



Tamalpais Community Services District

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AGENDA

Board of Directors - Work Session

Wednesday, May 26, 2010
305 Bell Lane, Mill Valley, CA
8:45 AM

1. CALL TO ORDER
2. ROLL CALL
3. PUBLIC EXPRESSION
4. GENERAL BUSINESS:
 - A. Discussion on Status of Efforts to Shift Sewer Flows – Steffen Bartschat/Jon Elam
 - B. Adoption of Redrafted Ordinance No. 81 Regarding Sanitary Sewer System – Jon Elam
 - C. SMCSO Wet Weather Flow Study Update/Discussion – Jon Elam
 - D. Proposed Discussion of the July 14, 2010 Board Meeting – Jon Elam
 - E. Review Draft Schedule for Filling Vacant Board Positions – Jon Elam
5. ADDITIONAL BOARD DISCUSSION AND COMMENTS
6. ADJOURNMENT

Date: May 26, 2010

ITEM # 4A

STAFF REPORT

To: Board of Directors

From: Jon Elam, General Manager

Subject: Discussion of the Board's Effort to Shift Flows from SMCSO to SASM

Attached is a note from Steve Moore, an Engineer from Nute Engineering, regarding the size challenges and costs of redirecting our sewer flows through the Rosemont pump station. This brings home the cost issue as we have previously discussed. Steffen attended the SASM Board meeting last Thursday and will give his thoughts on potential next steps.

Recommended Action: Discussion

From: Jon Elam [mailto:jelam@tcsd.us]
Sent: Sunday, May 16, 2010 4:12 PM
To: Steve Moore
Cc: Stephen Danehy; Steffen Bartschat
Subject: RE: Rosemont Capacity Issues

What this suggests is that our own excess EDU's might not be useable either. Why did Ed not tell about this before we spent \$10,000 on pipe studies that could not be used unless the pumping was redone?

From: Steve Moore [mailto:s.moore@nute-engr.com]
Sent: Friday, May 14, 2010 12:01 PM
To: Jon Elam; jimjacobs@ebsinfo.com
Subject: Rosemont Capacity Issues

Jon, Jim -

This is in response to your questions earlier this week. As you are going through the cost comparison analysis between SASM and SMCSO the Rosemont PS and FM capacities come into play.

Currently Rosemont PS has three modest 10 hp pumps capable of delivering 1140 gpm. The peak wet weather flow at Rosemont is 1160 gpm, so the pump station does not have extra capacity for wet weather. The design capacity based on my design work at SMCSO's Locust St PS is 8.8-5.4 mgd = 3.4 mgd = an additional 2360 gpm moved by Bell Lane. Diverting this amount of flow would triple the capacity needs at Rosemont. And then how do you move that volume across Kay Park to the Rosemont PS?

The station was built to accommodate the physical dimensions of larger pumps, but increasing pump size would be a significant undertaking nonetheless. Budget - \$2 million.

The Rosemont Force Main is mostly 16" OD SDR 9 heavy duty pipe, which has internal diameter of 12.26". This pipe was sized to only accommodate modest increases in capacity, not tripling of flows. If you forced the TCSD flow into this pipe the velocities would exceed the range of tolerance. The adverse

effects of high velocities in force main are wear-and-tear from the grit. It would have a sandblasting effect on the interior of the pipe, especially at the 90 bend in the Bay Front Park and the 45 bend near the batting cages at the Mill Valley Corp Yard. Finally the terminal manhole there at the Church parking lot exit would get pummeled by the higher flows such that the manhole would need to be rehabilitated, and there would be odor issues. We would recommend a second force main (double barrel) to accommodate the 3X flow. The other one cost about \$2 million to build in 2006-07.

Upgrades to Flamingo PS's and increase diameter of pipe, or build new FM from Bell Lane to Rosemont: \$2 million.

So I think you're looking at \$6 million in infrastructure costs to do anything, and a political challenge with Mill Valley since the Force Main went in so recently and disrupted their operations in their Corp. Yard, roads and parks.

