

AGENDA

BOARD OF DIRECTORS ORANGE COUNTY SANITATION DISTRICT

**DISTRICT'S ADMINISTRATIVE OFFICES
10844 ELLIS AVENUE
FOUNTAIN VALLEY, CA 92708
www.ocsd.com**

REGULAR MEETING

**MARCH 28, 2001
Immediately following the
6:30 p.m. Joint Meeting of the
Orange County Sanitation District and
Orange County Water District Meeting**

In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted in the main lobby of the District's Administrative Offices not less than 72 hours prior to the meeting date and time above. All written materials relating to each agenda item are available for public inspection in the office of the Board Secretary.

In the event any matter not listed on this agenda is proposed to be submitted to the Board for discussion and/or action, it will be done in compliance with Section 54954.2(b) as an emergency item, or that there is a need to take immediate action which need came to the attention of the District subsequent to the posting of the agenda, or as set forth on a supplemental agenda posted not less than 72 hours prior to the meeting date.

All current agendas and meeting minutes are also available via Orange County Sanitation District's Internet site located at www.ocsd.com. Upon entering the District's web site, please navigate to the Board of Directors section.

1. Invocation and Pledge of Allegiance
2. Roll Call
3. Consideration of motion to receive and file minute excerpts of member agencies relating to appointment of Directors, if any.
4. Appointment of Chair pro tem, if necessary
5. Public Comments: All persons wishing to address the Board on specific agenda items or matters of general interest should do so at this time. As determined by the Chair, speakers may be deferred until the specific item is taken for discussion and remarks may be limited to five minutes.

Matters of interest addressed by a member of the public and not listed on this agenda cannot have action taken by the Board of Directors except as authorized by Section 54954.2(b).

6. The Chair, General Manager and General Counsel present verbal reports on miscellaneous matters of general interest to the Directors. These reports are for information only and require no action by the Directors.
 - a. Report of Chair; consideration of resolutions or commendations, presentations and awards
 - b. Report of General Manager
 - c. Report of General Counsel
7. If no corrections or amendments are made, the minutes for the meeting held on February 28, 2001 will be deemed approved as mailed and be so ordered by the Chair.
8. Ratifying [payment of claims](#) of the District, by roll call vote, as follows:

<u>ALL DISTRICTS</u>	<u>02/15/01</u>	<u>02/28/01</u>
Totals	\$4,544,849.75	\$3,910,431.80

CONSENT CALENDAR

All matters placed on the Consent Calendar are considered as not requiring discussion or further explanation and unless any particular item is requested to be removed from the Consent Calendar by a Director, staff member or member of the public in attendance, there will be no separate discussion of these items. All items on the Consent Calendar will be enacted by one action approving all motions, and casting a unanimous ballot for resolutions included on the consent calendar. All items removed from the Consent Calendar shall be considered in the regular order of business.

Members of the public who wish to remove an item from the Consent Calendar shall, upon recognition by the Chair, state their name, address and designate by number the item to be removed from the Consent Calendar.

The Chair will determine if any items are to be deleted from the Consent Calendar.

9. Consideration of motion to approve all agenda items appearing on the Consent Calendar not specifically removed from same, as follows:

END OF CONSENT CALENDAR

10. Consideration of items deleted from Consent Calendar, if any.

NON-CONSENT CALENDAR

11.
 - a. Verbal report by Chair of Steering Committee re March 28, 2001 meeting.
 - b. DRAFT STEERING COMMITTEE MINUTES – NO ACTION REQUIRED (Information only): The Chair will order the draft Steering Committee Minutes for the meeting held on February 28, 2001 to be filed.
 - c. Reaffirm the [Charter of the FAHR Committee](#) with regard to Labor Negotiations.
12.
 - a. Verbal report by Chair of Operations, Maintenance and Technical Services Committee re March 7, 2001 meeting.

- b. DRAFT OPERATIONS, MAINTENANCE AND TECHNICAL SERVICES COMMITTEE MINUTES – NO ACTION REQUIRED (Information only): The Chair will order the draft Operations, Maintenance and Technical Services Committee Minutes for the meeting held on March 7, 2001 to be filed.
 - c. (1) Authorize the Contracts/Purchasing Manager to award a sole source purchase order to Taylor-Dunn, Inc. for Purchase of 17 Electric Carts, [Specification No. V-015](#), for a total amount not to exceed \$124,200.00 including sales tax; and (2) Authorize the District to recognize Taylor-Dunn, Inc. as the District's standard and sole manufacturer for future electric cart purchases without further Board approval.
 - d. Authorize staff to enter into negotiations with [Inland Composting and Organic Recycling](#) (ICOR) to produce Class A biosolids product(s) and to acquire from ICOR an interest in their production facility.
 - e. Authorize the Contracts/Purchasing Manager to competitively bid and subsequently award a contract for the Purchase of Sodium Hypochlorite, [Specification No. C-148](#), to the lowest responsive and responsible bidder for a total amount not to exceed \$400,000.
 - f. (1) Approve Change Order No. 1 to [Purchase Order No. 100764](#) issued to Great Western International for the Purchase of Caustic Soda (Specification No. 2000/01-01) for an increase in unit cost from \$265.00 per ton to \$462.00 per ton, increasing the total amount not to exceed \$756,300; and, (2) Authorize the General Manager to approve Change Order No. 2 to Purchase Order No. 100764 issued to Great Western International for the Purchase of Caustic Soda (Specification No. 2000/01-01) for an increase in unit cost from \$462.00 per ton to \$515.00 per ton, effective April 1, 2001, increasing the total amount not to exceed \$850,000, if needed; and (3) authorize staff to solicit bids for Purchase of Caustic Soda Solution, Specification No. C-150.
 - g. Adopt [Resolution No. OCSD 01-07](#), Establishing Dry Weather Urban Runoff Policy, and Repeal Resolution No. OCSD 00-22, incorporating amendments to the indemnification language.
- 13.
- a. Verbal report by Chair of Planning, Design and Construction Committee re March 1, 2001 meeting.
 - b. DRAFT PLANNING, DESIGN AND CONSTRUCTION COMMITTEE MINUTES – NO ACTION REQUIRED (Information only): The Chair will order the draft Planning, Design and Construction Committee Minutes for the meeting held on March 1, 2001 to be filed.
 - c. (1) Ratify Change Order No. 2 to [Modifications to Electrical and Control Systems](#) at Plant No. 2, Job No. P2-47-1, with Southern Contracting Company, authorizing an addition of \$6,134 and a time extension of 59 calendar days, increasing the total contract amount to \$1,309,535; and (2) Accept Modifications to Electrical and Control Systems at Plant No. 2, Job No. P2-47-1, with Southern Contracting Company as complete, authorizing execution of the Notice of Completion and approving the Final Closeout Agreement.
 - d. Ratify Change Order No. 7 to Improvements to Miller-Holder Trunk Sewer System, Reach 1, [Contract No. 3-38-1](#), with Fleming Engineering, Inc.,

authorizing an addition of \$114,973.75 and a time extension of 18 calendar days, increasing the total contract amount to \$8,786,334.56

- e. Establish a budget for Modifications to the Main Street Pump Station, [Contract No. 7-7-2](#), in the amount of \$445,000, to be reimbursed by the Design Consultant.
 - f. Authorize the General Manager to negotiate Addendum No. 4 with Carollo Engineers for the design of the Headworks Improvements at Plant No. 2, [Job No. P2-66](#), subject to approval by the Board of Directors at the May 23, 2001 meeting.
 - g. (1) Establish a budget for Supplement No. 1 to the 1999 Strategic Plan Program Environmental Impact Report, [Job No. J-40-5](#), for \$147,830; and (2) Approve a Professional Services Agreement with Environmental Science Associates for preparation of Supplement No. 1 to the 1999 Strategic Plan Program Environmental Impact Report, Job No. J-40-5, for a total amount not to exceed \$77,830.
 - h. (1) Authorize transfer of all funds from the [Scrubber Monitor and Control Project](#), Job No. SP-04, to Scrubber Monitor and Control Project, Job No. J-71-7; (2) Approve a budget amendment of \$1,586,000 for the Scrubber Monitor and Control Project, Job No. J-71-7, for a total project budget of \$2,382,000; and (3) Approve Professional Services Agreement with Lee and Ro, Inc., to provide engineering services for the design and construction support of the Scrubber Monitor and Control Project, Job No. J-71-7, for an amount not to exceed \$359,951.
 - i. Establish a budget of \$90,000 for Abandonment of Covey Lane Pump Station, [Contract No. 7-14-4](#).
 - j. Approve Addendum No. 1 to the Professional Services Agreement with ASL Consulting Engineers for the Warner Avenue Relief Sewer, [Contract No. 11-22](#), providing for a change in the name of the Consultant to Tetra Tech ASL, and providing for additional engineering services in the amount of \$57,679, for a total amount not to exceed \$282,479.
- 14.
- a. Verbal report by Chair of Finance, Administration and Human Resources Committee re the March 14, 2001 meeting.
 - b. DRAFT FINANCE, ADMINISTRATION AND HUMAN RESOURCES COMMITTEE MINUTES – NO ACTION REQUIRED (Information only): The Chair will order the draft Finance, Administration and Human Resources Committee Minutes for the meeting held on March 14, 2001 to be filed.
 - c. Receive and file [Treasurer's Report](#) for the month of February 2001.
 - d. Adopt [Resolution No. OCSD 01-08](#), approving substitution of the Standby Certificate Purchase Agreement of Lloyds TSB Bank PLC for the existing Standby Certificate Purchase Agreement of Barclays Bank PLC.
15. Ratify use of General Manager's Emergency Purchasing Authority, [Resolution No. OCSD 99-23](#), Section 3.07, to issue Change Order No. 1 to Purchase Order No. 26925 issued to Mladen Buntich Construction Company for Emergency Repair to

24-inch Coast Highway Force Main at the Inlet Structure east of the Santa Ana River, for an additional amount of \$110,000, for a total amount not to exceed \$200,000.

16. DRAFT JOINT GROUNDWATER REPLENISHMENT SYSTEM COOPERATIVE COMMITTEE MINUTES – NO ACTION REQUIRED (Information only): The Chair will order the draft Joint Groundwater Replenishment System Cooperative Committee Minutes for the meetings held on February 22 and March 1, 2001 to be filed.

17.

CLOSED SESSION: During the course of conducting the business set forth on this agenda as a regular meeting of the Board, the Chair may convene the Board in closed session to consider matters of pending real estate negotiations, pending or potential litigation, or personnel matters, pursuant to Government Code Sections 54956.8, 54956.9, 54957 or 54957.6, as noted.

Reports relating to (a) purchase and sale of real property; (b) matters of pending or potential litigation; (c) employment actions or negotiations with employee representatives; or which are exempt from public disclosure under the California Public Records Act, may be reviewed by the Board during a permitted closed session and are not available for public inspection. At such time as the Board takes final action on any of these subjects, the minutes will reflect all required disclosures of information.

- a. Convene in closed session, if necessary
1. Confer with General Counsel re Crow Winthrop Development Limited Partnership v. Orange County Sanitation District, Orange County Superior Court Case No. 000002012 (Government Code Section 54956.9)
- b. Reconvene in regular session
- c. Consideration of action, if any, on matters considered in closed session
18. Matters which a Director may wish to place on a future agenda for action and staff report
19. Other business and communications or supplemental agenda items, if any
20. Adjournment

NOTICE TO DIRECTORS: To place items on the agenda for the Regular Meeting of the Board of Directors shall submit items to the Board Secretary no later than the close of business 14 days preceding the Board meeting. The Board Secretary shall include on the agenda all items submitted by Directors, the General Manager and General Counsel and all formal communications.

