TO: BOARD OF DIRECTORS

FROM: EDWARD KREINS

DATE: JUNE 9, 2006

AGENDA ITEM
E-5
JUNE 14, 2006

CONSIDER APPROVING SOUTHLAND WASTEWATER TREATMENT FACILITY ACTION PLAN AND AUTHORIZE SUBMITTAL OF PLAN TO REGIONAL BOARD

ITEM

Consider editing/approving attached draft Action Plan and authorize staff to submit final Action Plan to the Regional Water Quality Control Board (RWQCB).

BACKGROUND

On February 7, 2006, NCSD received a Notice of Violation (NOV) from the RWQCB for the Southland Wastewater Treatment Facility in regard to historic elevated Biological Oxygen Demands (BOD) levels in the facilities discharge. Although the initial NOV ordered NCSD to respond by March 6, 2006, staff was able to secure an extension for response to July 6, 2006. On March 8, 2006 the Board authorized staff to process a Request for Proposals for consulting firms to respond to the NOV. On April 12, 2006, the District Board retained Boyle Engineering to prepare an Action Plan evaluating the causes of the violations and recommending actions to correct those causes. Attached is Boyle's draft Action Plan, which RWQCB staff have reviewed. Boyle is scheduled to present this plan to your Honorable Board at this meeting and secure any edits so that they can finalize the Action Plan and attach a Technical Memorandum detailing implementation schedules and responsibilities by the July 6, 2006 deadline. The Board should note that the Action Plan and Technical Memorandum constitute the first phase of Boyle's Assignment. The second phase (Phase II), yet to be contracted, would involve the development of a Facilities Master Plan for longer term upgrades to the Treatment Facility. Staff expects to request Board authorization to proceed with Phase II at your Honorable Board's July 26, 2006 Board Meeting.

District Staff and RWQCB Staff believe that the findings and the recommendations set forth in the Action Plan are valid and will significantly improve the performance of the facility. The Action Plan, however, also determines that additional improvements will be necessary to maintain the treatment capacity necessary to remain in compliance as influent flows increase. It should also be noted that the highest stress period for the treatment facility will be the period from late August through November when the temperatures are the highest. Staff will monitor the performance of the facility and report to the Board through out this period.

RECOMMENDATION

It is recommended that your Honorable Board edit/approve the attached Action Plan and authorize staff to submit it and the follow up Technical Memorandum to the RWQCB by the July 6, 2006 deadline set forth in the NOV.

ATTACHMENT

- Draft Action Plan

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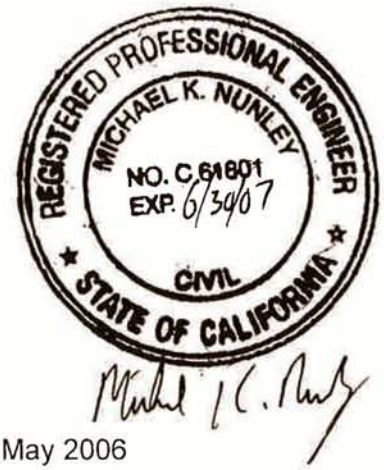
Southland WWTF Action Plan

Nipomo Community Services District

Capital Projects Assistant	Bruce Buel

Boyle Engineering Corporation

Project Manager	Joshua Reynolds, PE
Project Engineers	Michael K. Nunley, PE Kirk Gonzalez, EIT



May 2006

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

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1.0 Introduction

1.1 Background

The Nipomo Community Services District owns and operates the Southland Wastewater Treatment Facility (WWTF), which treats domestic wastewater from part of the Nipomo community under Waste Discharge Requirements Order No. 97-75. The WWTF has a permitted capacity of 900,000 gallons per day based on the maximum monthly demand.

On February 7, 2006, the District received a Notice of Violation (NOV) from Regional Water Quality Control Board (RWQCB) for the following violations reported during 2005:

- January – Biological Oxygen Demand (BOD_5) maximum and monthly average violations
- February – BOD_5 maximum and monthly average violations
- March – Suspended solids violation (lab error suspected)
- August – BOD_5 maximum and monthly average violations
- October – BOD_5 maximum and monthly average violations
- November – BOD_5 maximum and monthly average violations

According to the letter, no corrective actions plan had been submitted. The letter further stated:

Your reports include brief explanation of temporary corrective actions or concerns, but do not adequately address long term compliance, implementation schedules, or success of past actions.

It was noted that laboratory reports submitted with November monitoring information included results from two separate laboratories, and that analytical results reported by the two labs were significantly different. This made compliance evaluation or effectiveness of process alterations extremely difficult, from the RWQCB's perspective.

The letter included the following directives:

- Recommendation to investigate the dependability of analytical results in conjunction with investigation of treatment facility improvements;
- Submit a report of actions *needed to correct wastewater treatment facility deficiencies and discharge violations. The report shall include, but not be limited to; 1) a summary of actions needed to maintain compliance; 2) design of facility improvements; and 3) schedule for completing necessary corrective actions.*

Response was required by March 6, 2006, but an extension was granted to July 6, 2006, in a subsequent letter from RWQCB (March 3, 2006).

1.2 Scope of Work

In order to respond to the NOV, the District directed Boyle to perform the following services:

Phase I

Task 1 - Prepare an Action Plan for submittal to RWQCB. This report will include the following information:

- Review of previous Waste Discharge Requirement (WDR) violations and potential causes;
- Assessment of treatment pond capacity (including hydraulic parameters and aeration requirements) to meet current Waste Discharge Requirements (WDRs);
- Summary of work completed by operators to address violations and assessment of progress; and
- Schedule and approach for Technical Memorandum (Task Group 3) and optional Wastewater Facility Master Plan (Task Group 4 – if District desires to proceed with this Task).

This letter report comprises our Action Plan (Task 1)

Task 2 - Technical Memorandum for Immediate Improvements at WWTP
Prepare a technical memorandum to address operational changes, control scenarios, and "low-cost" improvements which will be accomplished within the next 30-90 days.

Phase II – Facility Master Plan

Upon successful completion of Phase I, the District will initiate Phase II of their strategy for planning future capital improvements for the WWTF. The Facility Master Plan will include the following tasks:

- Review of plant performance and capacity
- Development of design criteria - Projection of buildout flow demands, plant loading, and solids production and anticipation of future water quality standards for 20-yr planning horizon
- Facility improvements - Improvements will be recommended which will be implemented over the next 1-2 years to address existing deficiencies (other than minor items addressed in Technical Memorandum) and enhance plant performance. These improvements will help meet final Waste Discharge Requirements, will be compatible with future plant upgrades to meet buildout, but will not require major plant process modifications (such as conversion to a different treatment process).
- Alternatives evaluation for future plant improvements - Four (4) treatment process alternatives will be evaluated for meeting community needs at buildout.
- Capital improvements plan - The Master Plan will provide a phased capital improvements plan for the Wastewater Treatment Facility. It will include a schematic plan with recommended improvements, as well as a schedule and cost for implementation of the improvements.

2.0 Plant Performance

2.1 Treatment Process

The WWTF consists of an influent flow meter; comminutor; wetwell and pumping station; two (2) primary complete-mix ponds; two secondary ponds with an aerated cell and a stabilization cell; two sludge drying beds; and eight (8) percolation beds.

The WDR Order includes the following limits for the treatment facility.

Parameter	**Max 30-Day Mean**	**Max Daily**
Settleable Solids (SS) – ml/l	0.2	0.5
Suspended Solids (TSS) – mg/l	60	100
Biochemical Oxygen Demand, 5-day (BOD_5) – mg/l	60	100
Dissolved Oxygen - mg/L	Minimum 1.0	
Additional Limits/Requirements		
pH	6.5-8.4	
Receiving Groundwater	Nitrate levels shall not exceed 10 mg/l downstream of the disposal area. Groundwater samples upstream and downstream of the sprayfields shall not demonstrate a statistically significant increase in nitrate, sodium, chloride, and TDS.	

2.2 Flow Analysis

Table 1 summarizes plant flows from the past 2 years.

Table 1 – Historic Flow Data at WWTP

Month	PDF (mgd)	ADF (mgd)
Apr-04	0.904	0.459
May-04	0.714	0.453
Jun-04	0.663	0.472
Jul-04	0.694	0.470
Aug-04	0.694	0.489
Sep-04	0.738	0.497
Oct-04	0.616	0.443
Nov-04	0.652	0.456
Dec-04	0.703	0.473
Jan-05	0.897	0.582
Feb-05	0.834	0.611
Mar-05	0.812	0.625
Apr-05	0.885	0.622
May-05	1.156	0.729
Jun-05	1.047	0.761
Jul-05	1.714	0.791
Aug-05	1.400	0.556
Sep-05	0.999	0.577
Oct-05	2.024	0.641
Nov-05	0.679	0.533
Dec-05	0.888	0.547
Jan-06	1.899	0.654
Feb-06	0.736	0.551
Mar-06	0.870	0.570
	PDF= 2.024	**ADF = 0.565** **MMF = 0.791**

The table includes the peak daily flow (PDF = 2.0 MGD in October 2005), maximum month flow (MMF = 0.79 MGD from July 2005), and average daily flow (ADF = 0.565 MGD). The maximum month flow is the basis for the District's Waste Discharge Requirements and is limited to 0.9 MGD for this facility.

Operations staff has noted the plant's flowmeter, a Palmer Bowlus-type flume, often surcharges during high flow events which can result in inaccurate readings. In order to be accurate, these meters require a "free fall" from the outlet to prevent surcharging.

2.3 Plant Monitoring Reports

Table 2 summarizes treatment plant monitoring reports from the past 2 years. Results exceeding permit limitations are underlined.

Table 2 – Monitoring Records

Month / Year	Flow			BOD_5			TSS			DO			SS
	Min. (MGD)	Max. (MGD)	Mo. Avg. (MGD)	Min. (mg/L)	Max. (mg/L)	Mo. Avg. (mg/L)	Min. (mg/L)	Max. (mg/L)	Mo. Avg. (mg/L)	Min. (mg/L)	Max. (mg/L)	Mo. Avg. (mg/L)	Mo. Avg. (mg/L)
Apr-04	0.240	0.904	0.459	2.7	6.5	4.8	50	90	***65***	4.3	4.6	4.4	<0.05
May-04	0.224	0.714	0.453	3.1	***157.0***	***62.0***	20	70	45	***0.6***	3.6	1.7	<0.05
Jun-04	0.257	0.663	0.472	97.0	***155.0***	***124.4***	70	100	***85***	***0.2***	4.3	2.5	<0.05
Jul-04	0.292	0.694	0.470	35.0	95.0	***70.7***	30	90	60	***0.5***	2.1	1.2	<0.05
Aug-04	0.259	0.694	0.489	41.0	52.0	46.3	30	60	48	2.0	4.8	3.4	<0.05
Sep-04	0.299	0.738	0.497	21.9	64.6	41.2	40	50	42	4.2	5.7	4.7	<0.05
Oct-04	0.124	0.616	0.443	3.3	71.0	37.1	30	60	45	4.4	7.3	5.9	<0.05
Nov-04	0.147	0.652	0.456	30.2	49.0	39.3	40	***110***	***73***	4.2	7.3	6.0	<0.05
Dec-04	0.222	0.703	0.473	34.0	***122.0***	***67.6***	40	70	58	4.6	7.8	6.6	<0.05
Jan-05	0.220	0.897	0.582	69.0	***115.0***	***89.3***	50	70	60	4.7	7.8	5.9	<0.05
Feb-05	0.303	0.834	0.611	37.0	***101.0***	***72.8***	40	70	55	4.3	6.7	5.2	<0.05
Mar-05	0.458	0.812	0.625	44.0	56.1	49.8	20	***120***	44	2.8	4.8	4.1	<0.05
Average Value for Year			**0.503**			**59**			**57**			**4**	**<0.05**
Maximum Value for Year		**0.904**			**157.0**	**124.4**		**120**	**85**		**7.8**		
Annual Min	**0.124**			**2.7**			**20**			**0.2**			
Apr-05	0.330	0.885	0.622	2.9	40	25	20	20	20	4.2	7.0	5.4	<0.05
May-05	0.481	1.156	0.729	14.8	33.2	21	20	50	30	4.8	5.2	5.0	<0.05
Jun-05	0.484	1.047	0.761	3.8	43	31.7	40	50	42	5.3	5.9	5.5	<0.05
Jul-05	0.435	1.714	0.791	8	91	46.5	30	80	48	4.6	5.6	5.3	<0.05
Aug-05	0.381	1.400	0.556	43	***237***	***150.8***	20	40	28	5.4	5.9	5.7	<0.05
Sep-05	0.304	0.999	0.577	23.4	***218***	***116.6***	5	30	19	4.9	7.5	6.2	<0.05
Oct-05	0.359	2.024	0.641	33.3	***177***	***111.8***	30	50	40	3.9	5.8	5.1	<0.05
Nov-05	0.336	0.679	0.533	24.8	***176***	***91.4***	20	50	33	4.8	6.7	5.6	<0.05
Dec-05	0.362	0.888	0.547	29	***149***	***76.3***	10	40	28	6.2	6.9	6.7	<0.05
Jan-06	0.371	1.899	0.654	31.3	48	41.8	10	20	18	2.0	6.6	4.7	<0.05
Feb-06	0.305	0.736	0.551	23.7	50	34.8	20	20	20	2.5	5.9	3.7	<0.05
Mar-06	0.341	0.870	0.570	24.9	63	43.4	20	50	30	2.1	5.0	4.2	<0.05
Average Value for Year			**0.628**			**66**			**29**			**5.3**	**<0.05**
Maximum Value for Year		**2.024**			**237.0**	**150.8**		**80**	**48**		**7.5**		
Annual Min	**0.304**			**2.9**			**5**			**2.0**			

2.4 Process Capacity

The treatment capacity of the ponds was evaluated to meet the historic maximum month flow (0.79 MGD) based on hydraulic loading, BOD reduction, and aeration requirements.