I would need more information to discuss anything about tiering the increases - as an engineer I need to know what physical areas would be included or excluded. You can't just plan based on EDUs, you have to look at the discrete piping/pumping infrastructure chunks and where the diversion points are in the physical system.

A little free advice from Nute Engineering.

Steve Moore, P.E.
Nute Engineering
907 Mission Ave.
San Rafael, CA 94901
Ph. (415) 453-4480 x202
Fax (415) 453-0343
s.moore@nute-engr.com

Date: May 26, 2010

ITEM # 4B

STAFF REPORT

To: Board of Directors

From: Jon Elam, General Manager

Subject: Accept Revisions on Ordinance No. 81 Based on the Board's Discussion at the May 12, 2010 Board Meeting

Board Legal Counsel Jennifer Faught has made a number of changes to the proposed Ordinance No. 81 after input and discussion by the Board. Her redraft is attached. Based on those changes, she felt it would be appropriate for the Board to accept those changes and repost the ordinance for public review before the public hearing is held at the June 9, 2010 Board Meeting.

At the conclusion of the hearing, the Board could make final changes and take action to adopt it.

Recommended Action: Motion to Accept a Redraft of Ordinance No. 81, our Master District Sanitary Sewer System Ordinance and Repost the Proposal in Preparation of the June 9, 2010 Meeting

Date: May 26, 2010

ITEM # 4C

STAFF REPORT

To: Board of Directors
From: Jon Elam, General Manager
Subject: SMCSD Wet Weather Flow Study

SMCSD at their meeting on May 3, 2010, approved another round of funding with their contractor RMC on the next phase of their wet weather planning efforts. This, I believe, is very helpful and important to SMCSD and TCSD. As I have mentioned previously, SMCSD has abandoned their efforts to develop large wet weather storage facilities at either TCSD or downtown Sausalito. This came about due to public opposition and huge costs. Perhaps, though the real picture is that SMCSD has identified new technologies that could address the wet weather flows by potentially increasing the size of the treatment works from 6.0 mgd (million gallons per day) to 9.0 mgd.

The equipment is called a "high rate clarified" that would treat and clean wet weather flows very effectively and relatively cost effectively. Additional plant adjustments would need to be made as well, but all of this could be great news for them and whatever flows TCSD would continue to send to Sausalito.

Attached is a copy for your information of the materials the SMCSD Board approved. The cost of \$96,348 would be figured into our 25% (\$24,087) C-I-P share. As you go to Exhibit A, under Task 12 *Design Flow and Criteria* is a general statement outlining the studies purpose. Of note is *"The Consultant will work with SMCSD to identify the peak wet weather flow rates that can be expected at the treatment plant based on assumptions regarding I&I, sewer rehabilitation, low equalization/storage, and diversion of TCSD flow to SASM"*.

It is this last statement that causes concern. We have potentially overstated our efforts to shift flows to SASM and that SMCSD has assumed we can and will execute those shifts even though we obviously still don't have a detailed engineering or cost plan in hand. We have been told repeatedly by SMCSD that they need to keep moving ahead and clearly are starting to do so. Once before, we dragged along when we could have joined in on the Rosemont Pipe Extension in 2005/06, and now will have to pay the price.

SASM efforts and internal problems with LAFCO will divert a lot of attention and resources away from TCSD requests. If we wait for them, while SMCSD is moving ahead, we could foresee a similar outcome in trying to retrofit back into SMCSD.

Recommended Action: Discussion

AGENDA ITEM: VI.A
Date: MAY 3, 2010

WET WEATHER IMPROVEMENT PROJECT – AUTHORIZE EXECUTION OF AMENDMENT NO. 5 TO PROFESSIONAL SERVICE AGREEMENT WITH RMC WATER AND ENVIRONMENT, REVISING THE SCOPE OF SERVICES AND AGREEMENT LIMIT TO INCLUDE ADDITIONAL PRELIMINARY ENGINEERING SERVICES IN CONNECTION WITH SECONDARY TREATMENT IMPROVEMENTS, INCLUDING STRESS TESTING OF FIXED FILM REACTORS, PILOT TESTING OF HIGH RATE CLARIFIER EQUIPMENT AND PRELIMINARY DESIGN OF SECONDARY TREATMENT IMPROVEMENTS