Board Secretary:

Penny Kyle

(714) 593-7130 or
(714) 962-2411, ext. 7130

STEERING COMMITTEE

AGENDA REPORT

Meeting Date 03/28/01	To Jt. Bds. 3/28/01
Item Number	Item Number 11(c)

Orange County Sanitation District

FROM: Blake Anderson, General Manager
Originator: Lisa Tomko, Director, Human Resources and Employee
Development

SUBJECT: Reaffirm the Charter of the FAHR Committee with Regard to Labor
Negotiations

GENERAL MANAGER'S RECOMMENDATION

Reaffirm the Charter of the FAHR Committee with regard to Labor Negotiations

SUMMARY

Within the last eighteen months the District concluded labor negotiations with the Orange County Employees Association (OCEA), International Union of Operating Engineers Local 501 and the Supervisor and Professionals Management Team (SPMT). The contract duration for both the OCEA and Local 501 is three years. These agreements both expire in 2002. The contract duration for the SPMT is one year. This agreement will expire on June 30, 2001.

Recently, members of the FAHR committee requested that the charter of the FAHR Committee be revisited before the upcoming negotiations begin. The Committee's specific concern relates to its role in the meet-and-confer process and the Committee's ongoing direction to staff and consultants. The Director's handbook states that the FAHR Committee "...recommends policies and procedures regarding personnel, labor negotiations, insurers and coverage, procurement procedures and other related activities as needed or appropriate".

Tonight the FAHR Committee is seeking direction from the Steering Committee and the Board regarding the extent of its role in labor relations in anticipation of pending negotiations with the SPMT.

From the point of view of staff and the General Manager, it appears to make the most sense for the existing charter of the FAHR to remain as it was originally envisioned in 1994. At that time, then-Chair John Cox, Peer Swan and others conceived of the three-committee system we use today. Each committee has a distinct and logical charter for developing and proposing policy matters that are subsequently approved by the entire Board. Having each committee with specific jurisdictional responsibilities gives staff the advantage of being to work closely, efficiently and effectively with its governing board. The focus our three-committee system provides has given the committees the opportunity to achieve timely consensus and given staff the ability to execute timely action. In the case of labor negotiations, where the clock is always running, timeliness has great value.

With respect to jurisdictional responsibility, it makes sense that labor negotiation responsibilities remain with the FAHR. It is at this committee that all other matters related to budget, staffing, and human resource policies are developed. The Steering Committee has interest in some of these issues (as well as it does with certain operational and capital projects matters). But its discussions are more general and overarching and often are the precursor to the deeper and more substantive discussions that occur within the three committees. As has been its practice in the past, the Steering Committee may elect to provide advice and general direction to the

FAHR Committee on matters related to labor negotiations. But in the end, it appears to staff that details and negotiating parameters will emerge from the FAHR Committee, as has happened so effectively over the last six years.

PROJECT/CONTRACT COST SUMMARY

None

BUDGET IMPACT

- This item has been budgeted.
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

N/A

ALTERNATIVES

The Steering Committee could elect to take on the responsibility of directing meet and confer activities. Either as a committee of the whole or by forming an ad hoc subcommittee, the Steering Committee could provide direction to staff and to seek approval from the full board.

CEQA FINDINGS

N/A

ATTACHMENTS

N/A

OMTS COMMITTEE

AGENDA REPORT

Meeting Date 3/07/01	To Bd. of Dir. 3/28/01
Item Number OMTS01-08	Item Number 12(c)

Orange County Sanitation District

FROM: Bob Ooten, Director of Operations and Maintenance
Originator: Nick Arhontes, Manager Facilities Maintenance Services

SUBJECT: SOLE SOURCE PURCHASE OF ELECTRIC CARTS PER
SPECIFICATION V- 015

GENERAL MANAGER'S RECOMMENDATION:

- (1) Authorize the Contracts/Purchasing Manager to award a sole source purchase order to Taylor-Dunn Inc., of Anaheim for seventeen electric carts for a total amount not to exceed \$124,200.00 including sales tax as authorized by Section 3.17 of District Resolution No. OCSD 99-23.
- (2) Authorize the District to recognize Taylor-Dunn as the District's standard and sole manufacturer for future purchases as authorized by Section 3.17 of District Resolution No. OCSD 99-23.

SUMMARY:

The District owns and operates 142 electric carts from three different manufacturers for on-site employee transportation and cargo hauling. The electric cart inventory will, with the proposed purchase, consist of 130 Taylor-Dunn carts, 6 EZ-GO carts and 6 Nordscog carts. Staff recommends a sole source purchase of 17 Taylor-Dunn electric carts to replace existing vehicles at the end of their useful life. At present, only Taylor-Dunn and EZ-GO meet the District's electric cart specifications.

Industrial electric carts for staff and cargo carriers have been successfully used on site for over 25 years. Experience with several brands has indicated that Taylor-Dunn manufactures and provides product support in a manner consistent with our life cycle asset management criteria. This criteria focuses on superior design that allows lowest possible recurring maintenance labor inputs, low parts consumption, high reliability, strong product support and supplier longevity.

Staff is recommending the sole source purchase of the carts for the following reasons:

- In 1998, staff did a five-year life cycle cost comparison evaluation of Taylor-Dunn and EZ-GO electric carts. Although the Taylor-Dunn carts are slightly more expensive, the higher repair cost of the EZ-GO unit including the added labor made the lifecycle cost of the Taylor-Dunn equipment more cost-effective.
- Warehousing cost, space and labor needed to keep track of more than one type of equipment adds to overall cost. At present, Taylor-Dunn spare parts inventory value is about \$6,000. With the focus on Taylor-Dunn equipment, all other electric cart spare parts are being phased out of the inventory system.
- District purchasing staff have negotiated the cart cost to ensure the costs are fair. The purchasing staff have compared the costs to the State of California government bids for electric carts, the federal GSA bid or published costs, and have reviewed past electric cart purchase prices. The costs being offered are at the federal cost and slightly lower than costs for previous electric cart purchases.

- Taylor-Dunn has been located in Orange County for 50 years, has promptly delivered parts, provides spare parts discounts generally at 15 percent, will continue to provide on-site factory training to staff, and has no spare part freight charges. They also have an adequate stock of spare parts, which allows the District to keep a reduced inventory.

This recommendation has been reviewed and approved by the District's purchasing manager and legal counsel.

PROJECT/CONTRACT COST SUMMARY:

N/A

BUDGET IMPACT:

- This item has been budgeted.
(Line item: 2000-01 Budget, Section 8 - Page 188 under Division 430 line items)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted as a lease, but operating funds exist.
- Not applicable (information item)

ADDITIONAL INFORMATION:

Contact Nick Arhontes at: (714) 593-7210 or e-mail at: narhontes@ocsd.com

ALTERNATIVES:

N/A

CEQA FINDINGS:

N/A

ATTACHMENTS:

OMTS Committee Agenda Report OMTS-0046 – Overview of Fleet Services Practices

OMTS COMMITTEE

AGENDA REPORT

Meeting Date 3/07/01	To Bd. of Dir. 3/28/01
Item Number OMTS01-09	Item Number 12(d)

Orange County Sanitation District

FROM: Robert P. Ghirelli, D.Env., Director of Technical Services
Originator: Layne Baroldi, Sr. Regulatory Specialist

SUBJECT: NEGOTIATIONS WITH INLAND COMPOSTING AND ORGANIC RECYCLING

GENERAL MANAGER'S RECOMMENDATION

Authorize staff to enter into negotiations with Inland Composting and Organic Recycling (ICOR) to produce Class A biosolids product(s) and to acquire from ICOR an interest in the production facility.

SUMMARY

Recently enacted county bans on the land application of Class B biosolids* have resulted in decreased capacity and increased costs to manage biosolids in California. The viability of the land application of Class B biosolids beyond January 2003 is in serious doubt. These regulatory developments demand that the District take immediate action to insure reliable long-term biosolids management options. It is clear that any long-term sustainable biosolids management program supporting biosolids recycling must be flexible and based on producing Class A biosolids products.

Staff is requesting that the District's Board of Directors (Board) authorize staff to enter into negotiations with biosolids management firm(s) in order to insure that the District has a reliable, diversified, cost-effective and sustainable biosolids management program. Staff proposes that the District's biosolids management program include the continued land application of Class B biosolids for a minimum of two years, utilization of composting and chemical stabilization to manufacture Class A biosolids, and the development of an on-site chemical stabilization process on the District's Kings County property.

To achieve this goal of producing Class A biosolids products in the limited time available, funding of a minimum of \$20 million is recommended in order to pursue a public/private partnership interest in a compost and/or a chemical stabilization facility. Securing capacity at a site that can produce Class A biosolids products will provide the District with insurance that its biosolids will be managed in an environmentally safe and cost-effective manner while providing the District with a secure inclement weather biosolids management site.

* Definitions of Class B, Class A, and Exceptional Quality (EQ) Biosolids can be found at the end of this Agenda Report.

Background

Recent events throughout California have resulted in significant concern over the long-term reliability of the District's current biosolids management program. In spite of the adoption of a statewide permitting system supporting the land application of Class B biosolids in California, a number of counties have developed or are in the process of developing their own restrictive biosolids ordinances. These County biosolids ordinances range from those dwindling few counties that allow for Class B biosolids to be land applied, to those that allow only Class A biosolids, to complete bans on all forms of bulk biosolids. As a result of these regulatory

developments, Class B biosolids reuse options and capacities for the management of District's biosolids are becoming insufficient.

The District currently land applies 100% of its biosolids in Kings, Kern, Riverside, and San Diego counties through contracts with three biosolids management service providers. Land application of Class B biosolids may not be allowed in these counties beyond early 2003. The Kern County and Kings County bans require that the District produce Class A biosolids within two years and Riverside County may not be far behind.

In anticipation of these regulatory developments, the District's Strategic Plan recommended that staff commence assessment of other biosolids processing technologies and management alternatives, and purchase biosolids permitted land. The District purchased 1,808 acres in Kings County with the capacity to manage up to 25% of the District's biosolids production in order to add security to its biosolids management program. Staff and legal counsel is negotiating with Kings County to maintain the viability of Class B biosolids land application on this site beyond 2003. District's staff is concerned over the availability of additional management options for the remaining 75% of the District's biosolids.

Unfortunately, the Strategic Plan did not provide clear direction in selecting the appropriate alternative biosolids management option(s) that are necessary to secure a diverse biosolids management program for all of the District's biosolids. District's staff is reviewing several biosolids management technologies to address our needs to achieve Class A biosolids within the next two years.

Compost

Based on recent experience in Kern and Kings Counties, Class A biosolids compost is an accepted form of biosolids-derived product that addresses local public perception concerns. Staff is proposing that the Board authorize staff to enter into negotiations to acquire an interest in a composting facility to produce Class A biosolids. Production of Class A biosolids compost will provide a sustainable and cost-effective management option for the District. An interest in such a compost facility would secure capacity to process the District's biosolids utilizing the most acceptable biosolids management option currently available.

Development of a suitable composting facility will require significant efforts and funding to select and acquire a site that is acceptable from a public perception, safety, operational, and environmental viewpoint. Operational concerns including the design and permitting of the facility are critical to the success of a compost facility. The design criteria for the establishment of a biosolids composting facility requires adequate vacant land in an area zoned M-1 (light industrial) or M-2 (heavy industrial). The composting facility should be able to process a minimum of 550 wet tons per day of biosolids (100% of the District's daily production) and approximately 1,000 tons per day of other feedstock in order to obtain the proper carbon to nitrogen composting ratio. The facility will require structures and equipment for grinding and mixing of the feedstock and placement into windrow or static pile composting configurations. The design criteria will have to ensure that the compost meets temperature and time requirements for the destruction of pathogens. The finished product will be tested and stored on site for eventual sale as a soil amendment and other uses.

District's staff screened six potential composting sites in order to determine the District's budget needs. These sites include two existing facilities, San Joaquin Composting (Kern County) and Synagro's "Recyc" Composting Facility (Western Riverside County), and four proposed facilities, Westlake Farms (Kings County), Yakima (Kings County), Inland Composting and Organic Recycling (ICOR) (San Bernardino County / City of Colton), and Tule Ranch (Kings County).