Hydraulic Loading/BOD Reduction

The analysis included modeling of the ponds as partially-mixed reactors in parallel (Ponds 1 to 4 and 2 to 3) and in series (Ponds 1 to 2 to 3 to 4). The model applied a first-order rate equation to evaluate BOD reduction under two conditions: high flow, high temperature (summer conditions) and low flow, low temperature (winter conditions). Assumptions and calculations used in the model are included in the Appendix.

Plant Performance model results are summarized in Table 3:

Table 3 - Modeled Plant Performance – Historic Flows

Flow Pattern through Ponds	BOD_5 (mg/L)				
	Influent	Summer (.79 MGD)		Winter (.55 MGD)	
		Effluent	Reduction	Effluent	Reduction
Parallel 1 to 4 2 to 3	290	46	84%	49	83%
Series 1 – 2 – 3 – 4	290	30	90%	34	88%

Projected pond performance under the permitted maximum month flow of 0.9 MGD (assumed to occur in summer) is shown below in Table 4:

Table 4 - Modeled Plant Performance – Rated Capacity (0.9 MGD)

Flow Pattern through Ponds	BOD_5 (mg/L)		
	Influent	Effluent	Reduction
Parallel 1 to 4 2 to 3	290	53	82%
Series 1 – 2 – 3 - 4	290	37	87%

As shown above, operating all ponds in series should provide higher quality effluent than operating parallel trains. Under either scenario, the system has sufficient residence time to meet the month maximum limit of 100 mg/L BOD_5 and daily maximum of 60 mg/L.

Aeration Capacity

The aeration capacity was evaluated under two scenarios:

- Current aeration system (combination of conventional aerators and subsurface injectors); and
- 1998 aeration system (subsurface injectors only).

Since aeration efficiency in pond systems is affected by many factors (pond geometry, wind speed/direction, and temperature), our analysis neglects aeration through surface air transfer in order to provide a conservative analysis. Aeration systems are typically designed to meet the full oxygen demand of the wastewater, neglecting surface transfer.

Aeration calculations are included in the Appendix. Results are summarized below:

Table 5 Aeration Capacity

Design Flow	Required	1998 System	Current System
0.547 MGD	1,990	2,070[a]	3,180[a]
0.791 MGD	2,870	2,050[b]	3,260[b]
0.900 MGD	3,270	2,050[b]	3,260[b]

All units are lbs O_2 /day

[a]Aeration capacity for winter temperature (49.4°F)

[b]Aeration capacity for summer temperature (71.5°F)

It appears the subsurface diffusers did not have sufficient capacity to meet oxygen demands during critical periods. Mixing is another important role of the aeration system. Effective mixing in pond systems is usually accomplished with 0.1 to 2 hp/1000 cf. Ponds 1 and 2 each have a liquid volume of 295,700 cubic feet. Ponds 3 and 4 have a liquid volume of 250,380 cubic feet each (excluding the stabilization cells, which utilize 40% of the pond volume). The total volume is 1,092,000 cubic feet. Under the 1998 configuration, which relied on three 50-hp blowers for aeration and mixing, approximately 0.14 hp/1000 cf of mixing power was available if it was assumed each diffuser could deliver approximately 14 cfm. According to published ranges of performance for typical rigid tube diffusers, similar to the type used by the District, these tubes are expected to deliver 4 cfm[1]. This would result in approximately 0.04 hp/1000 cf of effective mixing energy in the ponds.

The current system includes 60 hp of surface aerators and 24 tube-type diffusers. It is estimated this system delivers 0.06 hp/1000 cf, which is 50% greater than the mixing energy which was available with the original aeration system.

The position and design of the subsurface diffusers were also problematic. Since the intakes for the diffusers are located near the base of the unit (approximately 1 ft above the bottom of the ponds), they tend to draw sludge, rags, and debris into the unit, resulting in clogging and ultimately failure if not cleaned. Clogged diffusers would result in significantly less oxygen transfer and mixing power than estimated above. This debris would also mixed back into the pond and would not be allowed to settle.

[1] Wastewater Engineering, 3rd Edition. Metcalf & Eddy (1991).

2.4 Potential Causes for Violations

Monitoring Data

One of the most significant challenges for District staff is the lack of adequate historic monitoring data for total BOD_5. In particular, it is difficult to evaluate past performance since soluble BOD_5 was tested (not total BOD_5) until May 2004.

Laboratory error may be a factor in the violations. The District began parallel laboratory analysis of BOD_5 in October 2005 to investigate this possibility. Significant discrepancies were noted in samples from two different laboratories (Fruit Growers Laboratories (FGL) and Creek Environmental Laboratories (CEL)), as shown in Table 6.

The most significant BOD_5 discrepancies between the two laboratories occurred in September, October, and November of 2005, with the Creek Environmental Laboratories significantly lower (30 to 90 mg/L difference) than the Fruit Growers Laboratories results.

Our staff contacted FGL to discuss the results, since District operations staff had noted that FGL had willingly admitted to past quality control problems. They reported that they experience irregular equipment errors which would affect their BOD results and could not provide a specific range of dates where the data might be questionable, due to one particular equipment failure or known discrepancy.

Aeration System Limitations

In general, poor settling of solids is expected in a "completely mixed" pond system. However, aeration and mixing performance are further impaired by the subsurface aerator design. The aerators are rigid tubes which contain perforated air pipes and two rotating impellers. The impellers are intended to break up the coarse air bubbles into finer bubbles. The operators have observed significant clogging and binding of these impellers by rags.

Poor oxygen transfer and mixing are expected in this subsurface aeration system since the impellers were frequently clogged, allowing coarse bubbles to release to the surface and preventing efficient oxygen transfer into the water. By inspection, it appears the mixing zones for these aerators are limited to a 1-2 foot radius around the impellers. Therefore, ponds do not appear to be "completely mixed" since the aerators were installed at a 12-foot spacing. This would further limit oxygen transfer to the ponds.

As presented in the process capacity section, the capacity of the diffusers (4 cfm) was a limitation in delivering air to the pond systems. The blowers were sized to deliver approximately 14 cfm per diffuser.

Ponds 3 and 4 continue to rely on subsurface diffusers. District staff intends to replace these diffusers with mechanical aerators in the future.

Position of Outlets

Vertical position of outlets from Ponds 2, 3, and 4 may draw "high solids" content if position is too high or too low. Optimal water quality is expected at 2 to 3 feet from the top of the water surface, to prevent capture of either algae and floating organics from the top or sludge from the bottom. The outlets in Ponds 1 and 2 were located approximately 5 feet from the bottom of the treatment ponds, but the outlet from Pond 1 was raised by approximately 3 feet in 2004. The planned liquid depth of the ponds is 11 feet, including 3 feet allowed for sludge storage and digestion at the base of the ponds.

The outlets in Ponds 3 and 4 were designed to operate as "floating" outlets which would adjust with the water level, in order to remain approximately 2 to 3 feet below the water surface. However, the operators have noted that the floating outlets did not function properly, resulting in the outlets dropping to the bottom of the ponds, and they have been evaluating alternatives to repair or replace them. The Pond 4 outlet was often a problem.

Sludge accumulation or position of the outlet in Pond 4 may explain why BOD results were significantly higher in Pond 4 than in Pond 3 for all dates where both ponds were sampled. If effluent samples had been taken from Pond 3, the plant would have met effluent limits in September, November, and December of 2005.

Sludge Accumulation

Sludge levels and position in ponds may contribute to effluent violations. The District measured sludge levels in the ponds on December 15, 2005. Results are included in the Appendix. Sludge had accumulated to the fixed outlet depth (approximately 5 feet from the pond bottom) near the outlet in Pond 2. It was also 4 or 5 feet deep near the curtain between the stabilization and aeration cells in Ponds 3 and 4.

Nitrification Processes

The District expanded their process monitoring program to evaluate BOD_5 from each pond and to measure carbonaceous BOD_5 in effluent. Results from this expanded monitoring program are summarized in Table 6. Nitrogenous BOD (NBOD) was calculated as the difference between carbonaceous and total BOD. Nitrogenous BOD results from the conversion of ammonia to nitrite and nitrite to nitrate.

The data in Table 6 indicates nitrogenous BOD is a significant component of total BOD in Pond 4 and the plant effluent. As shown, on January 18, 2006, two influent samples yielded BOD_5 results of 280 and 340 mg/L and $CBOD_5$ results of 250 and 340 mg/L, respectively, suggesting that 0 to 30 mg/L (0% to 10%) of the influent was attributable to nitrogenous BOD_5. January 25, 2006, results yielded 270 mg/L BOD_5, 226 mg/L $CBOD_5$, and an estimate of 44 mg/L $NBOD_5$ in plant influent. On that date, NBOD was approximately 16% of the total influent BOD. In November and December, 2005, NBOD attributed to 50 to 90% of the effluent BOD. This represents a significant increase of NBOD throughout the treatment process.

As discussed earlier, the lack of adequate aeration in Ponds 3 and 4 (which continue to rely on subsurface diffusers), coupled with the use of 40% of these ponds as stabilization cells, may result in the increase in nitrogenous BOD (possibly from ammonification) and total BOD between Pond 3 and the plant effluent, as shown in Table 6.

Table 6 - Summary of Available BOD Data from September 2005 through April 2006, mg/L

	Influent				Pond 1				Pond 2				Pond 3				Pond 4				Effluent			
	BOD	sBOD	cBOD	nBOD	BOD	sBOD	cBOD	nBOD	BOD	sBOD	cBOD	nBOD	BOD	sBOD	cBOD	nBOD	BOD	sBOD	cBOD	nBOD	BOD	sBOD	cBOD	nBOD
28-Sep-2005 CEL	220				37				38				20				110				110			
28-Sep-2005 FGL	280				39				42				25.1				159				199			
5-Oct-05 CEL	240																				27			
5-Oct-05 FGL																					33.3			
12-Oct-05 CEL	260																				44			
12-Oct-05 FGL	290																				81			
19-Oct-05 CEL	240																				74			
19-Oct-05 FGL	228																				156			
26-Oct-05 CEL	250																				150			
26-Oct-05 FGL	320																				177			
2-Nov-05 CEL	310																				38			
2-Nov-05 FGL																					101			
9-Nov-05 CEL	230				43				61				24				140				43/37		16/15	25
9-Nov-05 FGL	270				44				63				45				224				90	3.4		
16-Nov-05 CEL																							19	
16-Nov-05 FGL																							24.8	
7-Dec-05 CEL	330				59				60				34				180				200/230	170	28	187
7-Dec-05 FGL	290				47				51				37				222					2.5	26.8	
14-Dec-05 CEL																					110/ 130	29	22	98
14-Dec-05 FGL																					149		26.5	
21-Dec-05 CEL	280				46				43				24				88				41/40/45	12	19	23
21-Dec-05 FGL	240				45				37								145				43	ND	18.1	25
28-Dec-05 FGL																					84		16.6	
4-Jan-06 CEL	35				46				54				26				89				61/ 51/57	48	16	40
4-Jan-06 FGL	ND				51				59				27				154				47	2.2	21.4	26
11-Jan-06 CEL																					38		21	
11-Jan-06 FGL																					38/48			
18-Jan-06 CEL	340	160	340	0																	44	20	25	19
18-Jan-06 FGL	280	2.4	250	30																	31.3	91	20.2	11
25-Jan-06 CEL	270		226	44																	25		18	7
25-Jan-06 CEL					56	4.2	39	17	75	2.9	45	30	35	ND	19	16	149	ND	21	128	40.8	14.1		
1-Feb-06 FGL	310	95																			23.7	3.5	15.7	8
8-Feb-06 FGL	590																				30	5.6	14.7	15
15-Feb-06 FGL	380																				50	ND	19.4	31
22-Feb-06 FGL	280																				35.6	ND	22.9	13
1-Mar-06 FGL	147																				50		33	17
8-Mar-06 FGL	280																				63	2	50	13
17-Mar-06 FGL	173																				40	2.8	40	0
22-Mar-06 FGL	270																				39	5	40	(1)
29-Mar-06 FGL	240																				24.9	4.4	21.1	4
5-Apr-06 FGL	230/203	83			93	20.2	70	23	42	5.7	39	3	32	5.9	23	9					28.9	6.5	16.8	12
12-Apr-06 FGL	320																				42	5.3	14.5	28
19-Apr-06 FGL	360																				37/42	2.4/53	25.5/14.5	0

3.0 Summary of Plant Improvements

3.1 Improvements

Table 7 summarizes improvements performed by operators which would affect plant performance.