BACKGROUND: Attached is a proposed scope of work and budget for Amendment No.5 to the professional services agreement with RMC Water and Environment in connection with the wet weather conveyance and treatment improvement project. The proposed amendment covers services to stress test a fixed film reactor to determine whether loading can be increase from 3.0 mgd to 4.5 mgd or greater per reactor (9.0 mgd overall), pilot testing of equipment from two perspective manufacturers of high rate clarifiers, and preliminary design of secondary treatment improvements. The cost of the amendment No. 5 services is estimated at \$116,580. Service will be billed on a time and material basis. Staff believes the cost of the Amendment No. 5 services to be reasonable

\$20,242 remains from the authorization approved under Amendment No. 4. It is not expected that the services for which these fund were intended will be required. It is proposed that the funds be applied toward the cost of Amendment No. 5 service, reducing the authorization requirement from \$116,580 to \$96,348.

RECOMMENDATION: Authorize execution of Amendment No. 5 to the professional services agreement with RMC Water and Environment for services in connection wet weather conveyance and treatment improvements and raise the contract cost ceiling from \$387,356 to \$483,704

Exhibit A
Amendment No 5. - Scope of Services
Sausalito-Marín City Sanitary District
Wet Weather Conveyance and Treatment Plant Evaluation

Task 12 Secondary Treatment Improvements

The purpose of this task is to develop secondary treatment process improvements that will allow the DISTRICT to operate during wet weather without "blending." In addition, potential upgrades to the existing sand filters to enhance the plant's reliability in meeting dry weather NPDES requirements will be assessed.

Develop Design Flow and Criteria

The DISTRICT is currently evaluating various options for reducing and treating peak wet weather flows to the SMSCD wastewater treatment facility. The CONSULTANT will work with the DISTRICT to identify the peak wet weather flow rates that can be expected at the plant based on assumptions regarding upstream I/I sewer rehabilitation, flow equalization/storage, and diversion of TCSD flow to Sewerage Agency of Southern Marin. ~~(X)~~

Note → CONSULTANT will evaluate whether the existing fixed film reactors can be upgraded to reliably handle the predicted peak wet weather flow rates. CONSULTANT will review existing treatment plant performance data (to be provided by the DISTRICT) to assess recent process performance during wet and dry weather to estimate current process performance during wet weather and blending events. The CONSULTANT's review of existing data will also assist in the evaluation of the degree to which effluent polishing is needed to maintain effluent BOD and TSS below the DISTRICT's NPDES permit limits.

The CONSULTANT will assist the DISTRICT in stress testing the fixed film reactors to estimate whether they can sustain a peak hydraulic loading of approximately 2.5 gpm/ft² (approximately 9.0 MGD through both FFRs). CONSULTANT will develop a recommended method by which one of the FFRs is tested at this hydraulic loading rate. It is estimated that this stress testing will last one week, followed by two week of additional monitoring to identify if there are any residual effects from the stress testing. The primary purpose of this testing will be to estimate whether the existing media can mechanically sustain this hydraulic loading. However, the CONSULTANT will propose both hydraulic and process data to be collected and analyzed by DISTRICT staff in the course of the testing. CONSULTANT will also observe the condition of the upper layers of media before and after the testing to observe whether there has been damage to the media.

Consultant will use the results of additional flow modeling, conducted by the CONSULTANT under a separate authorization, to describe the estimated frequencies and durations that the treatment plant and FFRs will experience peak wet weather flows.

Consultant will estimate the expected treatment performance of the plant under peak wet weather flows, and its ability to meet NPDES requirements without blending.