Initial screening of these sites addressed key criteria including proximity to residential areas and sensitive land uses, adjacent landowners and noise considerations, ability to buffer, existence of

sensitive or endangered species, land costs, land topography, proximity to major roads and ease of access, availability of utilities, composting technologies, land availability in relation to site size needed, land use restrictions and zoning, ability to permit the site, proximity to product markets and feedstock supplies, and the ability to manage flood and stormwater.

The leading candidate for the proposed compost facility, and the site that will be used as a basis for determining this budget request, is ICOR, a 72-acre site located in the City of Colton near Riverside Drive and north of the Santa Ana River. The site is currently zoned for light industrial and heavy industrial and is suitable for composting biosolids. The site is designed to process 750 tons per day of biosolids (85% of the District's estimated biosolids production in 2020 according to Scenario 1 of the Strategic Plan).

PROJECT/CONTRACT COST SUMMARY

The following preliminary budget estimates for the major elements of a compost facility are based on Inland Composting and Organic Recycling's (ICOR) model:

Major Category Totals (does not include contingency costs):

• Site Preparation & Grading:	\$ 5,921,690.00
• Sanitary Sewers:	37,900.00
• Water Distribution:	299,390.00
• Storm Drainage:	442,920.00
• Roadway/Street Improvements:	1,550,415.00
• Utilities:	245,700.00
• Amenities & Special Construction:	689,500.00
• Consultant Fees & Services:	758,300.00
• Fees, Additional Permits, Etc.:	<u>65,200.00</u>

Total Cost Without Contingencies: \$10,011,015.00

Summary (including contingency costs):

• Total Costs Subject To Contingency:	\$ 9,181,515.00
• Contingencies @ 10%:	918,151.00
• Costs Not Subject To Contingency:	829,500.00

Total Probable Construction Cost: \$10,929,166.00

All of the development costs are subject to change in conformity to the final conditions of the Full Facility Permit that will be issued jointly by the California Integrated Waste Management Board (CIWMB) and Santa Ana Regional Water Quality Control Board (SARWQCB). This estimate is exacting and includes all of the costs for berms that will protect the site from a 100-year 48-hour storm event. Build the facility in accordance with the Conditional Use Permit from the City of Colton and as described by the project in the Environmental Impact Report.

ICOR has \$2.1 million dollars of equipment currently in operation, and will transfer all of these implements to the new facility. Additional equipment costs will include windrow turners, front-end loaders with 'tink' buckets and tractor-trailers. All of these additional pieces of machinery may be available from existing inventory of ICOR or as used equipment and may cost an additional \$2 million dollars, but should be the responsibility of ICOR to finance and acquire as needed from its operating funds, without additional expense to the District. Total preliminary (non-negotiated) costs for acquisition, development, and operation of the Facility are:

Land (Site)	\$ 4,000,000.00	10% interest in AMRF, LLP*
Development	\$ 10,929,166.00	30% interest in ICOR, Inc.
Land (Buffer)	\$ 4,500,000.00	100% of 58 acres of buffer land
Total	<u>\$ 19,929,166.00</u>	(Subject to negotiations)

*The ICOR compost facility property owner is Aqua Mansa River Farms (AMRF, LLP), a California Limited Liability Partnership. *Depending on the compost facility site chosen for development, significant additional facility enclosure cost may be incurred. Such cost may be in excess of \$20 million.*

The estimated annual management cost (not including the capital expense or profit rebate) would be \$29 per wet ton of biosolids utilizing ICOR, or \$5.3M per year if 500 wet tons of biosolids per day were managed at ICOR. The estimated annual cost to utilize a distant compost facility is \$35 per wet ton of biosolids, or \$6.4M per year to manage 500 wet tons of biosolids per day. In round numbers, this translates into an 18-year payback on the District's investment.

BUDGET IMPACT

- This item has been budgeted. (Line Item # 86 Joint Operating Fund budget)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

ALTERNATIVES

Only a few viable alternatives exist for long-term sustainable biosolids management other than composting. Specifically, landfilling, chemical stabilization / heat drying, and land application of Class B biosolids in Arizona.

Energy costs for natural gas and electricity is making heat less economically viable. High diesel fuel costs is also making the transportation costs for landfilling and / or land application in Arizona prohibitive. The lack of recycling and the increasing "tip fees" associated with disposal of the District's biosolids also make landfilling less attractive. These biosolids management options are estimated to cost in excess of \$40 per wet ton of biosolids. Composting is expected to cost ~\$28 per wet ton (excluding capital costs) and chemical stabilization is expected to cost ~\$32 per wet ton. Current Class B biosolids management cost approximately \$26 per wet ton during dry weather and \$36 per ton during wet weather.

A "do nothing" alternative would result in the District continuing to utilize land application of Class B biosolids as its only biosolids management practice. The District would be relying on county regulations to allow for the continued acceptance of Class B land application in order to successfully manage its biosolids. The imminent bans on Class B biosolids in Kern, Kings, and possibly Riverside Counties make utilizing the "do nothing" alternative unacceptable.

CEQA FINDINGS

Depending on the project, appropriate CEQA review will have to be performed.

ATTACHMENTS

DEFINITIONS

* Class B biosolids are biosolids that have been processed to achieve a significant pathogen reduction (e.g., using anaerobic digestion as performed at the District) and meets vector attraction reduction requirements.

* Class A biosolids are biosolids that have been further processed (e.g., composting) in order to meet the most stringent pathogen reduction and vector attraction reduction requirements.

* EQ biosolids are Class A biosolids that meet the most stringent limits for pollutant concentrations.

Pathogens are disease-causing organisms, such as certain bacteria, viruses, and parasites (e.g., salmonella, fecal coliform). Vectors are organisms, such as rodents and insects that can spread disease by carrying and transferring pathogens.

Expectation of a minimum of 15% of the final products to be used within District's service area.

OMTS COMMITTEE

AGENDA REPORT

Meeting Date 3/7/01	To Jt. Brd. 3/28/01
Item Number OMTS01-10	Item Number 12(e)

Orange County Sanitation District

FROM: Bob Ooten, Director of Operations and Maintenance
Originator: Mark Esquer, Manager of Process Engineering
Ed Torres, Manager of Air Quality and Special Projects

SUBJECT: ESTABLISH A CONTRACT FOR THE PURCHASE OF SODIUM HYPOCHLORITE, SPECIFICATION NO. C-148, FOR DISINFECTATION AND ODOR CONTROL IN THE TREATMENT PLANTS

GENERAL MANAGER'S RECOMMENDATION

Authorize the Contracts/Purchasing Manager to competitively bid and subsequently award a contract for the Purchase of Sodium Hypochlorite, Specification No. C-148, to the lowest responsive and responsible bidder for a total amount not to exceed \$400,000.

SUMMARY

The District uses bleach in the wastewater treatment process and must establish a new contract for purchase of this chemical. Staff is preparing bid packages in order to complete this work. As information, the District competitively bid the bleach contract under Specification No. C-040 and awarded the said contract to Western States, Inc. for a one-year contract renewable for four additional years. The District has exercised all of its renewal actions. The current contract will end May 13, 2001.

Bleach is used for the following purposes in the treatment plants:

- 1) Disinfecting the plant water. Plant water is the secondary effluent that is used in various areas of the plant for washing, cooling and pump seal purposes.
- 2) Controlling certain bacteria in the activated sludge plant process.
- 3) In foul air scrubbers for odor control.

As mentioned, bleach is used in foul air scrubbers to control hydrogen sulfide emissions and prevent odor complaints from the neighbors. Odor complaints have increased over the last several months, so staff commissioned an odor study to determine the best overall strategy for controlling plant odors. The odor study, performed as part of the Odor Facilities Rehabilitation Project, recommends that the District increase bleach usage to further reduce foul air scrubber hydrogen sulfide emissions. This corrective action will reduce neighbor odor complaints. It is estimated that bleach consumption in foul air scrubbers will be 555,000 gallons. This is approximately 230-percent more chemical than historically used for odor control purposes.

Bleach usage for disinfection and filament control has remained fairly stable over time and will continue to be stable. It is estimated that the District will consume 212,100 gallons of bleach each year for these uses.

PROJECT/CONTRACT COST SUMMARY

Based on purchasing 767,000 gallons of bleach at the anticipated unit cost of \$0.525 per gallon, including tax, the contract amount will not exceed \$400,000. The current fiscal year budget is not sufficient to support the new contract amount, therefore, Board approval to award a contract

is being requested. The new contract will impact the current year budget for a six-week period. The appropriate funds are being requested under next fiscal year budget to cover the new program costs.

BUDGET IMPACT

- This item has been budgeted. (Line item: Line Item: Section 5, Page 12)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

None

ALTERNATIVES

None

CEQA FINDINGS

None Required

ATTACHMENTS

None

OMTS COMMITTEE

AGENDA REPORT

Meeting Date 3/7/01	To Jt. Brd. 3/28/01
Item Number OMTS01-11	Item Number 12(f)

Orange County Sanitation District

FROM: Bob Ooten, Director of Operations and Maintenance
Originator: Ed Torres, Manager of Air Quality and Special Projects

SUBJECT: INCREASE IN UNIT COST FOR CAUSTIC SODA

GENERAL MANAGER'S RECOMMENDATION

- (1) Approve Change Order No. 1 to Purchase Order No. 100764 issued to Great Western International for the Purchase of Caustic Soda (Specification No. 2000/01-01) for an increase in unit cost from \$265.00 per ton to \$462.00 per ton effective February 15, 2001, increasing the total amount not to exceed \$756,300.
- (2) Authorize the General Manager to approve Change Order No. 2 to Purchase Order No. 100764 issued to Great Western International for the Purchase of Caustic Soda (Specification No. 2000/01-01), for an increase in unit cost from \$462.00 per ton to \$515 per ton effective on April 1, 2001, increasing the total amount not to exceed \$850,000, if needed.

SUMMARY

The District competitively bid the Caustic Soda contract under Specification No. 2000/01-01. Caustic Soda is used to control hydrogen sulfides in the District's foul air scrubbers at both treatment facilities and to control odors in trunk lines. The contract was awarded to Great Western International for a one-year contract from September 1, 2000 through August 30, 2001 for a unit cost of \$265.00 per dry ton delivered for an amount not to exceed \$470,300.

In a letter dated February 5, 2001, GW International requested a price increase for caustic soda due to the energy crisis and the resulting increase in the cost of energy, which has increased the cost of the chemical. In addition caustic is temporarily in short supply. Per the letter from GW International, the unit cost of caustic soda will be increased to \$462.00 per ton. Subsequently, a second letter dated February 19, 2001, forecasted another increase to \$515 per ton effective April 1, 2001. Like the first increase, the cost of energy and supply/demand of the market is the cause for the requested price increases.

The District budgeted to consume approximately 1,775 tons of caustic this year. Due to the increase in odor complaints, staff increased the use of caustic in order to control odors from the treatment plants. This increase in caustic use resulted in the projection of an additional 200 tons of chemicals to be consumed over the contract period for a 10 percent increase in use. The total updated caustic consumption is estimated at 1,975 dry tons.

To evaluate the requested unit price increases, staff reviewed the contract with the present chemical supplier, surveyed other large agencies also bidding on the chemical at this time, contacted the other major suppliers of the chemical, reviewed industry chemical cost forecasts, and interviewed the District supplier to understand the reason for the requested unit price increases.

The chemical supplier's contract allows pass through of abnormal costs. The data received indicates that the chemical bids are rising sharply and are over \$400/ton; another chemical

supplier told staff they could not match the proposed unit price increases and that electricity costs have risen substantially; driving up the cost of product; the industry forecasts reviewed by staff note price increases will occur and will be substantially increased depending on the cost of electricity; and staff met with our caustic chemical supplier to verify that electricity supply and demand issues merit the requested increases.

District staff and the purchasing manager recommend approval of Change Order No. 1 for an increase in the unit cost of caustic soda from \$265.00 per ton to \$462.00 per ton that will increase the cost from \$470,300 to \$756,300.

Authorize the General Manager to approve Change Order No. 2 to increase the unit price of caustic soda from \$462.00 per ton delivered to a not to exceed \$515.00 per ton delivered increasing the contract cost to \$850,000 subject to staff review of and acceptance the forecasted price increases. Staff has included a 5% contingency into the \$850,000.