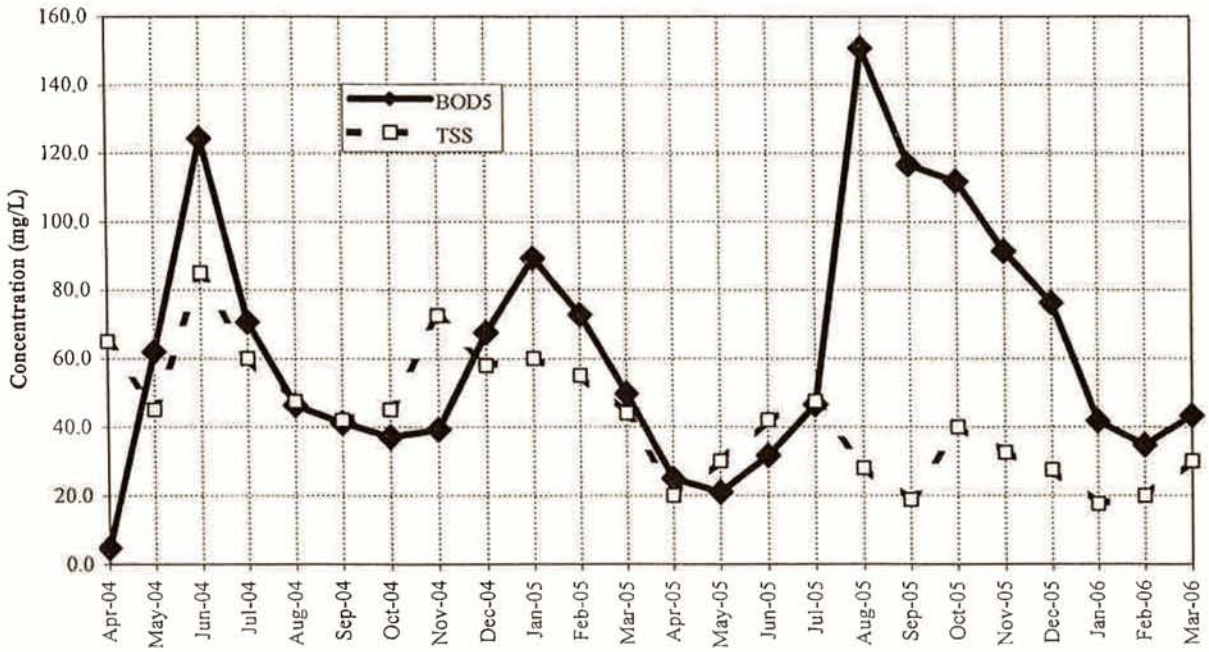
Table 7 – Improvements by Operators

Actions	Date
Phased replacement of subsurface aeration system with surface aerators	Spring 2004, Spring 2005, and Winter 2006
Sludge removed from Pond 1	May 2004
Raised outlet in Pond 1	June 2004
Began operating ponds in series	March 2005
Began running parallel samples at two different laboratories	September 2005
Flushed effluent channel and cleaned sampler	October 2005
Began recirculation from Pond 3 to the influent lift station	December 2005
Pond 4 taken offline	February 2006

3.2 Results

Figure 1 includes a graph of effluent BOD_5 and TSS.

Figure 1 - Effluent BOD_5 and TSS



All the improvements performed by operators thus far would improve the monitoring, performance, and operability of the plant. However, in our opinion the improvements in aeration and removal of Pond 4 from service would have the most significant and measurable impact in preventing future permit violations.

Improved Aeration

As discussed in previous sections, replacement of the subsurface diffusers with surface aerators is expected to deliver more oxygen and improve mixing in Ponds 1 and 2. The noticeable improvement in effluent BOD_5 between May-June 2004 and May-June 2005 may be a result of improved aeration. However, effluent BOD_5 and TSS were significantly higher in August, September, October, and November of 2005 than in the previous year. This may be a result of operating the ponds in series, as discussed previously, due to increase through Pond 4 of nitrogenous BOD_5 since aeration was inadequate in Ponds 3 and 4. If aeration was adequate, operating in series is expected to improve effluent quality. It could also be due to laboratory error, which is suggested by the difference in split samples analyzed in fall and winter of 2005.

Pond 4 Offline

BOD_5 and TSS are 20 to 60% lower in January, February, and March of 2006 as compared to the same period in 2005. The timing suggests this may be a result of recirculating effluent from Pond 3 or from taking Pond 4 offline. Since Pond 4 had higher total BOD_5 and NBOD than Pond 3, it appears taking this pond offline would have a significant impact. Since aeration to Pond 3 is primarily accomplished through the subsurface injectors, it is unlikely that recirculating this flow back to the headworks would result in an appreciable increase in available oxygen in Pond 1 as compared with the mechanical aerators in the primary ponds.

4.0 Conclusions

After reviewing the District's monitoring data, meeting with operations staff, observing the plant, and performing our capacity evaluation, we have concluded the following:

- The plant has sufficient volume to meet the permit limitations for BOD_5 and TSS;
- The WWTF could have met permit limitations in the fall of 2005 if Pond 4 had been taken out of service;
- Aeration capacity may not have been sufficient for mixing or oxygen transfer prior to installing mechanical surface aerators, but capacity should generally be sufficient now (except localized oxygen deficits in Ponds 3 and 4);
- Installation of mechanical aerators appears to have improved spring 2005 treatment performance over 2004 results;
- Possible causes of effluent violations include laboratory error, outlet position in the ponds, and inadequate aeration resulting in ammonification and nitrification in Ponds 3 and 4; and
- All the improvements performed by operators are expected to improve plant operability and performance. However, installing mechanical aerators and taking Pond 4 offline have apparently had a significant impact on effluent quality based on our analysis and review of plant monitoring data.

5.0 Recommendations

In order to address the plant's permit violations, and further improve plant operations, Boyle and the District will develop the following:

1. Technical Memorandum for "Immediate Improvements" at the WWTF – This Memorandum will present remedies for the potential causes of 2005 permit violations, as discussed in previous sections of this study. Objective is to identify any additional operational changes, monitoring, equipment items, or piping modifications which could be accomplished in the next 30-90 days to further enhance treatment performance. Memorandum will indicate which work items should be completed by operators and which will require assistance from a contractor, along with a schedule for completing this work. Memorandum will be submitted to RWQCB by July 6, 2006.

2. WWTF Master Plan – Objective is to develop design criteria (flow demand and water quality standards) for the new treatment facility, then to design and construct all improvements with the ultimate buildout demands and treatment goals in mind. Plan will include an implementation schedule and cost opinions for phased treatment facility improvements. Master Plan will be completed by April 30, 2007.

The following steps are recommended, as well:

- Find an alternative to Fruit Growers Laboratories for laboratory analysis, due to admitted quality control issues;
- Begin expanded sampling of nitrogen forms (TKN, nitrate, nitrite, and ammonia) and continue collecting CBOD and BOD data in each treatment pond on a biweekly basis (through November 2006) in order to evaluate nitrogen transformations through the pond series. At this time, we are uncertain of the role that ammonification and nitrification may have had in Fall 2005 permit violations. This sampling will the District to predict and/or evaluate whether the impact on BOD is significant. The District will allow submit an analysis of the results to RWQCB by December 31, 2006; and
- Continue with District's plans to install mechanical aerators in Ponds 3 and 4.

In a phone conversation with District staff on May 11, 2006, the District agreed to proceed with these recommendations.

Appendix

Pond Capacity Calculations

Sludge Measurements

BOD Removal in Ponds and Aeration Capacity of Original & current systems

$$\frac{C_n}{C_o} = \frac{1}{1+(k/nt)^n}$$ First order for *n* equally sized lagoons in series (ref. M&E p 843)

$$C = \frac{C_o}{1+(kV/Q)}$$ First order for each lagoon with unique volume and/ or removal rate (ref. M&E p 843)

Effluent BOD$_5$ Goal

C = 80 mg/L* (conserv. assumption of 80% of eff. Limitation)

Influent BOD$_5$

C_o = 290 mg/ L (2005 Max. month average BOD$_5$)

Estimated Inf. BOD$_u$ = 426.3 mg/ L (inf. BOD$_5$ x 1.47)

$k_T = k_{20}(1.036)^{T-20}$

k_{20} = 0.276 d^{-1} (first-order rate constant at 20°C)

T_L = 49.4 °F (Approximate ground temp., Dec)

= 9.7 °C 282.8 °K

T_H = 71.5 °F (Approximate ground temp., July)

= 21.9 °C 295.1 °K

k_L = 0.19 d^{-1}

k_H = 0.30 d^{-1}

Flows

Jul-06	0.791 mgd	= Q_H (July for conservative flow)
Dec-06	0.547 mgd	= Q_L
Permitted MMF	0.900 mgd	= Q_{MMF}

Volumes

Primary = 295,700 ft^3

= 2,211,984 gallons

*Fraction of Secondary Ponds for clarification: 0.4

Secondary = 250,380 ft^3 (total volume available for aeration)

= 1,872,968 gallons

Aeration requirement (oxygen demand)

O_2 demand (lb/ day) = Co x 1.5 x Q_{Ave} x 8.34e-6 Note: 1mg/L = 8.34e-6 lb/gal;

Calculated oxygen demands

Cu = 435 mg/ L (1.5 x Co)

Q_L = 547,000 gpd
Q_H = 791,000 gpd
Q_{MMF} = 900,000 gpd

Oxygen demand for low flow rate: **1,984.5 lb O_2/ day**
Oxygen demand for high flow rate: **2,869.7 lb O_2/ day**
Oxygen demand for permit MMFflow rate: **3,265.1 lb O_2/ day**

Original System Aeration Capacity

Subsurface diffuser count:

Primary 1:	54
Primary 2:	54
Secondary 1:	12
Secondary 2:	12
Total for system =	132 subsurface diffusers

No surface aerators in original system

Blowers:

	3 blowers (50HP)
	700 cfm/ blower
Total air flowrate =	**2100 cfm**

Check that blowers can supply sufficient airflow to diffusers:

Max possible air flowrate per diffuser: 15.9 ft^3/diffuser.min (up to 12 cfm typical)

Blowers have more than sufficient capacity for diffusers

Calculate standard oxygen transfer rate for original system:

Air flowrate per diffuser =	4 ft^3/min (typical, M&E Tbl 5-27)
Number of diffusers =	132 subsurface diffusers
Air flowrate to ponds =	528 ft^3 air/min
Assume:	21% O_2 in air (vol)
O_2 flowrate to ponds =	110.9 ft^3 O_2/ min

Convert volume to mass with ideal gas law pV = nRT

R =	0.08206 L.atm/ mol.°K
p =	1.3835 atm (13 ft of water)
T_L =	282.8 °K
T_H =	295.1 °K
V =	110.9 ft^3 O_2 / min
=	3,139.8 L
n_L =	187.2 moles O_2/ min
n_H =	179.4 moles O_2/ min
At. Wt. O_2 =	15.99 g/ mole
m_L =	2992.9 g O_2/ min
m_H =	2868.4 g O_2/ min
m_L =	6.6 lb O_2/ min
m_H =	6.3 lb O_2/ min

Standard O_2 transfer eff.: 28% (SOTE, M&E Tbl 5-27)

$SOTR_L$ =	1.85 lb O_2/ min
=	**2660.4 lb O_2/ day**
$SOTR_H$ =	1.77 lb O_2/ min
=	**2549.7 lb O_2/ day**

Calculate actual oxygen transfer rate for original system

$$AOTR = SOTR \times \frac{B\,C_W - C_l}{C_{S\,20}} \times 1.024^{T-20} \times a$$

$SOTR_L$ =	2660.4	lb O_2/ day
$SOTR_H$ =	2549.7	lb O_2/ day
B =	1	(salinity-surface tension factor, typically 1)
$C_{W\,L}$ =	11.0	mg/ L (oxygen saturation concentration at temp 9.7C and 300 ft, M&E)
$C_{W\,H}$ =	8.5	mg/ L (oxygen saturation concentration at temp 21.9C and 300 ft, M&E)
C_l =	2.0	mg/ L (operating oxygen concentration)
$C_{S\,20}$ =	9.08	mg/ L (oxygen saturation concentration at temp 20C)
T_L =	49.4	°F (Approximate ground temp., Dec)
=	9.7	°C
T_H =	71.5	°F (Approximate ground temp., July)
=	21.9	°C
a =	0.82	oxygen transfer correction factor for municipal wastewater
$AOTR_L$ =	**2072.18**	**lb O_2/ day (for original aeration system operating in winter)**
$AOTR_H$ =	**2045.85**	**lb O_2/ day (for original aeration system operating in summer)**