Identify and Evaluate Process Upgrades

Based on the design flow and criteria, CONSULTANT will develop and evaluate improvements to the secondary treatment process (e.g. fixed film reactors and secondary clarifiers) to avoid "blending" during peak wet weather events. CONSULTANT will also evaluate upgrades or replacement of the existing sand filters to improve tertiary performance, reduce maintenance and/or increase capacity. Specifically the CONSULTANT will review the following:

- Feasibility of increasing the hydraulic loading rate to the fixed film reactors and associated equipment upgrades
- Additional tertiary (polishing) process capacity for both dry weather and wet weather
- Tertiary treatment alternatives for the replacement of the existing sand filters including:
 - High rate clarification
 - Cloth media filtration
 - Microfiltration (e.g. membrane or ceramic filters)

Secondary Treatment Process Upgrade Workshop

The CONSULTANT will prepare for and attend one (1) workshop with the DISTRICT. The purpose of the workshop will be to review project alternatives and obtain key decisions required in order to proceed with a recommended project. The CONSULTANT will prepare and provide presentation boards and materials for the workshop as needed.

Prepare Secondary Treatment Improvements TM

After a recommended alternative is selected, CONSULTANT will prepare a pre-design level technical memorandum for the recommend project. The predesign will be at a 10% design level and will include the following:

- Recommended project summary
- Detailed design criteria
- Site plan
- Process mechanical plans and sections
- Process diagrams
- Hydraulic Profile
- Predesign level construction cost estimate

Deliverables:

- Presentations and presentation boards and other presentation materials for workshop
- Draft Pre-Design Technical Memorandum (electronic submission) for District review and comment
- Final Pre-Design Technical Memorandum (electronic submission), incorporating District comments.

Task 13 High-Rate Clarifier Pilot Testing

CONSULTANT will research the availability and potential contract terms for pilot testing two high-rate clarifiers on-site at the SMCSD treatment plant. Each pilot unit will be from a different manufacturer, which will allow the DISTRICT to confirm which manufacturer's unit (if any or both) will perform adequately on SMCSD's flow. The purpose of the pilot testing will be to evaluate the following:

- High-rate clarifier treatment performance on primary effluent (i.e. potential treatment of blended flows during wet weather)
- High-rate clarifier treatment performance on secondary effluent prior to disinfection (i.e. potential polishing step and/or replacement for existing sand filters).

If pilot units are available and the DISTRICT decides to proceed with the pilot test, the DISTRICT will negotiate contract terms and payment directly with the pilot equipment manufacturer. CONSULTANT will coordinate delivery and set-up as needed. Consultant will recommend a temporary configuration including location, connection points and additional equipment that may be required for setting-up the pilot unit on-site.

CONSULTANT will prepare a pilot study test plan for evaluating the high-rate clarifier pilot units performance on both primary and secondary effluent. It is anticipated that the pilot test will be one month in duration and include monitoring of the following parameters:

- Feed flow
- Feed and effluent TSS
- Feed and effluent cBOD
- Feed TDS
- Waste sludge flow
- Waste sludge percent solids
- Polymer and/or coagulant dose rates
- Effluent disinfection (bench scale test to determine disinfection dose and to verify that the high-rate clarifier effluent can be disinfected to meet the required coliform limits)

It is anticipated that the pilot tests will require that samples be collected and analyzed several times per day. Sample collection and analysis will be performed by the DISTRICT. CONSULTANT will visit the site once per week (five total site visits) during the set-up and operation of the pilot units. Upon completion, the consultant will compile the data collected by the DISTRICT and the equipment manufacturers. The CONSULTANT will prepare a technical memorandum summarizing the pilot study, which will include an evaluation of performance, suitability for use at the SMCSD plant and potential design criteria for a full scale installation.

The CONSULTANT will make one revision to the technical memorandum to incorporate relevant comments by the DISTRICT. All deliverables will be provided electronically to the DISTRICT.

Deliverables:

- Draft Pilot Testing Technical Memorandum (electronic submission)
- Final Pilot Testing Technical Memorandum (electronic submission)

Additional Services

If authorized, in writing, CONSULTANT may provide additional services under this Project. Level of effort and fee for additional services will be negotiated at the time that the services are requested.