PROJECT/CONTRACT COST SUMMARY

The existing contract amount for caustic soda is \$470,300. Based on the revised chemical consumption and Change Order Nos. 1 and 2, the contract amount could increase by \$379,700 for a total amount not to exceed \$850,000.

BUDGET IMPACT

- This item has been budgeted. (Line item: Section 5, Page 12)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

None

ALTERNATIVES

Approve General Manager's recommendation for Change Order No. 1 and proceed with competitive bidding process to secure a new contract. Initial contacts with other major suppliers have resulted in similar pricing requested by GW International with minimal assurance of 100 percent allocation.

CEQA FINDINGS

None Required

ATTACHMENTS

1. February 5, 2001 Letter from GW International
2. February 19, 2001 Letter from GW International

OMTS COMMITTEE

AGENDA REPORT

Meeting Date 3/7/01	To Bd. of Dir. 3/28/01
Item Number OMTS01-14	Item Number 12(g)

Orange County Sanitation District

FROM: Robert P. Ghirelli, D.Env. Director of Technical Services
Originator: Tom B. Meregillano, Regulatory Specialist

SUBJECT: Amend Dry Weather Urban Runoff Policy

GENERAL MANAGER'S RECOMMENDATION

Adopt Resolution No. OCSD 01-07, Establishing Dry Weather Urban Runoff Policy, and Repeal Resolution No. OCSD 00-22, incorporating amendments to the indemnification language.

SUMMARY

Background

The Irvine Company/Irvine Community Development Company (Irvine Company) intends to construct proposed developments that will generate dry weather urban runoff from the watersheds of Los Trancos and Muddy Canyon located near the Pacific Coast Highway. As a requirement from the California Coastal Commission, the Irvine Company was directed to manage their dry weather urban runoff generated from their proposed developments. In cooperation with the Irvine Company, the Irvine Ranch Water District (IRWD) has agreed to undertake the responsibility for the construction, operation, and maintenance of all facilities required for the collection and discharge of dry weather urban runoff from the Irvine Company's proposed developments, through IRWD's sewer facilities to the Orange County Sanitation District's (District) sewer system. The District has agreed to collect, treat, and dispose of the dry weather urban runoff generated from the Irvine Company's proposed developments pending the finalization of an agreement between IRWD and the District.

The District has been working closely with IRWD and the Irvine Company to finalize an agreement between IRWD and the District since the Board adopted the District's Dry Weather Urban Runoff Policy (policy), Resolution No. OCSD 00-22, on September 27, 2000. This agreement sets terms and conditions for the collection, treatment, and disposal of dry weather urban runoff from the Irvine Company's proposed developments. The District has met with the parties several times and has finalized and sent the agreement to IRWD on February 26, 2001 for signature. All responsible parties have signed the agreement.

Issues

There is an inconsistency of the indemnification language in the agreement and in the policy. Initially, the District formulated the indemnification language in the draft agreement to be consistent with the policy, which states that dischargers are required to indemnify and hold the District harmless from all liability associated with the dry weather urban runoff activities. The parties argued that the indemnification language in the draft agreement and in the policy is unfair because it obligates IRWD to indemnify the District from all liabilities including the District's active negligence or intentional wrongful acts associated with the dry weather urban runoff activities. For example, if District staff negligently or intentionally shuts off the diversion system without due cause, in which case this action may lead to damage, then IRWD will not indemnify the District. Based on IRWD's rational argument, the General Counsel recommended that District staff revise the indemnification language in the draft agreement to recognize the District's responsibility for negligence and intentional wrongful acts, except in the case where

the District is negligent or commits intentional wrongful acts to render an emergency service at the dry weather urban runoff diversion system facilities. The parties agreed to the revisions.

It became apparent during the development of the agreement that the use of the indemnification language in the policy is not practical to implement for real-world application and needed revisions. For example, potential dischargers with an evident need to discharge dry weather urban runoff to the District's sewer system for treatment will be discouraged to enter into an agreement with the District that indemnifies the District from all liabilities. This situation creates much risk for the discharger.

To resolve the inconsistency of indemnification language in the agreement and in the policy, and have it apply equally to all parties to all of the District's agreements, District staff recommends the adoption of Resolution No. OCSD 01-07.

A copy of the District's proposed Resolution is attached with the highlighted changes in Section A – 10.

PROJECT/CONTRACT COST SUMMARY

Not applicable

BUDGET IMPACT

- This item has been budgeted. (Line item: _____)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

Not applicable

ALTERNATIVES

A no-action alternative will discourage potential dischargers to enter into an agreement with the District. As a result, this situation will prevent the use of our service and the intended purpose of our policy, which is to address a public health or an environmental problem associated with dry weather urban runoff discharge.

CEQA FINDINGS

Not applicable

ATTACHMENTS

1. Proposed Resolution No. OCSD 01-07

PDC COMMITTEE
AGENDA REPORT

Meeting Date 03/01/01	To Bd. of Dir. 03/28/01
Item Number PDC01-12	Item Number 13(c)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Dean Fisher, Engineer

SUBJECT: MODIFICATIONS TO ELECTRICAL AND CONTROL SYSTEMS AT
PLANT NO. 2, JOB NO. P2-47-1

GENERAL MANAGER'S RECOMMENDATION

(1) Ratify Change Order No. 2 to Modifications to Electrical and Control Systems at Plant No. 2, Job No. P2-47-1, with Southern Contracting Company, authorizing an addition of \$6,134 and a time extension of 59 calendar days, increasing the total contract amount to \$1,309,535; and (2) Accept Modifications to Electrical and Control Systems at Plant No. 2, Job No. P2-47-1, with Southern Contracting Company as complete, authorizing execution of the Notice of Completion and approving the Final Closeout Agreement.

SUMMARY

Change Order No. 2 includes eight items of added work to Job No. P2-47-1. There are two omission items associated with this change order. There is a 59 day time extension associated with this change order. Liquidated damages on this contract are \$500 per day and there are no bonus provisions.

Contract Start Date	January 7, 1999
Original Contract Completion Date	May 6, 2000
Total Number of Change Orders to Date	1
Current Contract Completion Date	May 16, 2000
Revised Contract Completion Date	July 14, 2000
Actual Completion Date	July 14, 2000
Days Subject To Liquidated Damages	0
Liquidated Damage Assessment	0

PROJECT/CONTRACT COST SUMMARY

Original Contract Price	\$1,271,000.00
Previously Authorized Changes	\$ 32,401.00
This Change (Add)	\$ 6,134.00
Change Orders to Date	\$ 38,535.00
Percentage Increase to Date	3.03 %
Final Contract Price	\$1,309,535.00

BUDGET IMPACT

- This item has been budgeted. (Line item: 2000-01 Budget, Section 8, Page 104)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

Job No. P2-47-1, Modifications to Electrical and Control Systems at Plant No. 2, replaces and upgrades electrical and control equipment to the Plant Water Pump Station, the Foster Booster Pump Station, and the Ocean Outfall Station. This project also adds ventilation and air conditioning to the electrical distribution centers throughout Plant No. 2. Lee and Ro Consulting Engineers prepared plans and specifications and the contract was awarded to Southern Contracting Company on October 28, 1998. The contract is 100 percent complete.

The following summarizes Change Order No. 2:

Item No.	Description	Amount	Days	Type
1	Additional HVAC Circuits	\$ 1,646		Omission
2	Conduit Coating in Wet Locations	\$ 8,648		Design Change
3	Control System Modifications	\$ 2,333	59	Design Change
4	HVAC Drain Modifications	(\$ 3,150)		Design Change
5	Concrete Repairs	\$ 1,448		Omission
6	Transformer Pad Modifications	(\$ 2,962)		Design Change
7	Witness Test Reimbursement	(\$ 1,829)		Other
8	Cable Bus Substitution	\$0		Design Change
	Total – Change Order No. 2	\$ 6,134	59	

ALTERNATIVES

None

CEQA FINDINGS

This project is exempt per CEQA and District Guidelines, Section 15301(B). The Notice of Exemption was filed with the County Clerk on December 15, 1993.

ATTACHMENTS

1. Budget Information Table
2. Change Order Status Report
3. Change Order

PDC COMMITTEE
AGENDA REPORT

Meeting Date 3/1/01	To Bd. of Dir. 3/28/01
Item Number PDC01-13	Item Number 13(d)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Bud Palmquist, Senior Engineer

SUBJECT: IMPROVEMENTS TO MILLER-HOLDER TRUNK SEWER SYSTEM,
REACH 1, CONTRACT NO. 3-38-1

GENERAL MANAGER'S RECOMMENDATION

Ratify Change Order No. 7 to Improvements to Miller-Holder Trunk Sewer System, Reach 1, Contract No. 3-38-1, with Fleming Engineering, Inc., authorizing an addition of \$114,973.75 and a time extension of 18 calendar days, increasing the total contract amount to \$8,786,334.56.

SUMMARY

Change Order No. 7 includes 6 items of added work to Contract No. 3-38-1. There is an 18 calendar day time extension associated with this change order. Liquidated damages on this contract are \$750 per day and there are no bonus provisions.

Contract Start Date	May 18, 1999
Original Contract Completion Date	November 27, 2000
Total Number of Change Orders to Date	7
Current Contract Completion Date	January 18, 2001
Projected Completion Date	February 5, 2001
Projected Days Subject to Liquidated Damages	N/A

PROJECT/CONTRACT COST SUMMARY

Original Contract Price	\$ 8,363,796.00
Previously Authorized Changes	\$ 307,564.81
This Change (Add)	\$ 114,973.75
Change Orders to Date	\$ 422,973.56
Percentage Increase to Date	5.05%
Amended Contract Price	\$ 8,786,334.56

BUDGET IMPACT

- This item has been budgeted. (Line item: Section 8, Page 27)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

The contingency fund of the project budget will provide for the increased construction contract costs. Refer to the budget information table for more information.

ADDITIONAL INFORMATION

Contract No. 3-38-1, Improvements to Miller-Holder Trunk Sewer System, Reach 1, includes the installation of 15,939 feet of sewer pipe, manholes, and appurtenant facilities in the City of Buena Park, and along the CALTRANS right-of-way in Beach Boulevard. Boyle Engineering Corporation prepared the plans and specifications and the contract was awarded on April 28, 1999 to Fleming Engineering, Inc. The contract is now 99% complete.

The following summarizes Change Order No. 7:

Item No.	Description	Amount	Days	Type
1	Extra work associated with undisclosed utilities.	\$ 32,000.00	3	Changed Condition
2	Additional excavation and shoring for bore pit.	\$ 2,181.00	1	Changed Condition
3	New 8-inch service connection.	\$ 4,500.00	0	Changed Condition
4	Alternate traffic control at Hillsborough Drive bore operation.	\$ 11,243.00	1	Other
5	Replacement of undisclosed loop detectors.	\$ 7,549.75	0	Changed Condition
6	Traffic control plan modifications at Hillsborough Drive	\$ 57,500.00	5	Other
7	Time extension for inclement weather	\$ 0.00	8	Other
Total Change Order No. 7		\$114,973.75	18	

Item No. 1 includes 9 sub-items of added work associated with undisclosed utilities. Please refer to the change order for detailed information. Item Nos. 4 and 6 were required to comply with the direction of the City of La Mirada to maintain access to Hillsborough Drive throughout construction.

ALTERNATIVES

None

CEQA FINDINGS

This project with included in the Programmatic EIR for the 1989 Master Plan. The final EIA was approved July 19, 1998, and the Notice of Determination was filed on July 20, 1989.

ATTACHMENTS

Budget Information Table

Change Order Status Report

Change Order

PDC COMMITTEE

AGENDA REPORT

Meeting Date 03/01/01	To Bd. of Dir. 03/28/01
Item Number PDC01-14	Item Number 13(e)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: William Cassidy, Project Manager

SUBJECT: MODIFICATIONS TO THE MAIN STREET PUMP STATION,
CONTRACT NO. 7-7-2

GENERAL MANAGER'S RECOMMENDATION

Establish a budget for Modifications to the Main Street Pump Station, Contract No. 7-7-2, in the amount of \$445,000, to be reimbursed by the Design Consultant.