Current System Aeration Capacity

Subsurface diffuser count:

Primary 1:	0
Primary 2:	0
Secondary 1:	12
Secondary 2:	12
Total for system =	24 subsurface diffusers

Blowers:

3 blowers (50HP)
700 cfm/ blower

Total air flowrate = **2100 cfm**

Check that blowers can supply sufficient airflow to diffusers:

Max possible air flowrate per diffuser: 87.5 ft^3/diffuser.min (up to 12 cfm typical)

Blowers have more than sufficient capacity for diffusers

Calculate standard oxygen transfer rate for subsurface aerators in current system:

Air flowrate per diffuser = 4 ft^3/min (typical, M&E Tbl 5-27)
Number of diffusers = 24 subsurface diffusers

Air flowrate to ponds = 96 ft^3 air/min
Assume: 21% O_2 in air (vol)
O_2 flowrate to ponds = 20.2 ft^3 O_2/ min

Convert volume to mass with ideal gas law pV = nRT

R =	0.08206 L.atm/ mol.°K
p =	1.3835 atm (13 ft of water)
T_L =	282.8 °K
T_H =	295.1 °K
V =	20.2 ft^3 O_2 / min
=	570.9 L
n_L =	34.0 moles O_2/ min
n_H =	32.6 moles O_2/ min
At. Wt. O_2 =	15.99 g/ mole
m_L =	544.2 g O_2/ min
m_H =	521.5 g O_2/ min
m_L =	1.2 lb O_2/ min
m_H =	1.1 lb O_2/ min

Standard O_2 transfer eff.: 28% (SOTE, M&E Tbl 5-27)

$SOTR_L$ =	0.34 lb O_2/ min
=	**483.7 lb O_2/ day**
$SOTR_H$ =	0.32 lb O_2/ min
=	**463.6 lb O_2/ day**

Calculate actual oxygen transfer rate for subsurface aerators in current system

$$AOTR = SOTR \times \frac{B\,C_W - C_l}{C_{S\,20}} \times 1.024^{T-20} \times a$$

$SOTR_L$ =	483.7	lb O_2/ day
$SOTR_H$ =	463.6	lb O_2/ day
B =	1	(salinity-surface tension factor, typically 1)
$C_{W\,L}$ =	11.0	mg/ L (oxygen saturation concentration at temp 9.7C and 300 ft, M&E)
$C_{W\,H}$ =	8.5	mg/ L (oxygen saturation concentration at temp 21.9C and 300 ft, M&E)
C_l =	2.0	mg/ L (operating oxygen concentration)
$C_{S\,20}$ =	9.08	mg/ L (oxygen saturation concentration at temp 20C)
T_L =	49.4	°F (Approximate ground temp., Dec)
=	9.7	°C
T_H =	71.5	°F (Approximate ground temp., July)
=	21.9	°C
a =	0.82	oxygen transfer correction factor for municipal wastewater
$AOTR_L$ =	**376.76**	**lb O_2/ day (for original aeration system operating in winter)**
$AOTR_H$ =	**371.97**	**lb O_2/ day (for original aeration system operating in summer)**

Calculate actual oxygen transfer rate for low-speed surface aerators

$$N = N_o \times \frac{B\,C_W - C_l}{C_{S\,20}} \times 1.024^{T-20} \times a$$

N_o = 2.5 lb O_2/ HP.hr (O_2 transferred under std. cond. for low-speed surface)
B = 1 (salinity-surface tension factor, typically 1)
$C_{W\,L}$ = 11.0 mg/ L (oxygen saturation concentration at temp 9.7C and 300 ft, M&E)
$C_{W\,H}$ = 8.5 mg/ L (oxygen saturation concentration at temp 21.9C and 300 ft, M&E)
C_l = 2.0 mg/ L (operating oxygen concentration)
$C_{S\,20}$ = 9.08 mg/ L (oxygen saturation concentration at temp 20C)
T_L = 49.4 °F (Approximate ground temp., Dec)
= 9.7 °C
T_H = 71.5 °F (Approximate ground temp., July)
= 21.9 °C
a = 0.82 oxygen transfer correction factor for municipal wastewater

N_L = **1.95 lb O_2/ HP.hr (low temp)**
N_H = **2.01 lb O_2/ HP.hr (high temp)**

Available HP = 60 HP (for surface aerators)

$AOTR_L$ = **2804.1 lb O_2/ day (low temp)**
$AOTR_H$ = **2888.6 lb O_2/ day (high temp)**

Total oxygen transfer rate with current system

Sum of surface aerators in Ponds 1 & 2 and subsurface aerators in Ponds 3 & 4

$AOTR_L$ = **3180.8 lb O_2/ day (low temp)**
$AOTR_H$ = **3260.6 lb O_2/ day (high temp)**

Four Ponds in Series - Winter Season (Low temp & low flow condition)

Pond #1	V_1 =	2,211,984	gallons
	Q =	547,000	gpd
	k_L =	0.19	d^{-1}
	t =	4.04	days
	C_o =	290	mg/L
	C_1 =	163.4	mg/ L
Pond #2	V_2 =	2,211,984	gallons
	Q =	547,000	gpd
	k_L =	0.19	d^{-1}
	t =	4.04	days
	C_1 =	163.4	mg/ L
	C_2 =	92.1	mg/ L
Pond #3	V_3 =	1,872,968	gallons
	Q =	547,000	gpd
	k_L =	0.19	d^{-1}
	t =	3.42	days
	C_2 =	92.1	mg/ L
	C_3 =	55.6	mg/ L
Pond #4	V_4 =	1,872,968	gallons
	Q =	547,000	gpd
	k_L =	0.19	d^{-1}
	t =	3.42	days
	C_3 =	55.6	mg/ L
	C_4 =	**33.6**	**mg/ L**

total retention time = **14.94**

% reduction = **88%**

Four Ponds in Series - Summer Season (High temp & high flow condition)

Pond #1	V_1 =	2,211,984	gallons
	Q =	791,000	gpd
	k_H =	0.30	d^{-1}
	t =	2.80	days
	C_o =	290	mg/L
	C_1 =	158.8	mg/ L
Pond #2	V_2 =	2,211,984	gallons
	Q =	791,000	gpd
	k_H =	0.30	d^{-1}
	t =	2.80	days
	C_1 =	158.8	mg/ L
	C_2 =	86.9	mg/ L
Pond #3	V_3 =	1,872,968	gallons
	Q =	791,000	gpd
	k_H =	0.30	d^{-1}
	t =	2.37	days
	C_2 =	86.9	mg/ L
	C_3 =	51.1	mg/ L
Pond #4	V_4 =	1,872,968	gallons
	Q =	791,000	gpd
	k_H =	0.30	d^{-1}
	t =	2.37	days
	C_3 =	51.1	mg/ L
	C_4 =	**30.1**	**mg/ L**

total retention time = **10.33**

% reduction = **90%**

Four Ponds in Series - MMF Summer Season (High temp & MMF flow condition)

Pond #1	V_1 =	2,211,984	gallons	
	Q =	900,000	gpd	
	k_H =	0.30	d^{-1}	
	t =	2.46	days	
	C_o =	290	mg/L	
	C_1 =	168.0	mg/ L	
Pond #2	V_2 =	2,211,984	gallons	
	Q =	900,000	gpd	
	k_H =	0.30	d^{-1}	
	t =	2.46	days	
	C_1 =	168.0	mg/ L	
	C_2 =	97.3	mg/ L	
Pond #3	V_3 =	1,872,968	gallons	
	Q =	900,000	gpd	
	k_H =	0.30	d^{-1}	
	t =	2.08	days	
	C_2 =	97.3	mg/ L	
	C_3 =	60.2	mg/ L	
Pond #4	V_4 =	1,872,968	gallons	
	Q =	900,000	gpd	
	k_H =	0.30	d^{-1}	
	t =	2.08	days	
	C_3 =	60.2	mg/ L	
	C_4 =	**37.3**	**mg/ L**	total retention time = **9.08**
	% reduction =	**87%**		

Two Ponds in Series, Two parallel flow trains - Winter Season (Low temp & low flow condition)

Pond #1	V_1 =	2,211,984	gallons
	Q =	273,500	gpd
	k_L =	0.19	d^{-1}
	t =	8.09	days
	C_o =	290	mg/L
	C_1 =	113.8	mg/ L
Pond #4	V_3 =	1,872,968	gallons
	Q =	273,500	gpd
	k_L =	0.19	d^{-1}
	t =	6.85	days
	C_1 =	113.8	mg/ L
	C_3 =	**49.2**	**mg/ L**
Pond #2	V_2 =	2,211,984	gallons
	Q =	273,500	gpd
	k_L =	0.19	d^{-1}
	t =	8.09	days
	C_o =	290	mg/L
	C_2 =	113.8	mg/ L
Pond #3	V_4 =	1,872,968	gallons
	Q =	273,500	gpd
	k_L =	0.19	d^{-1}
	t =	6.85	days
	C_2 =	113.8	mg/ L
	C_4 =	**49.2**	**mg/ L**

total retention time = **14.94**

% reduction = **83%**

Two Ponds In Series, Two parallel flow trains - Summer Season (High temp & high flow condition)

Pond #1	V_1 =	2,211,984	gallons	
	Q =	395,500	gpd	
	k_H =	0.30	d^{-1}	
	t =	5.59	days	
	C_o =	290	mg/L	
	C_1 =	109.3	mg/ L	
Pond #4	V_3 =	1,872,968	gallons	
	Q =	395,500	gpd	
	k_H =	0.30	d^{-1}	
	t =	4.74	days	
	C_1 =	109.3	mg/ L	
	C_3 =	**45.5**	**mg/ L**	
Pond #2	V_2 =	2,211,984	gallons	
	Q =	395,500	gpd	
	k_H =	0.30	d^{-1}	
	t =	5.59	days	
	C_o =	290	mg/L	
	C_2 =	109.3	mg/ L	
Pond #3	V_4 =	1,872,968	gallons	
	Q =	395,500	gpd	
	k_H =	0.30	d^{-1}	
	t =	4.74	days	
	C_2 =	109.3	mg/ L	
	C_4 =	**45.5**	**mg/ L**	total retention time = **10.33**
% reduction =		**84%**		

Two Ponds in Series, Two parallel flow trains MMF Summer Season (High temp & MMF flow cond.)

Pond #1	V_1 =	2,211,984	gallons
	Q =	450,000	gpd
	k_H =	0.30	d^{-1}
	t =	4.92	days
	C_o =	290	mg/L
	C_1 =	118.2	mg/ L
Pond #4	V_3 =	1,872,968	gallons
	Q =	450,000	gpd
	k_H =	0.30	d^{-1}
	t =	4.16	days
	C_1 =	118.2	mg/ L
	C_3 =	**53.0**	**mg/ L**
Pond #2	V_2 =	2,211,984	gallons
	Q =	450,000	gpd
	k_H =	0.30	d^{-1}
	t =	4.92	days
	C_o =	290	mg/L
	C_2 =	118.2	mg/ L
Pond #3	V_4 =	1,872,968	gallons
	Q =	450,000	gpd
	k_H =	0.30	d^{-1}
	t =	4.16	days
	C_2 =	118.2	mg/ L
	C_4 =	**53.0**	**mg/ L**

