. The General Manager and Directors Lambeth and Russell have had several meetings with the State on this

issue and we are now prepared to meet with the State once again and present them with our findings. As of today $81,250 could be considered as part of the State's responsibility. Staff requests direction and approval to present the State with an invoice for the above mentioned amount.

5.3 – Discussion with SLO County ~~Supervisor's~~ Representative Regarding Funding for San Simeon Community Services District Capital Improvement Projects – The General Manager and Directors Lambeth and Russell have engaged in conversation with Mr. Greg Haas, District Representative for Lois Capps, regarding assistance for acquiring funding for the District's needed capital improvements. The list below outlines the capital improvements needed and the estimated costs associated with those improvements:

1) Pipe Line Improvements -	$3,831,000
2) Wellhead Rehabilitation – Two Pumps	$320,000
3) Additional Reservoir (750,000 gal)	$1,450,000
4) Collection System Repair	$1,250,000
5) District Road Improvements	$750,000
6) Well Field Security	$200,000
7) RWQCB Required Plant Upgrade (Tertiary Upgrade)	$1,250,000
8) General Plan Implementation	$150,000
9) State of California Collection System Upgrade	$50,000
10) Contingencies and Escalation	$1,350,000

These nine capital improvement projects plus contingencies and escalation costs are estimated at $10.5M to the District. Staff is requesting the Board to review and comment on these projects so that we can finalize our project list to present to Mr. Haas. Details on each of these projects are available either in the Preliminary Design Report that is in the board packets or in the Water Master Plan which will be presented to the board in February. Mr. Haas has asked that the District present him with our Capital Improvements Project Requirements before the end of the year, therefore staff is requesting the Board to approve the list of projects for presentation to Mr. Haas.

5.4 - Direction from the Board Regarding Item 3.1.1.3 of the General Manager's Report – Based on the findings of the accuracy test performed on the water meter located at 540 Pico Ave. Unit #103, it is staff's opinion that the new meter has been reading correctly from the beginning and therefore all charges to the above referenced location are correct. Staff recommends reissuing the bill with all current and past due charges (minus late fees) to be due on or before January 25, 2007.