SUMMARY

The five 200-horsepower (hp) sewage pumps installed on the station's easterly bay in 1998-99, as part of "Improvements to the Main Street Pump Station, Contract No. 7-7-1", have failed to perform as required. The pumps cavitate causing rapid wear, and excessive vibration of the pumps, increasing maintenance and reducing the life of the pumps. Cavitation also reduces the pump's capacity and efficiency. Designed for a total capacity of 40.4 million gallons per day (mgd) to handle peak wet weather (storm) flows, the pumps have been restricted to 30.5 mgd to eliminate the cavitation.

Cavitation occurs when gas comes out of solution to form tiny vapor bubbles prior to passing through the pump. The bubbles collapse as they pass through the pump causing pits, erosion, vibration, and noise. The vibration is caused by the imbalance and surging from the uneven distribution of the collapsing bubbles. The noise is similar to the sound of pumping sand or gravel.

The Design Consultant for Contract No. 7-7-1, and Staff, have investigated the cause, and reviewed numerous remedies to minimize and/or eliminate the cavitation. Remedies reviewed include:

- Replace the pump impellers
- Increase the water surface level in the wet well
- Trim the existing pump impellers
- Limit the maximum operating speed of the variable frequency drive (VFD) pumps
- Replace the three (3) constant speed drives with VFDs
- Increase the future capacity of the westerly bay's pumps to make up for lost capacity in resolving the cavitation of the easterly bay's pumps
- Replace the pumps

Staff recommends that the pumps be replaced with pumps suited for the full range of operating conditions of the pump station.

The Design Consultant and Staff mutually agree that the Design Consultant made a design error in the pump specifications. The work to resolve the cavitation problem is the responsibility of the Design Consultant. The Design Consultant has agreed to redesign and construct the new project at no cost to the District and reimburse the District for its costs associated with the redesign and replacement. A Reimbursement Agreement with the Design Consultant for the Orange County Sanitation District (District) to replace the pumps is under development.

PROJECT/CONTRACT COST SUMMARY

The total budget estimate for the Modifications to the Main Street Pump Station, Contract 7-7-2, is \$445,000. A Reimbursement Agreement with the Design Consultant is under development.

See the attached Budget Information Table for more information. The District will award a construction contract and the Design Consultant will reimburse the District for all related redesign and construction costs.

BUDGET IMPACT

- This item has been budgeted. (Line item:)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

The budget shall serve as a means to track costs that are to be reimbursed by the Design Consultant.

ADDITIONAL INFORMATION

Project Background

The Main Street Pump Station was constructed in 1986. It was designed to have an ultimate capacity of 80.8 million gallons per day (mgd), with flow split to two identical wet wells (east and west bays). Each bay would have five (5) non-clog vertical non-clog sewage pumps.

The original pump station contract, Main Street Pump Station, Contract No. 7-7, installed in 1986, one set of five 50-horsepower (hp) pumps on the westerly bay. The pumps are rated for a 25.5-mgd total capacity and discharge through an interim connection to the Sunflower Trunk. Ultimately, the pumps are to be replaced with five 200-hp pumps, with a total capacity of 40.4 mgd, and are to discharge through the westerly Baker force-main to the Baker-Main Trunk.

Improvements to Main Street Pump Station, Contract No. 7-7-1, installed in 1999, five (four duty / one standby) 200-horsepower (hp) pumps on the easterly bay that discharge to the Baker-Main Trunk through the easterly Baker force-main. Two pumps are powered by variable frequency driven (VFD-variable speed) motors, and three pumps are driven with constant speed motors. The pumps were designed for a total capacity of 40.4 million gallons per day (mgd). However, to eliminate cavitation, the total flow from the pumps is currently restricted to 30.5 mgd by partially closing a downstream discharge valve.

Remedy Alternatives

The Design Consultant for Contract No. 7-7-1, and Staff, investigated each of the following methods or approaches to eliminate the cavitation problem.

Replace the pump impellers: The absolute pressure required at the eye of the impeller is characteristic of the impeller, pump and speed (revolutions per minute - rpm) of the pump. It is determined by tests of similar impeller / pump configurations operated at constant speeds. The pump manufacturer investigated the use of other impellers, including impellers from other pump models. The manufacturer proposed an impeller from a different model based on a theoretical calculated performance. The custom configuration needed to fix the cavitation in the installed pumps would theoretically meet the pressure requirements. However, the pump's estimated performance curve barely and questionably encompasses the pump's calculated range of operation. The proposed configuration also has

other deficiencies. They include a 3-vane impeller design which has a track record of clogging thus increased maintenance, an additional restriction entering the pump (creating additional undesired forces on the impeller thus increased maintenance), and the configuration has no track record.

Increase the water surface level in the wet well: The operating levels of the wet well could be increased above design levels, thus increasing the available absolute pressure to above the required pressure. The levels required would further back up the flow into the trunk, submerging the trunk at the wetwell. Submergence of the trunk would cause grease build up in the trunk system. Velocities in the trunk approaching the wet well would also be decreased depositing sediment in the trunk. An increase in cleaning and maintenance cost for the trunk system would result.

Trim the pump impellers: Reducing the flow from the pump by reducing the diameter of the impeller would reduce the observed cavitation problems. Trimming the impellers would permanently reduce the total capacity of the pump bay from 40.4 mgd to 30.5 mgd. Custom control programming could allow impeller diameters for a capacity of 31.5 mgd. The trimmed impellers could not be replaced with impellers of the original diameter for future peak wet weather flows without cavitation returning.

Limit the maximum operating speed of the variable frequency drive pumps: Reducing the flow from the pump by limiting the pump's speed would reduce the observed cavitation problems. The maximum speed could increase as the number of pumps running increase. The cavitation would be eliminated in the variable frequency drive (VFD) pumps, however the constant speed driven pumps would continue to cavitate until the flow equal to four pumps running at full speed is reached. Additionally, several important operational features (e.g., bypass of the VFD) standard to Orange County Sanitation District (District) pump stations would be lost.

Replace the three constant speed drives with VFDs: The cavitation within the three constant speed pumps could be eliminated by replacing the drives with VFDs, and limiting the maximum operating speed as stated above. Limiting the maximum speed to less than 100%, and tying the maximum speed to the number of pumps running, is poor design. Also, space within the pump station is prohibitive and features (e.g., bypass of the VFD) standard to the District could not be used.

Increase the future capacity of the westerly bay's pumps: The impellers of the easterly bay's pumps would be trimmed to eliminate the cavitation as stated above. The resulting loss in capacity would be added to the current ultimate capacity for the westerly bay, for a total station capacity of 80.8 mgd. However, it is uncertain pumps with capacity of 49.3 to 50.3 million gallons per day (mgd) exists for the operating conditions of the pump station. Additionally, the District would have paid for facilities not received, and incur unwarranted cost in the future.

Replace the current pumps: The pumps installed, would be replaced with pumps of the designed capacity. Pumps that meet the design requirements are available.

Staff Recommendation

Staff recommends the pumps be replaced with pumps suited for the full range of operating conditions of the pump station. Staff has met with the Design Consultant to review the alternatives and Staff's recommendation. The Design Consultant agrees with Staff's recommendations. Additionally, the Design Consultant and Staff, mutually agree that the Design Consultant made a design error in the pump specifications. The work to resolve the cavitation problem is the responsibility of the Design Consultant. A Reimbursement Agreement with the Design Consultant for the District to replace the pumps is under development.

ALTERNATIVES

1. The District could continue to operate the pumps as currently installed, manually regulating (partially closing a discharge valve) the maximum capacity of the station to match influent flows. Thus increasing operating and maintenance costs.
2. District could choose another alternate from those reviewed. Each alternate reviewed, other than the one recommended by Staff, fails to meet industry standard guidelines / good design practices for pump station design and deliver the station's design capacity.

CEQA FINDINGS

This project was included in the Programmatic EIR for the 1989 Master Plan. The final EIR was approved on July 19, 1989, and the Notice of Determination was filed on July 30, 1989.

ATTACHMENTS

1. Budget Information Table
2. Figure 1, Location Map

PDC COMMITTEE

AGENDA REPORT

Meeting Date 3/1/01	To Bd. of Dir. 3/28/01
Item Number PDC01-15	Item Number 13(f)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Jim Herberg, Engineering Supervisor

SUBJECT: HEADWORKS IMPROVEMENTS AT PLANT NO. 2
JOB NO. P2-66

GENERAL MANAGER'S RECOMMENDATION

Authorize the General Manager to negotiate Addendum No. 4 with Carollo Engineers for the design of the Headworks Improvements at Plant No. 2, Job No. P2-66, subject to approval by the Board of Directors at the May 23, 2001 meeting.

SUMMARY

The Headworks at Plant No. 2 has been expanded or modified by more than 40 different projects over the past 30 plus years. There are a number of Headworks components requiring major rehabilitation, replacement, automation and safety/seismic upgrades. The Orange County Sanitation District (District) awarded a Professional Services Agreement (PSA) to Carollo Engineers for preliminary engineering of Headworks Improvements at Plant No. 2, Job No. P2-66. Based on District staff input through a series of workshops with Carollo Engineers, the construction cost presented in the Preliminary Engineering Report was estimated to be \$123M. The current FY2000-2001 budget is \$48M.

Carollo Engineers was subsequently awarded Addendum No. 3 to their existing contract to analyze the following four alternatives to the proposed \$123M Headworks project (Alternative 1A), to potentially reduce the construction cost:

- **Alternative 1B** - Designing the structural components of the Headworks for the ultimate flow, 517 million gallons per day (mgd) and the mechanical components for the projected 2020 peak flow (340 mgd) including cost saving measures.
- **Alternative 2A** - Designing the structural and mechanical components of the Headworks for the projected 2020 peak flow.
- **Alternative 2B** - Designing the structural and mechanical components of the Headworks for the projected 2020 peak flow including cost saving measures.
- **Alternative 3** - Rehabilitating the existing Headworks and constructing new Headworks as needed for the projected 2020 peak flow.

A series of three workshops were conducted to evaluate the various alternatives. The workshop participants selected cost savings measures in Alternatives 1B and 2B that were most appropriate from an Operations and Maintenance standpoint.

Although Alternative 2B was determined to have the lowest construction cost (i.e., \$102M), it is recommended that Alternative 1B (\$108M) be selected for the following reasons:

- Alternative 1B provides more value in terms of capacity per dollar spent, (i.e., \$0.21/gallon, for Alternative 1B vs. \$0.30/gallon for Alternative 2b).

- Alternative 1B makes provisions for future flow. Building the structures to handle the projected ultimate flow now would save the Orange County Sanitation District (District) money in the future.

Staff recommends that the District proceed with the design of Alternative 1B, keeping in mind that additional cost saving modifications may be made to the project elements based on a formal Value Engineering Workshop to be conducted early in the design process, and the pilot studies which will be conducted later this year.

Lastly, since Carollo Engineers has been intimately involved in the preparation of the Preliminary Engineering Report, and has a thorough understanding of the District's requirements for this project, Staff recommends that Carollo Engineers be considered for the design of the proposed Headworks project. Following fee negotiations, a Professional Services Agreement (PSA) for final design would be brought before the Planning, Design, and Construction (PDC) Committee and the Board for approval in April 2001.

PROJECT/CONTRACT COST SUMMARY

The Headworks analysis was performed by Carollo Engineers under Addendum No. 3 approved by the Board in November 2000, to Carollo Engineers' existing PSA. No additional authorization is being requested at this time. The PSA Table is attached.

BUDGET IMPACT

- This item has been budgeted. (Line item:)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

No additional budget expenditures are being requested at this time. Please refer to the attached Budget Information Table.

ADDITIONAL INFORMATION

A preliminary construction cost of \$48M was included in the (Orange County Sanitation District's (District) FY 2000/01 Budget for the new Headworks. As part of the preliminary engineering process, a series of workshops were conducted to present the proposed project elements to the District's Engineering and Operations staff. Based on better project definition and decisions made in the workshops, the estimated construction cost for the new Headworks increased substantially to approximately \$123M.