total retention time = **9.08**

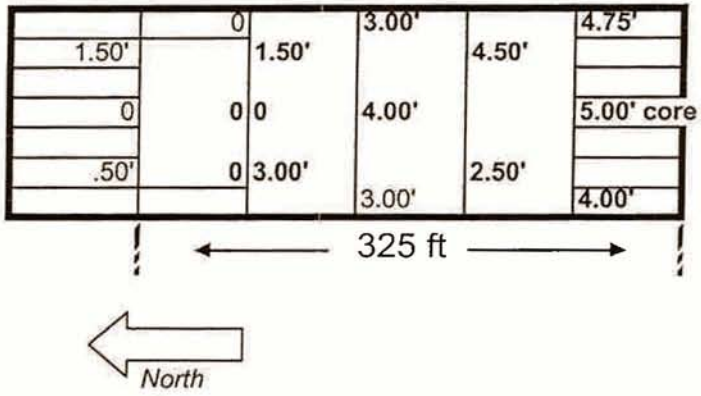
% reduction = **82%**

*M&E Reference: Wastewater Engineering Treatment and Reuse, 4th Edition

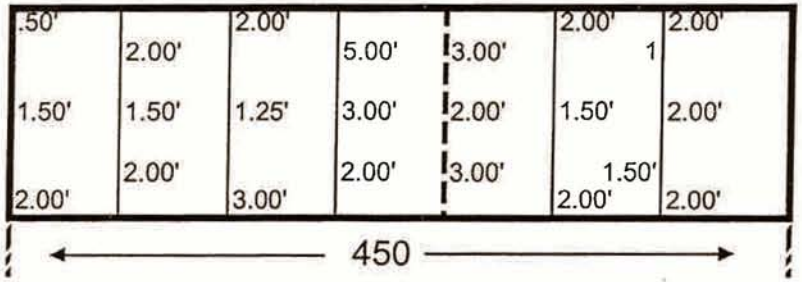
Southland Waste Water Plant

Sludge Survey as of 12/15/05

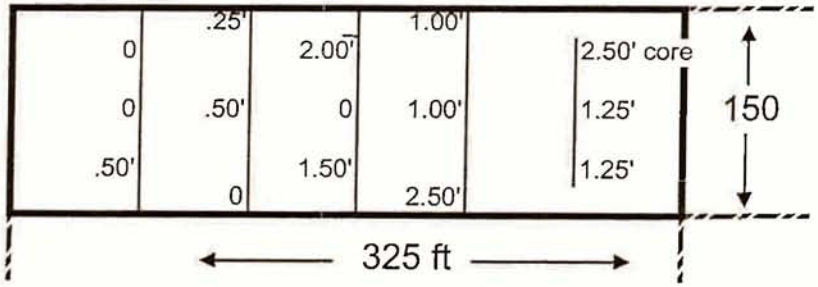
Pond 2 primary



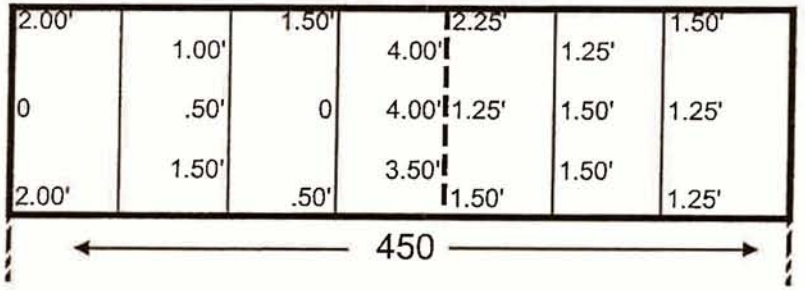
Pond 3 secondry



Pond 1 primary



Pond 4 secondary



TO: BOARD OF DIRECTORS

FROM: EDWARD KREINS

DATE: JUNE 9, 2006

AGENDA ITEM
E-6
JUNE 14, 2006

GENERAL MANAGER SALARY RANGE RECOMMENDATION

ITEM

Consider recommendation from Ralph Andersen & Associates (RAA) to revise potential salary range for General Manager Position

BACKGROUND

Tom Bacchetti of Ralph Anderson and Associates submitted the attached memorandum to President Vierheilig regarding the advertised salary range for the General Manager position. Based on the comparison of positions developed by RAA, Mr. Bacchetti is recommending that your Honorable Board "may want to consider increasing the salary range for the position in order to assure the best opportunity of attracting a quality pool of applicants."

RECOMMENDATION

It is recommended that your Honorable Board provide direction to the Personnel Committee and direct the Personnel Committee to contact RAA regarding the Board's determination.

T:\BOARD MATTERS\BOARD MEETINGS\BOARD LETTER\BOARD LETTER 2006\GM Salary Range Negotiations.doc

Snapshot salary data Hi Larry,

It was good to talk with you earlier today about my concerns regarding the current salary range offered to the General Manager position. As mentioned, two factors precipitated my call: first was a review of our data base looking for potential candidates to whom we might reach out. The second was knowledge of a recent RFP distributed by the Rosamond Community Services District and the salary range they will be offering for a very similar job.

As promised, we've attached a spreadsheet with comparative data. There are 31 comparisons. Of the 31, we've highlighted (in yellow) 13 for purposes of comparison understanding that this is not a carefully researched compensation survey. The 13 represent some potential candidates.

The 32nd comparison is the salary range for a search being organized to find the next General Manager for the Rosamond Community Services District.

Given this data, the Directors of the Nipomo CSD way want to consider increasing the salary range for the position in order to assure the best opportunity of attracting a quality pool of candidates.

Id be happy to talk with you further on this subject.

Cordially,

Tom Bacchetti
Senior Associate
Ralph Andersen & Associates
San Francisco, CA (415) 550-8065
Mobile (415) 269-2769
E-mail: TBacchetti@ralphandersen.com

Corporate Office:
5800 Stanford Ranch Road, Suite 410
Rocklin, CA 95765
(916) 630-4900
Fax: (916) 630-4911
Website: www.ralphandersen.com

Comparative Snapshot of Some Existing Salaries

	A	B	C	D	E
1	**Title**	**Employer**	**Employer City/State**	**Salary**	**Effective Date**
2	Deputy General Manager	Municipal Water Department	San Bernardino, CA	$117,000	May-04
3	Former Director of Municipal Utilities	City of Stockton	Stockton, CA	$126,000	May-03
4	Former Director of Public Works	City of San Juan Capistrano	San Juan Capistranto, CA	$137,000	Apr-06
5	Deputy City Administrator	City of Yuma	Yuma, AZ	$133,000	Jun-06
6	Deputy District Engineer and Chief Project Director	US Army Corps of Engineers	Sacramento, CA	$136,000	Jan-06
7	Director of Utilities	City of Santa Maria	Santa Maria, CA	$136,000	Feb-06
8	Senior Civil Engineer	City of Oxnard	Oxnard, CA	$109,000	Mar-06
9	Assistant General Manager/CFO	Cucamonga County Water District	Rancho Cucamonga, CA	$129,996	Apr-04
10	Water & Environmental Manager	City of Chino	Chino, CA	$84,300	Jun-05
11	Public Works Director	City of Newberg	Newberg, OR	$81,984	Sep-05
12	General Manager	El Dorado Irrigation District	Placerville, CA	$160,000	May-06
13	Former U.S. Commissioner	Intl. Boundary & Water Commission	El Paso, TX	$162,100	Oct-05
14	Chief of Water Resources	City of Redlands	Redlands, CA	$108,000	May-04
15	Former Director of Public Works	City of Solvang	Solvang, CA	$93,000	May-03
16	General Manager	Irvine Ranch Water District	Irvine, CA	$185,000	Jan-04
17	Assistant General Manager/Treasurer	Citrus Heights Water District	Citrus Heights, CA	$100,000	Oct-04
18	General Manager	Rubidoux Community Services District	Riverside, CA	$168,000	Mar-04
19	Director of Planning	Rancho California Water District	Temecula, CA	$151,000	Oct-05
20	Former Public Work Director/City Engineer	City of Riverbank	Riverbank, CA	$82,000	Jan-04
21	Director of Public Works	City of Pico Rivera	Pico Rivera, CA	$113,400	May-06
22	Director of Water Resources Management	Eastern Municipal Water District	Perris, CA	$103,800	Oct-05
23	Senior Engineering Manager	Parsons Brinkerhoff	San Diego, CA	$142,000	Nov-05
24	General Manager	Hi-Desert Water District	Yucca Valley, CA	$106,000	May-04
25	Director of Public Works	City of Glenn Heights	Glenn Heights, TX	$64,000	Oct-05
26	Associate General Manager	Municipal Water District of Orange	Fountain Valley, CA	$113,000	May-04
27	Chief Operations Officer	Children and Families Commission	Irvine, CA	$135,000	Feb-06
28	Director, Facilities Maintenance Department	U.S. Defense Department	Camp Pendleton, CA	$108,000	Oct-05
29	Public Works Director	City of Placerville	Placerville, CA	$90,000	May-04
30	Director of Water and Wastewater	Holland Board of Public Works	Holland, MI	$95,000	May-04
31	Executive Director	Regional Water Authority and Sacramento Groundwater Authority	Sacramento, CA	$124,500	Sep-04
32					
33	General Manager	Rosamond Community Services District	Rosamond, CA	$100,000 to $130,000	Open
34					

TO: BOARD OF DIRECTORS

FROM: EDWARD KREINS

DATE: JUNE 9, 2006

AGENDA ITEM
G
JUNE 14, 2006

MANAGER'S REPORT

ITEM

Standing report to your Honorable Board
Period covered by this report May 20 through June 9, 2006

DISTRICT BUSINESS

Administrative

Unless the Board has any concerns, it will be our plan to commence printing the agendas for future meetings on two sided paper. We believe this will not only save paper costs, but will reduce the size of materials necessary to bring to meetings. If the Board has any questions or concerns staff will be pleased to address them.

Water Service Requests/Allocation Accounting: No allocations during the period.

Safety Program
No injury reports during the period.

Project Activity

Please see the attached report by District Projects Assistant Bruce Buel.

Field Activity

Please see the attached report by District Utility Supervisor Dan Migliazzo.

Conservation Program activities

Please see the attached report by Conservation Specialist Madonna Dunbar.

RECOMMENDATION

Staff seeks direction and input from your Honorable Board.

ATTACHMENT

- Memorandum from District Projects Assistant.
- Memorandum from Utility Supervisor.
- Memorandum and brochures from Conservation Specialist.

Ed Kreins

From: Dan Migliazzo
Sent: Friday, May 26, 2006 8:05 AM
To: Ed Kreins
Cc: Bruce Buel
Subject: Weekly Summary 5/22-5/26

1. PG&E installed monitoring equipment @ Eureka well along side our equipment to monitor electrical power in that area. We have had many power problems at and around the Willow Rd. area, including Black Lake all the way to Pomeroy Rd.
2. Installation of clean-outs on the force main in the Maria Vista Estates has begun. We are scheduled to begin pressure testing on the force today 5/26/06.
3. Met with Boyle personnel @ the Black Lake booster station going over the scope of the project.
4. We sampled the Tefft St. tract and the Easy Ln. tract awaiting sample results, the pressure testing on these two tracts was completed last week.
5. We are continuing the installation of pump panels @ Southland WWP for the new surface aeration and lighting around the basins.
6. We had monthly safety meeting at the yard Tuesday on personal protective equipment.
7. We continue to see power glitches at the Palms and Oak Glen lift stations. (we have not been able yet to pinpoint the problem)
8. We picked our new dump truck on Thursday. (we will need to surplus our old one)
9. Sundale and blower engines were serviced this week.
10. Carriage Homes balled and mandreled another section of on site sewer line. (passed 5/24/06)
11. Regular rounds at wells and lift station normal operation.

These are a thumbnail of the weeks operations,
Thanks,
Dan

Ed Kreins

From: Dan Migliazzo
Sent: Friday, June 02, 2006 9:58 AM
To: Ed Kreins
Cc: Bruce Buel
Subject: Weekly Summary for 5/30/06 - 6/2/06

Ed,
Here the weeks highlights,

1. We have had numerous callouts at certain lift stations, we have pinpointed the problem at Gardenia we are pulling pump one out today and ordering a new unit.
2. We are continuing the upgrade at the Southland WWP, all pump panels are installed and we will be setting aerators in next week. (our results at the plant have been very encouraging)
3. Maria Vista has installed the cleanouts,blowoffs and air vacs from the lift station site to Orchard and will be pressure testing that section Monday 6/5/06.
4. Butch has returned from vacation and Ernie has just left for vacation.
5. The alerts on our lift station sites are a good thing but problems we never knew we had are popping up and our overtime has increased. We are trying to address these problem as they arise.
6. We have been fairly successful keeping Euerka well off line during the day. Sundale, Knollwood and Via Concha are maintaining system demands during the day.
7. We had to open the Blacklake inter connection to back up the two wells, the booster station is pumping more water than the wells can supply drawing the tank down to far for safety.
8. We have had two minor leak problems this week.

Thanks,
Dan

NIPOMO COMMUNITY SERVICES DISTRICT

148 SOUTH WILSON STREET
POST OFFICE BOX 326
NIPOMO, CA 93444 - 0326
(805) 929-1133 FAX (805) 929-1932
Web site address www.nipomocsd.com

MEMORANDUM

TO: EDWARD KREINS, GENERAL MANAGER

FROM: BRUCE BUEL, PROJECTS ASSISTANT

DATE: JUNE 9, 2006

RE: PROJECTS UPDATE – 5/17/06 to 6/7/06

Following is a narrative describing the status and progress on projects that office and field staff has worked on from 5/17/06 through 6/7/06. Additionally, this Update includes a section on Environmental Review Task Orders issued and a section on new water allocations approved.