Amendment No. 5: Exhibit B - Consultant Budget
 Sausalito-Marin City Sanitary District
 Wet Weather Treatment and Conveyance Evaluation

Task	Subtask	Personnel	Hours	Rate	Amount	Materials	Amount	Travel	Amount	Subcontractors	Amount	Contingency	Amount	Total
Task 124 Substation Treatment Improvements	High Rate Clarifier Upgrade	15	4	50	200									200
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
	High Rate Clarifier Upgrade	20	10	30	300									300
Task 124 High Rate Clarifier Pilot Testing	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
	High Rate Clarifier Pilot Testing	15	40	50	2000									2000
TOTAL:														\$10,000

1. The individual hourly rates include salary, overhead, profit, and ordinary expenses. Consultant reserves the right to adjust to hourly rates by the Consumer Price Index for the San Francisco Bay Area as of the start of each year.

2. Other direct costs (ODCs) include laptop reproduction, jobs, mileage, and travel expenses. Subcontractors will be billed at actual cost plus 10%.

3. Project Technology & Communication (PTC) Charges at 3% of RMC Labor.

Date: May 26, 2010

ITEM # 4D

STAFF REPORT

To: Board of Directors

From: Jon Elam, General Manager

Subject: Schedule for the July 14, 2010 Board Meeting

Staff has been contemplating the idea of cancelling the currently scheduled July 14, 2010 Board Meeting. Steffen will be gone for seven weeks and other Board members may also be taking vacation time during the month.

The challenge is that the Board adopts its annual budget usually in July. It is possible to schedule it for the last week of June, but there is the potential of budget changes from SMCSO, as occurred last year. The key component of the budget is the selling of sewer and refuse rates. The Park and Recreation levy is automatic due to Proposition 13. Staff has not proposed much of a capital program for 2010 due to the unresolved questions regarding SMCSO and SASM. Staff would like feedback from the Board regarding their personal schedule in July.

Recommended Action: Discussion

Date: May 26, 2010

ITEM # 4E

STAFF REPORT

To: Board of Directors

From: Jon Elam, General Manager

Subject: Review Draft Schedule for Filling Vacant Board Positions

The Board received a detailed memo from Meyers-Nave regarding the process for filling a vacancy. It begins with the Board's acceptance of the letter of resignation from Rick Johnson which will be completed on June 9, 2010. The District is then required to post a notice of the vacancy (at least 15 days prior to the appointment). I would propose a posting by June 15, 2010 and the deadline would be July 15, 2010. Since some members of the Board will be on vacation during the month of July.

Next, Staff will put together a packet for the Board to review and rank the applications received to determine a schedule of interviews of potential candidates (proposing August 4, 2010 at 7:00pm). Following the interviews, the Board will develop a recommendation for appointment for the August 11, 2010 Board Meeting. Following the Board appointment, Staff will formally notify the County Elections Office of the appointment.

This would allow the Board to fully comply with all Elections requirements regarding an appointment for a term that will expire on November 30, 2012.

Recommended Action: Discussion and Provide Direction to Staff

MEMORANDUM

DATE: April 30, 2010

TO: President Bartschat and Members of the Board of Directors
Tamalpais Community Services District

FROM: John Bakker, District Counsel
Jennifer Faught, Associate

COPY: Jon Elam, General Manager

RE: **Filling a Vacant Seat on the District Board**

This memorandum outlines the Board's options for filling the Board vacancy that will be created by Director Johnson's likely resignation sometime this summer. The Board's options (set forth in Government Code section 1780) would be as follows:

1. *Appoint an individual to fill the vacancy.* How long the appointed individual holds office depends on when the vacancy occurs. In this case, the vacancy will occur in the first half of the term of office. If the date that the District Board is notified of the vacancy is more than 130 days before the "next general district election," then the individual *appointed* to fill the vacancy would hold office until an election can be held at the next general district election. The person *elected* would then hold office for the unexpired balance of the term of office. The date of next general district election is November 8, 2011. (See Elec. Code § 1303.) Thus, if the District Board appoints someone to fill the vacancy, the District would indeed need to add a seat with a term of two years to next year's ballot.