In an effort to reduce costs, District staff and Carollo Engineers conducted a one-day Value Engineering workshop to discuss potential cost saving measures for the new Headworks project (Alternative 1A) described in the Preliminary Engineering Report. The results of this workshop provided the basis for approval of an additional engineering study by the Board in November 2000 (i.e., Addendum No. 3 to Carollo Engineers PSA).

The following four alternatives were evaluated as part of Addendum No. 3:

- **Alternative 1B** - Build current new Headworks project for an operational capacity of 340 million gallons per day (mgd) with provisions for an ultimate peak flow capacity of 517 mgd and include cost saving measures.
- **Alternative 2A** - Build new Headworks for an operational capacity of 340 mgd.
- **Alternative 2B** - Build new Headworks for an operational capacity of 340 mgd including cost saving measures.

- **Alternative 3** - Build new metering and diversion structure, new bar screens, new pumping to replace Headworks B, new partial grit basins, new partial grit handling/loading, new chemical facilities, new electrical building and new yard piping/structure, and rehabilitate Headworks C pumping and grit basins for an operational capacity of 340 mgd. New facilities included cost saving measures where appropriate.

Detailed cost information relative to these alternatives is presented in Attachments 3, 4, and 5. A summary of costs for each alternative is presented in Table 1.

TABLE 1
CONSTRUCTION COST FOR HEADWORKS ALTERNATIVES

ALTERNATIVE	CONSTRUCTION COST
1A	\$123.2 M
1B*	\$108.2 M
2A	\$116.5 M
2B*	\$102.0 M
3	\$145.7 M

*A total of 23 cost saving measures were evaluated for Alternatives 1B and 2B (Refer to Attachment 4).

Alternatives 1A and 2A include the construction of a new headworks with structural capacities of 517 million gallons per day (mgd) and 340 mgd, respectively. Even though Alternative 1A is \$7M higher than Alternative 2A, it is a better value relative to the capacity provided (i.e., gain 177 mgd more structural capacity for an additional cost of \$7M). The value can be more readily seen if the costs are compared in terms of \$/gallon. Based on this approach, Alternative 1A's cost of \$0.24/gallon is less than the \$0.34/gallon for Alternative 2A.

Alternatives 1B and 2B are the same as Alternatives 1A and 2A with the inclusion of cost saving measures. Alternative 1B is about \$6M more than Alternative 2B. In terms of \$/gallon, however, the cost of Alternative 1B (\$0.21/gallon) is less than the cost of Alternative 2B (\$0.30/gallon).

Alternative 3 includes the rehabilitation of the existing headworks and construction of a new headworks with a combined structural capacity of 340 mgd. The cost of this alternative is significantly greater than the cost of the other alternatives (i.e., greater by \$22.5M to \$43.7M). It should be noted that the cost presented in Table 1 is only the initial cost of this alternative. In order to compare alternatives with similar useful lives, additional funds will be needed in the future to either upgrade the existing headworks further or replace it with new facilities. This will only make the cost differential greater. Since the cost of this alternative is significantly greater than the other alternatives, it is not recommended for further consideration.

Based on an economic analysis, Alternative 1B is the preferred alternative. Not only does this alternative have a better value now, but it will also save the District money in future construction costs. Building structures to handle a flow of 517 mgd instead of 340 mgd now and 177 mgd later will require less concrete and associated building materials because of the use of common wall construction.

Based on a technical analysis, Alternative 1B is also preferred because it provides greater flexibility to handle future conditions. In addition, the hydraulic flow splitting would be less complex. The potential major disadvantages of this alternative include:

- Building facilities now for flows that may not materialize

- Building facilities now that will require retrofitting before they are actually needed because the flows don't materialize as soon as expected (10-20% of the structural components may be affected)

Since the cost benefits outweigh the potential disadvantages, Staff recommends that the District proceed with Alternative 1B.

It should be noted that the pilot work scheduled for later in 2001 will also help to better define the process elements of the new Headworks facility. For example, the pilot work may demonstrate that screenings washing is not required which, in turn, would reduce the construction cost. In addition, other cost saving measures may be identified in a more comprehensive Value Engineering workshop to be conducted at the beginning of the Design effort. The construction cost may also be further reduced by as much as \$4.0M if the Odor Control Study, currently being performed by Orange County Sanitation District (District) staff, shows that soil filters can be used in lieu of packed tower scrubbers for odor control.

ALTERNATIVES

The District could consider issuing a Request for Proposal for design services to other prospective firms.

CEQA FINDINGS

Replacement of the Plant No. 2 Headworks was not included in the 1999 Strategic Plan Program Environmental Impact Report (EIR). A supplemental EIR will be needed for the new Headworks.

ATTACHMENTS

1. Budget Information Table
2. PSA Status Report
3. Alternative 1A and 2A Construction Costs
4. Alternative 1B and 2B Cost Saving Measures
5. Alternative 3 Construction Costs

PDC COMMITTEE

AGENDA REPORT

Meeting Date 03/01/01	To Jt. Bds. 03/28/01
Item Number PDC01-16	Item Number 13(g)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Jim Herberg, Engineering Supervisor

SUBJECT: SUPPLEMENT NO. 1 TO THE 1999 STRATEGIC PLAN PROGRAM
ENVIRONMENTAL IMPACT REPORT FOR JOB NO. J-40-5

GENERAL MANAGER'S RECOMMENDATION

(1) Establish a budget for Supplement No. 1 to the 1999 Strategic Plan Program Environmental Impact Report, Job No. J-40-5, for \$147,830; and (2) Approve a Professional Services Agreement with Environmental Science Associates for preparation of Supplement No. 1 to the 1999 Strategic Plan Program Environmental Impact Report, Job No. J-40-5, for a total amount not to exceed \$77,830.

SUMMARY

The 1999 Strategic Plan identified a 20-year Capital Improvement Program for the Orange County Sanitation District (District). To support the Strategic Plan, the District completed a Program Environmental Impact Report (EIR) to address the environmental impacts associated with proposed projects in compliance with the California Environmental Quality Act (CEQA).

There are three treatment plant projects currently under design that were included in the 1999 Strategic Plan EIR, which have significantly changed from the projects described in the EIR, requiring additional environmental review. These three projects are: (1) Area Classification Study Implementation Plan for Plant Nos. 1 & 2, Job No. J-35-2; (2) Effluent Pump Station Annex, Job No. J-77; and (3) Headworks Improvements at Plant No. 2, Job No. P2-66. According to CEQA, the District must disclose to the public any changes that were not previously identified or discussed in the EIR. To comply with this requirement, Staff recommends that Supplement No. 1 to the 1999 Strategic Plan EIR (SEIR) be prepared.

Environmental Science Associates (ESA) is being proposed as a sole source provider due to their expertise and experience as the Consultant responsible for development of the District's Strategic Plan EIR. Engineering is not aware of another firm that is presently capable of preparing an SEIR in a timely manner consistent with the assumptions used to develop the Strategic Plan EIR.

Staff has prepared a Scope of Work and ESA has prepared a proposal letter with an estimated cost to complete the work. Staff has negotiated a proposed fee not to exceed \$77,830.

PROJECT/CONTRACT COST SUMMARY

As indicated in the attached Budget Information Table, authorization of \$77,830 is requested for the proposed Professional Services Agreement (PSA) and \$44,000 for Staff and material costs.

BUDGET IMPACT

- This item has been budgeted.
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

Authorization of a transfer of \$147,500 from the Orange County Sanitation District (District) Capital Improvement Reserve Funds is being requested for Job No. J-40-5. The proposed budget authorization is as follows:

Staff & Material	\$ 44,000
Consultant PSA	\$ 97,830
Contingency	<u>\$ 6,000</u>
	\$147,830

Please refer to the attached Budget Information Table.

ADDITIONAL INFORMATION

Background

Area Classification Study Implementation Plan for Plant Nos. 1 & 2, Job No. J-35-2

The 1999 Strategic Plan identified the need to upgrade Orange County Sanitation District (District) facilities to comply with the National Fire Protection Association (NFPA) 820 and California Occupational Safety and Health Administration (Cal/OSHA) requirements. However, the extent of construction for the project was not fully known when the Strategic Plan Environmental Impact Report (EIR) analysis was performed.

In September 1999, Brown and Caldwell completed the Hazardous Area Classification Study for Plant Nos. 1 and 2. The study identified many conditions that met code requirements at the time of construction, but are presently in violation of today's standards. The study provided Staff with uniform documentation showing potential fire and explosion hazard locations throughout District facilities. Code deficiencies were documented and various options evaluated to bring all facilities into full compliance.

Under the proposed PSA, the Consultant will analyze environmental impacts associated with the replacement and/or upgrade of equipment necessary to maintain full compliance with NFPA 820 and the latest National Electric Code (NEC) and Cal/OSHA code standards.

Effluent Pump Station Annex, Job No. J-77

The 1999 Strategic Plan recommended that the Foster Outfall Pump Station (FPS) be rehabilitated to pump effluent to the 78-ocean outfall during peak wet weather emergencies. In December 1999, Carollo Engineers completed a study entitled "Evaluation of Secondary Effluent Pumping at Plant No. 2," which recommended replacement of the existing Foster Outfall Pump Station (FPS) rather than rehabilitation.

Under the proposed Professional Services Agreement (PSA), the Consultant will analyze the impacts from construction of a new Effluent Pump Station Annex (EPSA).

Headworks Improvements at Plant No. 2, Job No. P2-66

The 1999 Strategic Plan recommended that Plant No. 2 Headworks be rehabilitated. However, upon further review, it was decided to replace the Headworks. The revised Headworks project is documented in the Preliminary Engineering Report prepared by Carollo Engineers.

Additionally, Carollo Engineers has prepared an engineering analysis of five Headworks alternatives to confirm the best project from both a technical and economic perspective. The analysis was completed in January 2001.

Under the proposed PSA, the Consultant will analyze the impacts of demolition of the existing Plant No. 2 Headworks and construction of the new Plant No. 2 Headworks.

ALTERNATIVES

Do not issue a Professional Services Agreement (PSA). The 1999 Strategic Plan Environmental Impact Report (EIR) does not support the projects described herein. Without the supplemental environmental analysis, the projects, if constructed, would be in violation of California Environmental Quality Act (CEQA). Moreover, the projects may be subject to legal challenges, which may result in projects being difficult or very costly to implement in the future.

CEQA FINDINGS

The Notice of Determination for the 1999 Strategic Plan EIR was filed with the State Clearinghouse on October 28, 1999. The recommended action provides for a Supplemental EIR required for the three projects described herein.

ATTACHMENTS

1. Budget Information Table
2. PSA Status Report
3. Proposal letter from Environmental Science Associates dated January 29, 2001

PDC COMMITTEE
AGENDA REPORT

Meeting Date 3/01/01	To Bd. of Dir. 3/28/01
Item Number PDC01-17	Item Number 13(h)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Jim Burror, Project Manager

SUBJECT: SCRUBBER MONITOR AND CONTROL PROJECT,
JOB NO. J-71-7 (FORMERLY JOB NO. SP-04)

GENERAL MANAGER'S RECOMMENDATION

(1) Authorize transfer of all funds from the Scrubber Monitor and Control Project, Job No. SP-04, to Job No. J-71-7; (2) Approve a budget amendment of \$1,586,000 for Scrubber Monitor and Control Project, Job No. J-71-7, for a total project budget of \$2,382,000; and (3) Approve Professional Services Agreement with Lee and Ro, Inc., to provide engineering services for the design and construction support of the Scrubber Monitor and Control Project, Job No. J-71-7, for an amount not to exceed \$359,951.

SUMMARY

The Engineering Division is now implementing the Design and Construction phase of the Scrubber Monitor and Control Project. The new project designation will be Job No. J-71-7, and supercedes the Operations and Maintenance (O&M) Division's project designation Job No. SP-04.