I. PROJECTS UPDATE

NCSD Water Intertie Project –

- This project is in environmental review with the Draft EIR circulated on May 24, 2006. The official comment deadline set by the Office of Planning and Research is July 14, 2006; however, staff will be accepting comments through July 18, 2006. Attached is a graphic of the Critical Path for the project.
- The Board, on May 24, 2006, received the Draft EIR, selected Boyle Engineering as the engineering team for design of the Project, and adopted preliminary determinations regarding the sources of capital funding for construction, the sources of revenue to repay debt service and the sources of revenue to pay for operation costs. The Board at its June 14, 2006 Meeting is scheduled to consider approval of Boyle's proposed scope of work for the pre-design phase of the project engineering and creation of a new bank account for investment of the remaining 2003 COP Proceeds.
- The Supplemental Water Project Standing Committee on May 10, 2006 set its next meeting for July 19, 2006 to discuss comments to the Draft EIR.

- Staff has researched information on Directional Drill technology, the names of firms that perform Directional Drilling, and the locations where Directional Drilling has been used.
- Staff has initiated work with Bob Tarvin of Tarvin and Associates on preparation of the rough appraisal.
- Staff has circulated a Request for Statement of Qualifications for Construction Management services to eleven local firms to determine the interest and availability of these firms to provide Construction Management Services.
- Staff researched permit, land acquisition and funding issues related to the project.
- Staff supplied information on the Project to the I-Bank at the request of I-Bank staff.
- Staff has accomplished all critical path tasks necessary to accomplish the Timeline set forth in Section VI of the attached REVISED Strategic Plan Outline (See also the Critical Path Network attached).

Southland WWTF Upgrade Project –

- This project is at the concept stage both in responding to the RWQCB's Notice of Violation (NOV) and considering logical upgrades to the WWTF and to the adjacent collection system.
- The Board on April 12, 2006 selected Boyle Engineering to prepare the Feasibility Study on the Upgrade Project. The Agreement between NCSD and Boyle has been fully executed and staff has issued the Notice to Proceed to Boyle. The Board at its June 14, 2006 Board Meeting is scheduled to consider adoption of Boyle's proposed Action Plan.
- Staff and Boyle have refined the draft Action Plan based on feedback from staff of the Regional Water Quality Control Board (RWQCB) so that the Board can consider adopting the Action Plan at its June 14, 2006 Board Meeting.
- Staff and Boyle have met to review the recommendations set forth in the Draft Action Plan to develop the timelines and staffing details required by the RWQCB. Once the District Board approves the Action Plan, Boyle is scheduled to finalize these details for submission to the RWQCB by the July 6, 2006 deadline set forth in the NOV.
- Staff has circulated a Request for Statement of Qualifications to six state certified laboratories so that the Board can consider selecting new Laboratories at its July 12, 2006 Board Meeting.

Southland Shop Upgrades –

- This Project is at the concept stage with the expectation that staff will bring options to the Board at a future date for enlarging the shop and reorganizing the site.
- Staff has developed rough design layouts for alternative upgrades to the shop and a punch list of upgrades for the grounds.
- Staff is working with Garing/Taylor to secure topographic mapping of the entire site to assist in planning the layout of the improvements.

Standard Specifications –

- The Board adopted revised Standard Specifications (SS) at its May 10, 2006 Board Meeting. Staff has published the revised Standard Specifications on our website and replaced the old set for all pending and new development projects affecting NCSD utilities.

Hetrick Road Waterline Upgrade –

- Boyle Engineers has completed the preliminary design and presented the preliminary design to the Board at its April 26, 2006, Board Meeting. Staff expects that the Board will make an environmental determination on the Project at its October 11, 2006 Board Meeting.
- Staff has determined that the project is not categorically exempt pursuant to the California Environmental Quality Act and that a more detailed environmental review will be required. Staff mailed out a Request for Statement of Qualifications for CEQA review of small projects to prospective firms and received back Statements from five firms. The Board adopted a resolution establishing guidelines for retention environmental firms at its May 10, 2006 Board Meeting. Staff then mailed out a Request for Quote for the Hetrick Project to each of the five firms. Staff awarded this review to the firm submitting the lowest quote, Padre and Associates for $5,945.
- Staff has also circulated a Request for Statement of Qualifications for Construction Management Services (CM) to eleven local firms. The Statements of Qualifications are due back on June 8, 2006.

Blacklake Pump Station Upgrade –

- This project is in the concept design phase with the consultant expected to produce a draft concept design report for upgrades to the pumps and the distribution system by the end of June. Staff expects to present the plans to the Board this summer and bid the project so that it is completed during the winter when water demand is at its lowest.
- The Board on May 10, 2006 approved an amendment to the design services agreement with Boyle Engineers to authorize additional engineering analysis. Staff has executed a task order with Boyle for the approved additional engineering.
- Staff is independently preparing to upgrade the intertie between the Town System and the Blacklake System so that the District can take the Blacklake Pump Station off-line when it comes time for the upgrade.

Frontage Road Relocation –

- The County is the lead agency on this project, which is in its concept phase with no defined timeline for completion.
- Staff has reviewed the Options Report prepared by the County.
- King Ventures and Shapiro have proposed to realign Frontage from Hill Street to Grande Street as part of their respective development proposals. EDA on behalf of the two parties submitted a draft set of plans and profiles to County Public Works last fall. The County and Caltrans have reviewed these initial plans and responded with redlines, but additional discussions are necessary to determine the exact alignment and to deal with reconfiguration of the Southbound off-ramp and drainage.

Telemetry and Control (SCADA)–

- The Telemetry and Control System is functioning with all water storage reservoirs, ten wells, 12 lift stations, both WWTFs, the Blacklake Blower Building, and the Blacklake Connection connected. The Board on May 10, 2006 accepted the system and authorized staff to close out the development agreement with the contractor.
- Staff still needs to integrate additional facilities and start using the data capabilities of the software to gather data.
- Staff has not yet defined the status of the CIMIS station at the Woodlands.

Geographic Information System (Geo-Viewer)

- The GIS System is functioning with data attributes available for most layers in most of the District's Service Area.
- Staff is still adding data and attempting to rectify features to the actual geography.

Basin Groundwater Monitoring-

- The contract details remain under discussion with District legal staff and the consultant's contract managers. Staff is underway with the consultant (SAIC) gathering data as authorized by the Board at its December 14, 2005, Board Meeting.
- Staff expects that this program will extend for multiple years and will involve interaction with the other basin stakeholders.
- Staff continues to gather data for integration into the data base to be designed by the consultant. Staff has secured the monitoring program being implemented by the Woodlands and has met with Woodland's Engineer to discuss their ongoing groundwater monitoring and production.

Preventative Maintenance and Staffing Review -

- This project has just started with staff assembling all systems and facilities.
- Staff has reviewed various computer software systems capable of tracking and reporting on maintenance management and has focused on two competing systems that appear to be promising. The "show and tell" of the system that the City of Santa Maria is using (one of the two finalists) originally scheduled on April 17, 2006 has been postponed.

Fairways Street Light Painting –

- The Board on April 12, 2006 awarded this work to Harry Jeffries Custom Painting and authorized staff to execute a contract with Jeffries.
- The agreement with Jeffries is now fully executed and staff has mailed notice to the affected residents.
- Jeffries is scheduled to start the project on June 13, 2006 and conclude his work by the middle of July.
- Staff will provide a final report to the Board upon completion of the work.

Woodgreen Lift Station Access Upgrade –

- This project is in the concept phase with significant input from the homeowners group. Staff is preparing a "show and tell" with likely contractors to secure quotes for upgrading this access. Staff has also mailed out a Request for Statement of Qualifications to likely contractors in anticipation of a future Request for Quotes to do this work.
- Staff expects to bring quotes for Board consideration late spring with the work to be performed once the ground dries out.

Contract Street Sweeping –

- The Board on May 24, 2006 awarded this work to SP Maintenance and authorized staff to execute an agreement. District Legal Counsel has prepared a draft agreement and staff has driven each paved street inside the District with SP Maintenance to reach agreement on the total number of curb miles. Staff expects that SP Maintenance will commence street sweeping on July 1, 2006.

Water Tank Security –

- This project is currently an unfunded idea; however, staff is proposing to include funds in the FY 06-07 Budget to install video camera systems at the Tank Farm and the Standpipe Tank to address security issues.

Blacklake Salts –

- This project involves limiting the discharge from regenerative water softener units within the Blacklake development. Staff expects to develop education material to share with the property owners by this fall.
- Staff understands that the Blacklake Homeowner's Association has promulgated amendments to its Master CCRs prohibiting the installation of new regenerative water softeners and encouraging conversion of existing units to the canister format.
- Staff has discussed the possibility of an incentive program whereby NCSD would offer a monetary reward for conversion of regenerative water softeners to more discharge friendly formats.

Pomeroy Water Line (Willow to Aden) -

- This project remains on hold given the likely realignment of Pomeroy by San Luis Obispo County. The Board on May 10, 2006 transferred the COP funding previously allocated to this Water Line to the Supplemental Water Project.

Relocation of NCSD Mains in/through County Drainage Structures -

- SLO County recently agreed to upgrade six Nipomo Drainage Structures over the next three fiscal years. Staff has discussed the opportunity to coordinate with County Public Works as they plan each upgrade.
- As currently planned, SLO County would work on the Mallagh Culvert and the Burton Culvert in FY 06-07; the Sea & Burton Culvert and the Haystack Culvert in FY 07-08; and the Thompson Avenue and the Tefft & Avocado Culvert in FY 08-09.
- Staff is proposing that the Board provide funding for the Mallagh Culvert and the Burton Culvert in the District's FY06-07 Budget.
- Staff has advised Supervisor Achadjian of NCSD's willingness to cooperate with the County in implementing these upgrades.

SSO Overflows General Waste Discharge Requirements –

- Staff researched the G-WDRs proposed by the SWRCB; discussed their potential impact on NCSD internally and with SWRCB staff; and presented staff conclusions at the Board's April 26, 2006 Board Meeting.
- The SWRCB at its May 2, 2006 Meeting did amend and then adopt the G-WDR. Staff is scheduled to present the revised G-WDR at the June 14, 2005 District Board Meeting.

FY06-07 Projects Preparation -

- The Ad Hoc Budget Committee has proposed that the Board fund a valve exercizing program and revisions to the water and sewer master plans in FY06-07. Staff has initiated research on these programs as well as the upgrades to the Gardenia Lift Station and the Hazel Lift Station proposed in the old Sewer Master Plan. Staff is also preparing the bid specifications for renovation of four of the percolation ponds at the Southland Wastewater Treatment Facility.

- Staff is monitoring the efforts of OCSD/Grover Beach/Arroyo Grande to evaluate the feasibility of a Desalination Plant at their Waste Water Treatment Facility. The Tri-Agency Group has retained the Wallace Group to prepare a Feasibility Study evaluating the cost effectiveness of desalting water at their WWTF for development of a future water supply. Staff expects to hold talks with Conoco-Phillips this summer to determine Conoco-Phillips willingness to participate in a feasibility study of using excess heat at their refinery as the primary energy source for desalination of brackish supply water.

II. ENVIRONMENTAL REVIEWS PROCESSED

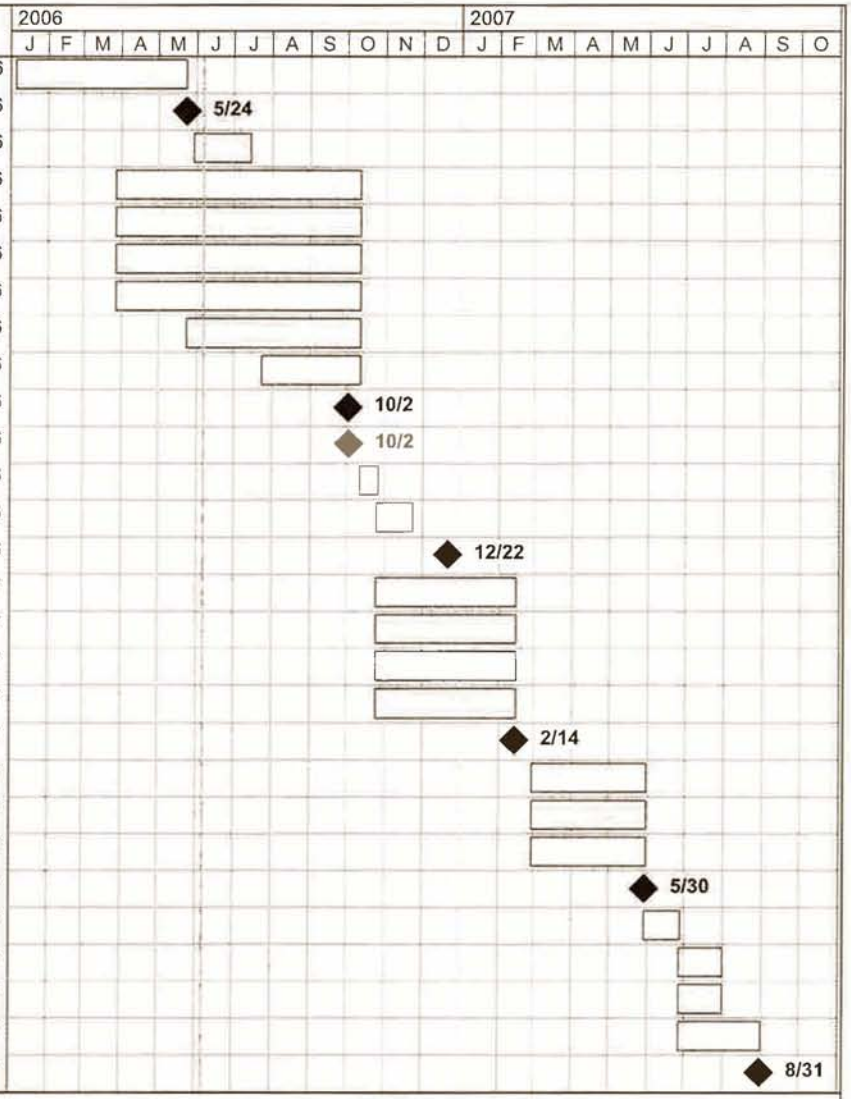
On May 22, 2006, staff executed an agreement and a task order with Padre Associates to perform the environmental review of the Hetrick Road Water Project for $5,945 pursuant to the Resolution adopted by the Board on May 10, 2006. Padre's quote was the lowest of the five quotes submitted by the five pre-qualified environmental review firms. Padre is scheduled to produce the Initial Study by the end of July so that it can be circulated and comments received by the end of August. Padre would then respond to comments received and publish a final draft for Board review at its October 11, 2006 Board Meeting.