In addition, if the District chooses to appoint a member to fill the seat:

- a. 15 days prior to the appointment, the District must post notice of the vacancy in three or more conspicuous places in the District.
 - b. The District must notify the County elections official within 15 days of the appointment.
 - c. The Board must make the appointment within 60 days of either the date on which the Board is notified of the vacancy, or the effective date of the vacancy, whichever is later.
2. *Call an election to fill the vacancy.* If the District wished to call an election instead of making an appointment, the Board would need to call the election within 60 days of the date the board is notified of the vacancy or the effective date of the vacancy, whichever is later. The election would

To: President Bartschat and Members of the Board of Directors
Tamalpais Community Services District
From: John Bakker, Jennifer Faught
Re: Filling a Vacant Seat on the District Board
Date: April 30, 2010
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then be held at the next established election date that is 130 or more days after the date the Board calls the election. For example, if the District were to call an election to fill the vacant seat at its June 9th meeting, it would need to hold an election on November 2, 2010.

3. The board also has a third option, which is to take no action and allow the Board of Supervisors to fill the seat. If the Board of Supervisors then failed to fill the seat within 90 days of the District Board being notified of the vacancy (or the effective date of the vacancy), the District would be required to call an election at the next established election date that is 130 or more days after the date the District Board calls the election. For example, if the vacancy were effective July 1, and the Board of Supervisors did not fill the seat by September 29, the District would call an election at its October 13th meeting. An election to fill the seat would then take place on March 8, 2011.

Finally, no matter what option the Board chooses, the District must notify the County elections official of the vacancy no later than 15 days after either the date on which the Board is notified of the vacancy or the effective date of the vacancy, whichever is later.

For your reference, attached is a copy of the information taken directly from the Registrar of Voter's website regarding the estimated costs per registered voter for each type of election.¹

Attachment

1422022.1

¹ For accurate cost information, we recommend that the District contact the County directly. The document is also available at the following URL: http://www.co.marin.ca.us/depts/RV/Main/election_info/Info_for_Voters/Election_Costs.pdf

**MARIN COUNTY REGISTRAR OF VOTERS
ESTIMATED COST OF ELECTIONS TO CITIES, SCHOOLS,
AND SPECIAL DISTRICTS IN 2010-2011
(all costs are per registered voter)**

It costs Marin County approximately \$700,000 to \$900,000 to conduct a countywide election. Cities, schools and special districts that have candidates and/or measures on the ballot pay their share of this cost, while the county covers the remaining costs. Below are the estimated costs to cities, schools and special districts for elections held in 2010 - 2011.

TYPE OF ELECTION	COST PER REGISTERED VOTER in city, school district or special district
Statewide Primary election	\$1.75- \$3.00 per registered voter
Statewide General election	\$1.75 - \$3.00 per registered voter
November odd year election (UDEL)	\$1.75 - \$3.00 per registered voter
Special election at polls	\$8.00 - \$10.00 per registered voter
Special election by mail ballot	\$6.00 - \$8.00 per registered voter

The costs listed above are estimated, not guaranteed costs. They do not include the direct costs to jurisdictions on the ballot, such as the costs of typesetting and printing candidates' statements or measures. Election costs are influenced by the number of jurisdictions sharing the ballot and by the number of contests and measures that a jurisdiction has on the ballot. The more measures and contests a jurisdiction has on the ballot, the higher cost per registered voter. If the jurisdiction is alone on the ballot, it will incur the full cost of the election.

Set-up Fee

Jurisdictions which start the election process, whether or not they go on the ballot, will be charged a set-up fee. The set-up fee for schools and special districts is \$250.00. The setup fee for cities and towns is \$50. Cities and towns pay a lower set-up fee because the city and town clerks perform most of the up-front work for their elections.

Method of calculating election costs

Marin County uses the cost sharing method described in the report, [A Jurisdiction Cost-Sharing of Consolidated Elections in Marin County, California](#). The report was prepared for Marin County in 2003 by Government Finance Research, 2023 "N" Street, Sacramento, CA 95814, Phone (916) 447-5520.

For a copy of the report, contact the Registrar of Voters; Administrative Services, (415) 499-6467.