The O&M Division has budgeted \$796,000, and spent \$195,000, installing and testing potential scrubber control and monitoring equipment over the past three years. The proposed control strategy will allow Hydrogen Sulfide (H₂S) and other chemical emission sensors to directly control the scrubbers. Currently, eight units are temporarily installed and in full operation. Four are installed at Plant No. 1 on Scrubbers 4, 7, 9, and 10. Four are installed at Plant No. 2 on Scrubbers H, I, S, and T.

The next phase of this project, and the subject of this Agenda Report, is the full-scale implementation of the Scrubber Monitor and Control Project recommended by Engineering and O&M. This phase of the project includes designing permanent monitoring and automation improvements, including H₂S and chlorine residual sensors at each scrubber's exhaust stack, and automatic controls for optimum scrubber operation of the Orange County Sanitation District's (District) 27 scrubbers.

Staff solicited proposals for the preparation of a Preliminary Design Report (PDR), Construction Documents, and Construction Support Services from the following five firms: Brown and Caldwell, Carollo Engineers, CH2M Hill, Lee & Ro, Inc., and Malcolm Pirnie. Lee & Ro, Inc. was the only firm to propose on the project. Staff reviewed the proposal and negotiated with the Consultant on January 18, 2001. The other firms declined to propose on this project because of limited staffing resources at this time.

Staff evaluated Lee & Ro, Inc.'s proposals, and their expected level of effort. The number of hours proposed by Lee & Ro, Inc. were reduced by 494 hours, or 11%. After this negotiation, Staff recommends approval of a Professional Services Agreement (PSA) for the engineering, design, and construction support services for Job No. J-71-7, with Lee & Ro, Inc. for an amount

not to exceed \$359,951. See the attached Staff Evaluation of Proposals to Provide Engineering Services for more information.

The design work is estimated to take 24 weeks to complete, and will begin within one month after the approval of the PSA. The construction work is estimated to be completed in June 2002.

PROJECT/CONTRACT COST SUMMARY

The total budget estimate for the Scrubber Monitor and Control Project, Job No. J-71-7, is \$2,382,000. Authorization of \$359,951 for the Consultant PSA and \$1,000 for Project Development are being requested. See the attached Budget Information Table for more information.

BUDGET IMPACT

- This item has been budgeted. (Line item: 2000/01 Budget Section 8, Page 9 and 114, under Job No. SP-04)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

The current project budget is \$796,000 under Job No. SP-04. The Job No. SP-04 budget and remaining funds are being requested to be moved to the newly created project, Job No. J-71-7. Also, a budget amendment of \$1,586,000 is being requested to set a total revised budget of \$2,382,000. This budget amendment will allow for the design and construction of the Scrubber Monitor and Control project recommended by Engineering and Operations and Maintenance. The budget increase includes \$1,000 for Project Development, \$280,000 for Consultant PSA, \$1,046,000 for a Construction Contract, \$39,000 for Construction Inspection, and \$220,000 for Project Contingencies. A budget breakdown is included in the attached Budget Information Table for this project.

ADDITIONAL INFORMATION

Background

The scrubber emissions monitoring program began in 1996. Operations and Maintenance (O&M) solicited interested vendors to demonstrate a monitoring system that could continuously measure Hydrogen Sulfide (H₂S) scrubber emissions and control scrubber chemical additions. Vendor testing was conducted for six months. The Vapex system was the only monitor to meet all criteria for performance, accuracy and reliability. O&M staff unanimously agreed to proceed with design and installation of the Vapex monitors. At the time, it was decided that 16 Vapex units were required, this included one spare. This was assuming that one Vapex unit could effectively control two scrubbers.

The project's design and equipment purchase were budgeted for in FY1997-98. O&M elected to manage the project and selected CH2M Hill to perform the project's design. Unfortunately, CH2M Hill underestimated the Scope of Work. Through several meetings and negotiations, it was agreed to release them from designing full automation of all the scrubbers. However, CH2M Hill agreed to automate the six most used scrubbers and design local controls for the remaining units. Meanwhile, O&M purchased 16 Vapex units and temporarily installed four units at each plant.

In FY1998-99, the construction documents for the Vapex installations were turned over to the Engineering Department. The Engineering Department reviewed the construction documents and put the project on hold after determining that the Plans and Specifications did not meet the

soon to be released Engineering Design Guidelines. Also, during that review period, the Orange County Sanitation District (District) experienced a substantial number of odor complaints at Plant No. 2. Most of the complaints were the result of bleach carryover from the scrubbers.

To resolve the bleach issue, O&M investigated options to optimize the bleach chemical feed. In the first quarter of FY2000-2001, O&M determined that ATI chlorine residual monitors meet all the established criteria for performance, accuracy and reliability. Five ATI units were purchased and temporarily installed, including two units at Plant No. 1 and three units at Plant No. 2. Concurrently, information from the Odor Control Master Plan project, Job No. J-71-4, revised the proposed scrubber operational and control strategies to avoid offsite impacts.

The revised operational strategy increases the number of scrubbers needed in full time operation from 6 to 14 at Plant No. 1, and from 8 to 13 at Plant No. 2. The revised control strategy requires that each operational scrubber must have its own Vapex system and an ATI unit where bleach is used, to ensure the offsite impact reductions. Thus, 27 scrubbers will require Vapex units and 15 scrubbers will require ATI units for a successful project.

Engineering Design Guidelines Requirements

The construction documents prepared by Operations and Maintenance (O&M) in January 1999 were not constructed. The project did not meet the soon to be released Engineering Design Guidelines and O&M wanted to incorporate the installation of the ATI units and additional Vapex units. Thus, it was determined to delay the project's implementation because the project was infeasible as designed. Staff recommends that the project be redesigned to the new engineering design standards and with all the required project elements to allow for a successful project.

New Project Scope

In July 2000, the Engineering Department developed a new Scope of Work to incorporate the design of the additional Vapex units, the ATI units, and the Engineering Design Guidelines. The new scope also includes a requirement to upgrade and fully automate each of the scrubbers to the existing Orange County Sanitation District (District) standards. The result is a project that includes installing the Vapex and ATI units, upgrading the scrubbers hardware and software controls, installing magnetic flow meters to control source water, installing caustic chemical controllers, and reconfiguring the pH meters.

Increased Scope Impacts to the Project Budget

The original project was to install 15 Vapex units. From that 15, six scrubbers were to be automated and the remaining nine were to have improved local controls. Based on the results from Job No. J-71-4, the new project will install Vapex units on all 27 scrubbers, install ATI units on 15 scrubbers, and automate all 27 scrubbers. The automation includes upgrading the scrubber hardware and software controls, installing magnetic flow meters to control source water, installing caustic chemical controllers, and reconfiguring the pH meters.

The original project budget was \$796,000. The revised estimate is \$2,382,000. Of this amount, \$1,390,000 is necessary for O&M to implement its monitoring project. The remaining \$992,000 is necessary to upgrade the scrubbers to the existing District automation standards.

Cost-Benefit Analysis

The estimated financial benefit of this project includes reductions in Staff time and chemical costs. These are estimated at \$377,000 per year. The estimated payback period for the \$2,382,000 project is 6.3 years.

Other project benefits include: (1) More accurate compliance with AQMD monitoring requirements; (2) A reduction in the number of odor complaints from surrounding neighbors; and (3) The project contributes to the area automation and staff reduction goal.

Conclusion

The project as currently proposed has a payback of 6.3 years. The project will also allow the Orange County Sanitation District (District) to implement automation goals, reduce chemical usage, reduce staffing effort, and reduce odor complaints. Thus, the project is favorable to the continued economical operation of the District's treatment facilities and is recommended by Staff for implementation.

ALTERNATIVES

The project could be cancelled; however, this may lead to additional odor complaints from the treatment's neighbors and increased staffing requirements for compliance monitoring.

CEQA FINDINGS

This project is exempt for CEQA under section 15302. A Notice of Exemption will be filed at the County Clerk's Office during the design phase of this project.

ATTACHMENTS

1. Budget Information Table
2. PSA Status Report
3. Staff Evaluation of Proposals to Provide Engineering Services

PDC COMMITTEE
AGENDA REPORT

Meeting Date 3/01/01	To Bd. of Dir. 3/28/01
Item Number PDC01-18	Item Number 13(l)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Larry Rein, Contract Project Manager

SUBJECT: ABANDONMENT OF COVEY LANE PUMP STATION
CONTRACT NO. 7-14-4

GENERAL MANAGER'S RECOMMENDATION

Establish a budget of \$90,000 for Abandonment of Covey Lane Pump Station, Contract No. 7-14-4.

SUMMARY

The Irvine Ranch Water District (IRWD) constructed the Harvard Avenue Trunk Sewer (HATS) in the early 1990s, making it possible for the Orange County Sanitation District (OCSD) to redirect flows eastward by gravity, and abandon a series of nine pump stations built in the 1960s. Of these nine pump stations, all have now been abandoned except the Covey Lane Pump Station. Recently, the land east of Covey Lane Pump Station has been subdivided and development is finally proceeding. OCSD needs to acquire an easement and construct a gravity sewer across a parcel of land prior to the development being finalized. With construction of this gravity line, the Covey Lane Pump Station can be decommissioned. IRWD has already reserved capacity in HATS for this additional flow. An agreement has been in place since 1992, allowing this exchange of flow with IRWD.

The gravity sewer construction and cost will be incurred by the land developer. OCSD will be responsible for overall design, project coordination, and pump station abandonment costs.

PROJECT/CONTRACT COST SUMMARY

The total proposed FY 2000/01 budget for the Abandonment of Covey Lane Pump Station, Contract No. 7-14-4, is \$90,000. This includes:

Project Development	\$5,000
Project Design	\$22,000
Construction Contract	\$35,000
Construction Administration	\$7,000
Construction Inspection	\$14,000
Contingency	<u>\$7,000</u>
	\$90,000

Please refer to the attached Budget Information Table.

BUDGET IMPACT

- This item has been budgeted.
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

A budget breakdown is included in the attached Budget Information Table.

ADDITIONAL INFORMATION

Now that the land east of Covey Lane has been subdivided, a land developer is beginning to install sewers and other improvements. The project is being budgeted now because it is necessary to abandon the pump station prior to improvements to the subdivided land being completed. As part of the land development, the developer will install the sewer east of Covey Lane and incur the costs for installation. Orange County Sanitation District (OCSD) will contract for the remainder of the work. The design work is limited and will be done by OCSD staff. The design work will consist of the sewer work, the pump station abandonment work, and extensive project coordination with the land developer, the City of Tustin and Irvine Ranch Water District. The contract work by OCSD will be limited to the pump station abandonment work.

ALTERNATIVES

None

CEQA FINDINGS

The project is covered in the previously approved 1989 Master Plan/EIR. The final EIR was approved July 19, 1989 and the Notice of Determination was filed July 20, 1989.

ATTACHMENTS

Budget Information Table

PDC COMMITTEE
AGENDA REPORT

Meeting Date 3/01/01	To Bd. of Dir. 3/28/01
Item Number PDC01-19	Item Number 13(j)

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Jeffrey D. Kidd, Contract Project Manager

SUBJECT: WARNER AVENUE RELIEF SEWER, CONTRACT NO. 11-22

GENERAL MANAGER'S RECOMMENDATION

Approve Addendum No. 1 to the Professional Services Agreement with ASL Consulting Engineers for the Warner Avenue Relief Sewer, Contract No. 11-22, providing for a change in the name of the Consultant to Tetra Tech ASL and providing for additional engineering services in the amount of \$57,679, for a total amount not to exceed \$282,479.

SUMMARY

This project consists of improvements to relieve hydraulic deficiencies on two separate reaches of the existing Warner Avenue Relief Sewer and to relieve deficiencies in the overall sewer drainage basin tributary to that trunk sewer. The 1999 Strategic Plan identified these two reaches of the Warner Avenue Sewer to be hydraulically deficient, and in need of replacement. The 1999 Strategic Plan did not address hydraulic deficiencies in one of the City of Huntington Beach's (City) sewers in Warner Avenue that affects the overall system.