III. CHANGES TO WATER ALLOCATION

On May 23, 2006, staff issued an Intent to Serve (ITS) Letter to Mid State Properties for three new services in Tract 2855 (2755 Grande). As detailed in the attached Water Allocation Accounting Summary, the issuance of this ITS letter allocates .9 acre feet of new water to the SFR sub-allocation. With this new allocation, the SFR sub-allocation stands at 49.8% of the annual maximum and the total Allocation stands at 49.6% whereas 58.3% of the water year has passed.

t:\documents\staff folders\bruce\memos\060609projectupdate.doc

ID	Task Name	Duration	Start	Finish
1	ADEIR	98 days	Fri 1/6/06	Tue 5/23/06
2	DEIR Published	1 day	Wed 5/24/06	Wed 5/24/06
3	Draft EIR Circulation	34 days	Tue 5/30/06	Fri 7/14/06
4	Permit Scoping	142 days	Tue 3/28/06	Wed 10/11/06
5	Time Sensitive Research	142 days	Tue 3/28/06	Wed 10/11/06
6	Land Option Evaluation	142 days	Tue 3/28/06	Wed 10/11/06
7	Funding Option Evaluation	142 days	Tue 3/28/06	Wed 10/11/06
8	Predesign Studies	101 days	Wed 5/24/06	Wed 10/11/06
9	Final EIR Processing	58 days	Mon 7/24/06	Wed 10/11/06
10	Draft Predesign Published	1 day	Mon 10/2/06	Mon 10/2/06
11	FEIR Published	1 day	Mon 10/2/06	Mon 10/2/06
12	FEIR Certification	11 days	Wed 10/11/06	Wed 10/25/06
13	Project Selection	21 days	Wed 10/25/06	Wed 11/22/06
14	Final Predesign Memorandum	1 day	Fri 12/22/06	Fri 12/22/06
15	Prequalify Contractors	81 days	Wed 10/25/06	Wed 2/14/07
16	30% Design Preparation	81 days	Wed 10/25/06	Wed 2/14/07
17	Permit Applications and Coordination	81 days	Wed 10/25/06	Wed 2/14/07
18	Funding Procurement	81 days	Wed 10/25/06	Wed 2/14/07
19	30% Design Published	1 day	Wed 2/14/07	Wed 2/14/07
20	Land Acquisition	66 days	Wed 2/28/07	Wed 5/30/07
21	Permit Condition Negotiations	66 days	Wed 2/28/07	Wed 5/30/07
22	90% Design	66 days	Wed 2/28/07	Wed 5/30/07
23	90% Design Published	1 day	Wed 5/30/07	Wed 5/30/07
24	Final Plans and Specifications	21 days	Wed 5/30/07	Wed 6/27/07
25	Bidding	25 days	Wed 6/27/07	Tue 7/31/07
26	Contract Award	25 days	Wed 6/27/07	Tue 7/31/07
27	Permit Final	48 days	Wed 6/27/07	Fri 8/31/07
28	NTP	1 day	Fri 8/31/07	Fri 8/31/07



Project: NCSD Waterline Intertie Project- Critical Path Network
Date: Tue 6/6/06

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

TABLE OF CONTENTS

Rough Draft
NCSD SUPPLEMENTAL WATER PROJECT
Strategic Plan Outline

3/8/06
5/30/06 Revisions in Bold Italics

I. CEQA Timeline

II. Design Timeline

III. Permit Timeline

IV. Land & ROW Timeline

V. Funding Timeline

VI. Critical Path

VII. 2006 Board/Committee Meetings

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I. Rough draft NCSD-SWP CEQA TIMELINE

1. PROJECT OBJECTIVES DEFINITION

A.	Initial Board Review	3/8/06
B.	Web & Office Posting	3/8/06 to 4/12/06
C.	Board Determination	4/12/06

2. DRAFT EIR

A.	Prepare Printcheck Draft	4/14/06 to 5/4/06 (21 days)
B.	Prepare Circulation Draft	5/4/06 to 5/11/06 (7 days)
C.	Printing	5/11/06 to 5/18/06 (7 days)
D.	NOC/Circulation	5/22/06 to 7/10/06 (49 days)
E.	Board Status Report	5/24/06
F.	Presentation to WRAC	6/7/06

3. FINAL EIR

A.	Committee Review #1	7/13/06
B.	Prep Ad Draft Responses	7/10/06 to 8/10/06 (30 days)
C.	Committee Review #2	8/10/06 to 8/24/06 (14 days)
D.	Prepare Printcheck Draft	8/24/06 to 9/7/06 (14 days)
E.	Edit and Print Final	9/7/06 to 9/21/06
E.	Presentation to Board	10/11/06

4. CERTIFICATION

A.	Prepare Findings	9/21/06 to 10/5/06
B.	Certification Hearing #1	10/11/06
C.	Certification Hearing #2	10/25/06
D.	Notice of Determination	10/25/06

5. PROJECT SELECTION

A.	Committee Review	TBD
B.	Board Review	TBD

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II. Rough Draft NCSD-SWP Design Timeline

1. DESIGN TEAM SELECTION

A.	Prepare Draft Design Services RFP	3/17/06	
B.	Board Review RFP and Concept	3/22/06	(See Footnote No. 1)
C.	Circulate Design Services RFP (mail/post)	3/24/06	(See Footnote No. 2)
D.	Receive Design Services Proposals	4/21/06	
E.	Committee Review of Proposals	4/28/06	
F.	Screen to Short List	5/5/06	
G.	Short List Interviews	5/17/06	
H.	Board Selection/Authorize Negotiation	5/24/06	

2. DESIGN SERVICES AGREEMENT

A.	Negotiate Design Agreement	TBD
B.	Board Review	TBD
C.	Execute Agreement	TBD

3. QUALITY CONTROL (QA/QC) TEAM SELECTION

A.	Circulate QA/QC RFP	5/25/06
B.	Receive QA/QC Proposals	6/15/06
C.	Board Review	6/28/06
D.	Execute Agreement	TBD

4. DESIGN

A.	Issue NTP#1	TBD
B.	Research & 30% Design	120 Days from NTP#1
C.	30% Review & Issue NTP#2	TBD (See Footnote #3)
D.	90% Design Submittal	120 Days from NTP#2
E.	90% Review & Issue NTP#3	TBD
F.	100% Design Submittal	21 Days from NTP#3
G.	Printing	7 Days

5. CONSTRUCTION MGMT (CM) TEAM SELECTION – If Necessary

A.	Circulate CM RFP	TBD
B.	Receive CM Proposals	TBD
C.	Board Review	TBD
D.	Execute Agreement	TBD

II. Rough Draft NCSD-SWP Design Timeline (Continued)

6. ENGINEERING SERVICES DURING CONSTRUCTION (ESDC)

A.	Negotiate ESDC BUDGET	TBD
B.	Board Review	TBD
C.	Execute Agreement	TBD

7. BIDDING

A.	Advertise	TBD
B.	Open Bids and Resolve Protest	TBD
C.	Award Bids	TBD
D.	Execute Contracts/Secure Bonds, Etc.	TBD
E.	Issue NTP	TBD

NOTE #1: Assumes no Value Engineering Exercise and CM is not done by Design Team

NOTE#2: Potential Design Firms –Cannon; Boyle; Wallace; EDA; RRM; Penfield Smith; SAIC; MNS; Provost & Pritchard; Malcolm Pirnie; Carollo; MWH; Black and Vetch; Kennedy Jenks;

NOTE #3: Assumes 30% Submittal instead of the 75% proposed by Cannon (June 2005)

III. Rough Draft NCSD-SWP Permit Timeline

1. INITIAL CONTACTS & CONFIRMATIONS

A.	Letter to Each Agency	3/30/06	(See Footnote #1)
B.	Calls/Meetings with Each Agency	4/5 to 4/26	
C.	Determine Time Sensitive Research	4/26/06	
D.	Secure Proposals to Perform Research	TBD	(See Footnote #2)
E.	Board Consideration of Proposals	TBD	
F.	Execute Agreements	TBD	
G.	Perform Research & Secure Results	TBD	
H.	Summary of Results	TBD	

2. DEIR COMMENT REVIEW

A.	Review DEIR Comment Submitted	7/10/06
B.	Calls/Meetings with Each Agency	7/11/06 to 7/25/06
C.	Summary of Results	7/31/06

3. PERMIT PROCESSING

A.	Prepare and Submit Application	TBD	(See Footnote #3)
B.	Interact with Agency	TBD	
C.	Negotiate Potential Conditions	TBD	
D.	Committee Review of Policy Issues	TBD	
E.	Board Review of Policy Issues	TBD	
F.	Secure Permits	TBD	

4. PERMIT IMPLEMENTATION

A.	Secure Proposals for New Research	TBD
B.	Board Consideration of Proposals	TBD
C.	Execute Agreements	TBD
D.	Perform Research & Secure Results	TBD
E.	Integrate Conditions/Research into Design	TBD
F.	Integrate Conditions into Construction	TBD

NOTE #1 – Permit Agencies: US ACE (Section 404 & NPDES); Ca DFG (1601); CCRWQCB (401 & NPDES); USFWS (7g/10); Caltrans (Encroachment); City Santa Maria (Encroachment Permit); County Santa Barbara (Encroachment Permit); County of SLO (Encroachment Permit);

NOTE #2 – Mitigation D7 Research must start by 8/15/06 to conclude by 10/31/06

NOTE #3 – As soon as possible after FEIR Certification

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IV. Rough Draft NCSD-SWP Land & ROW Timeline

1.	INTIAL CONTACTS		
A.	Letter to Each Owner	3/17/06	
B.	Calls to Each Owner	3/24/06 to 3/31/06	
C.	Summary of Results	4/7/06	
2.	ROUGH APPRAISAL		
A.	RFQ/RFP to Potential Appraisers	3/17/06	(See Footnote #1)
B.	Receive Proposals	4/7/06	
C.	Board Selection re Rough Appraisal	4/26/06	
D.	Execute RA Agreement	4/28/06	
E.	Secure Rough Appraisal	5/31/06	
F.	Board Review (Closed Session)	6/14/06	
3.	DETAILED APPRAISAL		
A.	Board Authorization for Detailed	11/15/06	
B.	Execute D A Agreement	11/17/06	
C.	Secure Detailed Appraisal	Jan 2007	
D.	Board Review (Closed Session)	Jan 2007	
4.	NEGOTIATIONS		
A.	Tender Offers	Jan 2007	
B.	Negotiate w Prop Owners	Jan 2007 to TBD	
C.	Board Review	Feb 2007	
D.	Open Escrows	Feb 2007 to TBD	
E.	Board Review	TBD	
5.	FUNDING		
A.	Secure Funding	Feb 2007	
B.	Board Adopt Notice of Acceptance	Feb 2007	
C.	Close Escrow	TBD	
D.	Secure Title and File Documents	TBD	

NOTE #1 – Potential Appraisers: Reeder Gilman; Schenberger et al

V. Rough Draft NCSD-SWP Funding Timeline

1.	EVALUATION OF OPTIONS		
A.	Project Connection Charge Revenues	2/28/06 to 3/31/06	(Note #1)
B.	Describe Potential Grants/Appropriations	2/28/06 to 3/31/06	(Note #2)
C.	Describe Low Interest Loans	2/28/06 to 3/31/06	(Note #3)
D.	Describe Municipal Bond/COP Options	2/28/06 to 3/31/06	(Note #4)
E.	Describe Purveyor Buy In Options	2/28/06 to 3/31/06	
F.	Describe LLP Turn Key Concept	2/28/06 to 3/31/06	
E.	Summary of Results	4/5/06	
2.	INITIAL REVIEW OF OPTIONS		
A.	Committee Review	>4/5/06	
B.	Board Review	4/26/06	
3.	FUNDING DEVELOPMENT		
A.	Connection Charge Monitoring	Ongoing	
B.	Grant Monitoring & Applications	Ongoing	
C.	Process Loan/Bond/COP Paperwork	TBD	
D.	Secure Funds	TBD	