Proposed Addendum No. 1 adds the following project elements:

- Engineering services to increase the size of the Warner Avenue Relief Sewer, currently under design, to accommodate removal and abandonment of approximately 2,700 lineal feet of 21-inch City sewer on Warner Avenue, east of Bolsa Chica Street. This is needed to improve the hydraulic conditions where the existing Orange County Sanitation District (District) sewer and the City sewer flow into the Slater-Springdale Trunk. The City's trunk sewer on Warner Avenue is parallel and redundant to the District's trunk sewer. Recent videotaping of this reach revealed their pipe to be in poor condition and in need of replacement. This abandonment will improve the hydraulic conditions in the overall system but will require the design of a new junction structure.
- Structural engineering services for a pipeline transition structure in the area of Graham Avenue, due to the limited pipe cover in the area. The original Professional Services Agreement (PSA) included only civil and mechanical design services.
- Since approval of the original PSA, the Consultant has undergone a change in ownership, resulting in a name change from ASL Consulting Engineers to Tetra Tech ASL.

The cost for Addendum No. 1 is \$57,679, for a total PSA amount of \$282,479.

PROJECT/CONTRACT COST SUMMARY

Refer to the attached Budget Information Table and Professional Services Agreement (PSA) Status Report for a summary of costs associated with the PSA and this pending Addendum No. 1. As a result of Addendum No. 1, additional facilities will be designed and constructed. At this

time, it is estimated that the increase in construction cost, associated with these new facilities is \$650,000. The construction cost estimate will be further refined as the design progresses.

BUDGET IMPACT

- This item has been budgeted. (Line item: Warner Avenue Relief Sewer, 11-22, Section 8, Page 44)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

The City of Huntington Beach (City) trunk sewer in Warner Avenue and the parallel Orange County Sanitation District (District) sewer serve similar drainage areas. It is proposed that City and District flows be combined into one sewer for hydraulic efficiency purposes. Recent videotaping of the City sewer in Warner Avenue revealed the pipe to be in poor condition. Hence, it is proposed to abandon the City's sewer on Warner Avenue, from Bolsa Chica Street to Springdale Street, and to replace approximately 2,700 lineal feet of City sewer on Warner Avenue west of Bolsa Chica Street.

Preliminary design of the Warner Avenue Relief Sewer includes transitioning from a single pipeline to multiple pipelines in the vicinity of Graham Avenue, due to the limited cover in this area. Structural design of the upstream and downstream structures required for this transition, was not included in the PSA.

ALTERNATIVES

Not proceeding with Addendum No. 1, Contract No. 11-22 (NO ACTION). The no action alternative could eliminate the implementation of cost-effective collection system improvements, resulting in continued inefficiencies and potential surcharging.

CEQA FINDINGS

This project is included in the 1999 Strategic Plan Program Environmental Impact Report that was certified on October 27, 1999 and a Notice of Determination was filed on October 29, 1999. The Consultant has determined that supplemental environmental work will not be required for this project.

ATTACHMENTS

1. Budget Information Table
2. PSA Status Report
3. Consultant Acquisition Letter dated January 10, 2001
4. Additional Work Request Letters (2) dated January 22, 2001

BOARD OF DIRECTORS

AGENDA REPORT

Meeting Date 03/14/01	To Bd. of Dir. 03/28/01
Item Number FAHR01-08	Item Number 14(c)

Orange County Sanitation District

FROM: Gary Streed, Director of Finance
Originator: Michael White, Controller

SUBJECT: TREASURER'S REPORT FOR THE MONTH OF FEBRUARY 2001

GENERAL MANAGER'S RECOMMENDATION

Receive and file Treasurer's Report for the month of February 2001.

SUMMARY

Pacific Investment Management Co. (PIMCO), serves as the District's professional external money manager, and Mellon Trust serves as the District's third-party custodian bank for the investment program.

The District's Investment Policy, adopted by the Board, includes reporting requirements as listed down the left most column of the attached PIMCO Monthly Report for the "Liquid Operating Monies" and for the "Long-Term Operating Monies" portfolios. The District's external money manager is operating in compliance with the requirements of the District's Investment Policy. The District's portfolio contains no reverse repurchase agreements.

Historical cost and current market values are shown as estimated by both PIMCO and Mellon Trust. The District's portfolios are priced to market ("mark-to-market") as of the last day of each reporting period. The slight differences in value are related to minor variations in pricing assumptions by the valuation sources at the estimate date.

PROJECT/CONTRACT COST SUMMARY

None.

BUDGET IMPACT

- This item has been budgeted. (Line item: _____)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

Schedules are attached summarizing the detail for both the short-term and long-term investment portfolios for the reporting period. In addition, a consolidated report of posted investment portfolio transactions for the month is attached. The attached yield analysis report is presented as a monitoring and reporting enhancement. In this report, yield calculations based on book values and market values are shown for individual holdings, as well as for each portfolio.

Mellon Trust, the District's custodian bank, is the source for these reports. Transactions that were pending settlement at month end may not be reflected.

These reports accurately reflect all District investments and are in compliance with California Government Code Section 53646 and the District's Investment Policy. Sufficient liquidity and anticipated revenues are available to meet budgeted expenditures for the next six months.

The table below details the book balances of the District's funds at month-end. A graphical representation of month-end balances is shown by the attached bar chart.

Funds/Accounts	Book Balances February 28, 2001	Estimated Yield (%)
State of Calif. LAIF	\$	6.2
Union Bank Checking Account	18,843,079	N/A
Union Bank Overnight Repurchase Agreement	347,909	4.84
PIMCO – Short-term Portfolio	2,030,000	5.8
PIMCO - Long-term Portfolio	34,480,050	4.1
District 11 GO Bond Fund 921	375,941,291	5.8
Debt Service Reserves w/Trustees	1,752	5.5
Petty Cash	35,633,622	N/A
	<u>8,000</u>	
TOTAL	<u>\$467,285,703</u>	

ALTERNATIVES

None

CEQA FINDINGS

None

ATTACHMENTS

1. Monthly Investment Reports
2. Monthly Transaction Report

FAHR COMMITTEE

AGENDA REPORT

Meeting Date 3/14/01	To Bd. of Dir. 3/28/01
Item Number FAHR01-12	Item Number 14(d)

Orange County Sanitation District

FROM: Gary G. Streed, Director of Finance

SUBJECT: SUBSTITUTION OF STANDBY CERTIFICATE PURCHASE
AGREEMENT OF LLOYDS TSB BANK FOR OCSD 1992 REFUNDING
CERTIFICATES OF PARTICIPATION (COP)

GENERAL MANAGER'S RECOMMENDATION

Adopt Resolution No. OCSD 01-08, approving substitution of the Standby Certificate Purchase Agreement of Lloyds TSB Bank PLC for the existing Standby Certificate Purchase Agreement of Barclays Bank PLC.

SUMMARY

In 1992, the District issued \$160,600,000 of refunding Certificates of Participation (COPs) to take advantage reduced interest costs. These COPS were issued in a variable interest rate mode. To minimize the District's exposure to interest rate fluctuations and to satisfy rating agency concerns, an interest rate exchange agreement, commonly called an interest rate swap, was approved with AIG for the term of the COPs.

One of the provisions of the swap is that AIG obtain a Standby Certificate Purchase Agreement. This is a letter of credit provided by a highly rated bank. A standby agreement provides for payment of principal and/or interest by the bank in the event the District is unable to make the payment. The current provider, Barclays Bank, has decided to leave this portion of the banking business. In response, AIG has solicited proposals from other banks and has selected Lloyds TSB Bank PLC to provide this service for the next five years. Fees for this liquidity facility are paid by AIG.

Both Standard & Poor's and Moody's have confirmed their existing AAA and Aaa ratings in the event this substitution is confirmed. There should be no impact on the marketability or desirability of the District's COPs from this transaction and thus no impact on interest rates is expected. In any case, interest rate risk has been transferred to AIG via the swap provisions.

PROJECT/CONTRACT COST SUMMARY

No cost to the District.

BUDGET IMPACT

- This item has been budgeted. (Line item:)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

N/A

ALTERNATIVES

Instruct AIG to select another liquidity provider. There are no advantages to the District from pursuing alternatives.

CEQA FINDINGS

N/A

ATTACHMENTS

None.

BOARD OF DIRECTORS

AGENDA REPORT

Meeting Date	To Bd. of Dir. 03/28/01
Item Number	Item Number 15

Orange County Sanitation District

FROM: David Ludwin, Director of Engineering
Originator: Sid Kirk, Project Specialist

SUBJECT: EMERGENCY REPAIR TO 24-INCH FORCE MAIN INTO PLANT NO. 2,
PURCHASE ORDER NO. 26925

GENERAL MANAGER'S RECOMMENDATION

Ratify use of General Manager's Emergency Purchasing Authority, Resolution No. OCSD 99-23, Section 3.07, to issue Change Order No. 1 to Purchase Order No. 26925 issued to Mladen Buntich Construction Company for Emergency Repair to 24-inch Coast Highway Force Main at the Inlet Structure east of the Santa Ana River, for an additional amount of \$110,000, for a total amount not to exceed \$200,000.

SUMMARY

This item is to notify the Board of Directors regarding the use of the General Manager's Emergency Purchasing Authority, in accordance with Resolution No. OCSD 99-23 for Purchase Orders in excess of \$100,000 each.

The District was notified by a citizen on the levee bike trail of foul odors in the vicinity of the Plant No. 2 Siphon Inlet Structure. As a result of this notification the sinkhole was found over the 24-inch Force Main entering the Inlet Structure. No spill occurred, as it appeared that sewage flowing through the pipe remained in the pipe flow line.

The original purchase order for \$90,000 was issued to investigate the cause of the sinkhole and make necessary repairs. The ductile iron pipe force main adjacent to the Inlet Structure had collapsed due to severe corrosion at the crown of the pipe. Additional deterioration of the pipe beyond the collapsed force main section was also observed to be in immediate need of repair. Change Order No. 1 to the original purchase order is to slip line approximately 400 feet of deteriorated force main. The additional work included removing a section of pipe for access, cleaning, video inspection, slip line work, and construction of a new pressure manhole at the access point. Change Order No. 1 is not to exceed \$110,000. The purchase order and subsequent change order were issued under a sole source agreement due to the emergency nature of the pipe collapse and to prevent the possibility of a sewage spill. The General Manager has approved the emergency measures taken to eliminate a potential hazard. A summary of the Purchase Order follows:

Purchase Order	Description of Purchase Order	Amount
PO Number 26925 to Mladen Bundich Construction Company	Investigate and repair initial collapse of the 24" force main.	NTE \$ 90,000
Change Order No. 1	Renovate approximately 400 feet of deteriorated force main.	NTE \$ 110,000
TOTAL		NTE \$ 200,000

PROJECT/CONTRACT COST SUMMARY

N/A

BUDGET IMPACT

- This item has been budgeted. (Line item)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

None

ALTERNATIVES

None

CEQA FINDINGS

N/A

ATTACHMENTS

None

BOARD OF DIRECTORS
AGENDA REPORT

Meeting Date	To Bd. of Dir. 03/28/01
Item Number	Item Number 8

Orange County Sanitation District

FROM: Gary Streed, Director of Finance
Originator: Lenora Crane, Administrative Assistant

SUBJECT: PAYMENT OF CLAIMS OF THE ORANGE COUNTY SANITATION DISTRICT

GENERAL MANAGER'S RECOMMENDATION

Ratify Payment of Claims of the District by Roll Call Vote.

SUMMARY

See attached listing.

PROJECT/CONTRACT COST SUMMARY

N/A

BUDGET IMPACT

- This item has been budgeted. (Line item: N/A)
- This item has been budgeted, but there are insufficient funds.
- This item has not been budgeted.
- Not applicable (information item)

ADDITIONAL INFORMATION

None.

ALTERNATIVES

N/A

CEQA FINDINGS

N/A

ATTACHMENTS

1. Copies of Claims Paid reports from 02/01/01 - 02/15/01 and 02/16/01 - 02/28/01