NOTE #1 - Also track County In-Lieu Fees for O&M Coverage
NOTE #2 – Prop 50 w County; Prop 50 NCSD; Fed WRDA
NOTE #3 – Ca SRF; CIEDB; USDA
NOTE #4 – Assessment Bond; Revenue Bond; COP w CSDA; COP NCSD

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VI. Rough Draft NCSD-SWP Critical Path

ELEMENT	TIMEFRAME
Administrative DEIR	***1/6/06 to 5/23/06***
DEIR PUBLISHED	***5/24/06***
Draft EIR ***Circulation***	***5/30/06*** to ***7/14/06***
Permit Scoping	3/28/06 to ***10/11/06***
Time Sensitive Research	3/28/06 to ***10/11/06***
Land Option Evaluation	3/28/06 to ***10/11/06***
Funding Option Evaluation	3/28/06 to ***10/11/06***
PREDESIGN STUDIES	***5/24/06 to 10/11/06***
Final EIR Processing	7/13/06 to 10/11/06
PREDESIGN PUBLISHED	***10/2/06***
FEIR PUBLISHED	***10/2/06***
FEIR Certification	10/11/06 to 10/25/06
Project Selection	10/25/06 to 11/22/06
PRE-QUALIFY CONTRACTORS	***10/25/06 to Feb 07***
30% Design Preparation	10/25/06 to Feb 07
Permits and Conditions	10/25/06 to Feb 07
Funding Procurement	10/25/06 to Feb 07
30% DESIGN PUBLISHED	***Feb 2007***
Land Acquisition	Feb 07 to June 07
90% Design Preparation	Feb 07 to June 07
90% DESIGN PUBLISHED	***June 2007***

Bidding	July 07
Contract Award	July 07
Permit Final	July 07 to August 07
NTP	August 07

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VII. Rough Draft 2006 NCSD-SWP Board/Committee Meetings

Board Meeting Date	Committee Meeting Date	TOPIC
	3/3	Policy Issues & Timelines
3/8		Policy Issues & Timeline
3/22		Design Services RFP
4/12		Project Objectives
	<4/26	Funding Options
4/26		Funding Options; Retain Appraiser
5/10		
	<5/24	Review Design Proposals
5/24		Select Design Team & DEIR Status Report
6/14		Review Rough Appraisal Results
6/28		Design Team Agreement & QA/QC Team Selection
7/12		
	7/13	Review of FEIR Comments
7/26		
8/9		
	<8/24	Review of Responses to FEIR Comments
8/23		
9/13		
9/27		
10/11		FEIR Certification #1
10/25		FEIR Certification #2
11/8		Project Selection #1
11/22		Project Selection #2; Authorize detailed proposals

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5/23/06

Nipomo Community Services District
Water Allocation Accounting Summary

Water Year 2005-2006

	NUMBER OF UNITS						ACRE-FEET OF ALLOTED WATER						Notes:
	SFR > 10	SFR 4.5 - 10	SFR < 4.5/DUP	SEC	MF	Low I	SFR/DUP	SEC	MF	Low I	Total	Tally	
Project							32.5	5	10.2	3.3		51	Low I (low income) pulls from SFR/DUP and MF, proportional to their allotment.
APN 092-083-009/010 - PHASED (year 2 of 4)					11		0.0	0.0	(2.0)	0.0	(2.0)	49.0	Phased, 4- years, Board approved 5/25/05
092-130-019, Hill Street - Phased (year 2 of 2)			21				(6.3)	0.0	0.0	0.0	(6.3)	42.7	Phased, 2- years, Board approved on 5/11/05
APN 092-572-046, 852 PRIMROSE	3						(1.7)	0.0	0.0	0.0	(1.7)	41.1	Issued by GM on 10/24/05
APN 091-311-010, Haanpaa	3			3			(1.7)	(0.9)	0.0	0.0	(2.6)	38.5	BOD approved 10/26/05
APN 092-130-043, GRANDE, PEARSON, Phased 1/3					11	4	0.0	0.0	(2.0)	(0.7)	(2.7)	35.8	BOD approved 10/26/05
APN 090-135-006, W. TEFFT, SPENSER					3		0.0	0.0	(0.5)	0.0	(0.5)	35.3	BOD approved 11/28/05
APN 092-138-013, 759 JUNIPER	1			1			(0.6)	(0.3)	0.0	0.0	(0.9)	34.4	GM approved 2/15/06
APN 090-143-005/007, Sparks/Dana			4				(1.2)	0.0	0.0	0.0	(1.2)	33.2	Re-issued ITS by BOD, 2/22/06
APN 092-130-071, FEDERER	2	1					(1.6)	0.0	0.0	0.0	(1.6)	31.7	Re-issued ITS by BOD, 3/08/06
APN 091-283-057, RITCHIE	2						(1.1)	0.0	0.0	0.0	(1.1)	30.6	Issued by GM on 03/27/06
APN 092-141-028, KRICHEVSKY	3						(1.7)	0.0	0.0	0.0	(1.7)	28.9	Issued by GM on 04/26/06
APN 092-241-022, WALKER	1						(0.6)	0.0	0.0	0.0	(0.6)	28.4	Issued by GM on 04/27/06
APN 092-130-044 ROOSEVELT apts, Phased 1/4					11	4	0.0	0.0	(2.0)	(0.7)	(2.7)	25.7	BOD Approved 5/10/06
Tract 2855, Mid State Properties			3				(0.9)	0.0	0.0	0.0	(0.9)	24.8	Issued by GM on 05/23/06
Totals	15	1	28	4	25	4	(16.2)	(1.2)	(6.5)	(1.4)	(25.3)		
					Percent of annual allotment:		49.8%	24.0%	63.5%	43.6%	49.6%		
Phasing Limit Check (Max 50% of annual allocation or 25.5 AF)													
Phased allocation =	8.3					Updated:	5/24/06						
					Percent Water-Year over:		58.3%						

Abbreviations:
SFR = single family residence
SEC = secondary dwelling (a.k.a. Granny Unit)
DUP = Duplex
MF = multi-family development (e.g. mutiple dwelling units sharing a common roof)

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NIPOMO COMMUNITY SERVICES DISTRICT

148 SOUTH WILSON STREET
POST OFFICE BOX 326
NIPOMO, CA 93444 - 0326
(805) 929-1133 FAX (805) 929-1932
www.nipomocsd.com

MEMORANDUM – Manager's Report

TO: ED KREINS, INTERIM GENERAL MANAGER

FROM: MADONNA DUNBAR, CONSERVATION SPECIALIST

DATE: JUNE 8, 2006

RE: CONSERVATION PROGRAM ACTIVITIES – May / June 2006

PROGRAM ACTIVITIES:

1) The NCSD Water Conservation Program Outline is being finalized for submitted to the Board of Directors Committee.

2) Issued bi-weekly press releases regarding water quality, water consumption, and water awareness month.

3) Prepared a comprehensive Recycling and Re-Use Guide for residents. Additional production of new outreach literature in water conservation, water quality. (See attached). Continued expansion of education section of NCSD website.

4) Ongoing preparation and publicity of the gardening workshop series for June, July, and Aug. with presenters in the areas of: residential irrigation basics, low water use landscape design and low toxicity gardening.

5) Ongoing preparation for booth / events outreach for May - Oct 2006.

6) Established SSO committee; tracking State Water Board Sanitary Sewer Overflow regulation legislation, implementation procedures.

8) On-going cross training; general front office procedures. Beginning transfer of duties to myself, from retiring Safety Office, Ernie Thompson.

PROFESSIONAL DEVELOPMENT / TRAINING:

No formal training this month.

KEY MEETINGS:

Ongoing networking with local agencies, in environmental education, water conservation, water quality, Nipomo civic organizations.

- 5/9/06 - Partners in Water Conservation meeting: PIWC is forming a partnership focusing on outdoor water conservation, with the California landscaping Contractors Association.

- 5/17/06 – Attended SLO Green Building Association Presentation on Low Water Use Landscaping Design.

- 5/18/06 – Met with Nipomo High School Progressive Club students, and faculty member Lori Dixon, to discuss future collaboration on environmental education at Nipomo High School.

- 5/19/06 – met with Partners in Water Quality: Nipomo Storm Drain Marking event will be held in late August / early September. Creek Clean Up day confirmed (countywide) for Sat. Sept. 30, 2006.

- 5/19/06 – met with BOD Conservation sub-committee to review formal program development.

- 5/26/06 – met with organizing committee for the SLO County 2007 Water Festival. This group, a subcommittee of partners in Water Quality, is beginning the planning of a Water Education festival scheduled for May 2007.

- 6/4/06 – met with Nipomo Native Garden Group for additional community networking.

- 6/6/06 – Tour of Cold Canyon Landfill. Discussion with John Ryan, operations manager of ways to assist residents in keeping up to date with proper solid waste disposal and diversion.

- 6/6/06 – Met with Clyde Cruise, Nipomo Chamber of Commerce, to assist in recycling/waste management at Here Comes Summer Festival.

- 6/8/06 – Met with Dave Herma and Dick Weitzl of Black Lake Village Association to discuss option for reducing landscaping water use on BLV common areas.

Comparative Snapshot of Some Existing Salaries

	A	B	C	D	E
1	**Title**	**Employer**	**Employer City/State**	**Salary**	**Effective Date**
2	Deputy General Manager	Municipal Water Department	San Bernardino, CA	$117,000	May-04
3	Former Director of Municipal Utilities	City of Stockton	Stockton, CA	$126,000	May-03
4	Former Director of Public Works	City of San Juan Capistrano	San Juan Capistranto, CA	$137,000	Apr-06
5	Deputy City Administrator	City of Yuma	Yuma, AZ	$133,000	Jun-06
6	Deputy District Engineer and Chief Project Director	US Army Corps of Engineers	Sacramento, CA	$136,000	Jan-06
7	Director of Utilities	City of Santa Maria	Santa Maria, CA	$136,000	Feb-06
8	Senior Civil Engineer	City of Oxnard	Oxnard, CA	$109,000	Mar-06
9	Assistant General Manager/CFO	Cucamonga County Water District	Rancho Cucamonga, CA	$129,996	Apr-04
10	Water & Environmental Manager	City of Chino	Chino, CA	$84,300	Jun-05
11	Public Works Director	City of Newberg	Newberg, OR	$81,984	Sep-05
12	General Manager	El Dorado Irrigation District	Placerville, CA	$160,000	May-06
13	Former U.S. Commissioner	Intl. Boundary & Water Commission	El Paso, TX	$162,100	Oct-05
14	Chief of Water Resources	City of Redlands	Redlands, CA	$108,000	May-04
15	Former Director of Public Works	City of Solvang	Solvang, CA	$93,000	May-03
16	General Manager	Irvine Ranch Water District	Irvine, CA	$185,000	Jan-04
17	Assistant General Manager/Treasurer	Citrus Heights Water District	Citrus Heights, CA	$100,000	Oct-04
18	General Manager	Rubidoux Community Services District	Riverside, CA	$168,000	Mar-04
19	Director of Planning	Rancho California Water District	Temecula, CA	$151,000	Oct-05
20	Former Public Work Director/City Engineer	City of Riverbank	Riverbank, CA	$82,000	Jan-04
21	Director of Public Works	City of Pico Rivera	Pico Rivera, CA	$113,400	May-06
22	Director of Water Resources Management	Eastern Municipal Water District	Perris, CA	$103,800	Oct-05
23	Senior Engineering Manager	Parsons Brinkerhoff	San Diego, CA	$142,000	Nov-05
24	General Manager	Hi-Desert Water District	Yucca Valley, CA	$106,000	May-04
25	Director of Public Works	City of Glenn Heights	Glenn Heights, TX	$64,000	Oct-05
26	Associate General Manager	Municipal Water District of Orange	Fountain Valley, CA	$113,000	May-04
27	Chief Operations Officer	Children and Families Commission	Irvine, CA	$135,000	Feb-06
28	Director, Facilities Maintenance Department	U.S. Defense Department	Camp Pendleton, CA	$108,000	Oct-05
29	Public Works Director	City of Placerville	Placerville, CA	$90,000	May-04
30	Director of Water and Wastewater	Holland Board of Public Works	Holland, MI	$95,000	May-04
31	Executive Director	Regional Water Authority and Sacramento Groundwater Authority	Sacramento, CA	$124,500	Sep-04
32					
33	General Manager	Rosamond Community Services District	Rosamond, CA	$100,000 to $130,000	Open
34					