



City of Sunnyvale

Agenda Item-No Attachments (PDF)

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REPORT TO COUNCIL

SUBJECT

Approve a Funding Agreement with the Santa Clara Valley Water District for CEQA Review and Design Costs to Retain a Membrane Bioreactor Option at the Water Pollution Control Plant, Approve an Amendment to an Existing Contract with Carollo Engineers for the Additional Services, and Approve Budget Modification No. 32

REPORT IN BRIEF

Approval is requested to authorize the City Manager to execute a reimbursement agreement with the Santa Clara Valley Water District (SCVWD) in the amount of \$618,735 related to funding of CEQA review and additional engineering design for the new Water Pollution Control Plant to consider a Membrane Bioreactor (MBR) option for the production of recycled water at the facility. Approval is also requested to amend an existing contract with Carollo Engineers in the amount of \$507,160 to perform these additional services, and for a 15% contingency in the amount of \$76,074. Last, it is recommended that Council approve Budget Modification No. 32 to appropriate funding from the SCVWD for the project.

ENVIRONMENTAL REVIEW

The Water Pollution Control Plant (WPCP) Master Plan will include a full CEQA analysis and Programmatic Environmental Impact Report (PEIR) development. This PEIR is currently estimated to be completed in 2016.

EXISTING POLICY

Sunnyvale General Plan, Chapter 7, *Environmental Management*

Goal EM-1 Adequate Water Supplies: Acquire and manage water supplies so that existing and future reasonable demands for water, as projected in the 20-year forecast, are reasonably met.

Policy EM-1.2: Maximize recycled water use for all approved purposes both within and in areas adjacent to the City, where feasible.

BACKGROUND AND DISCUSSION

On August 13, 2013 Council approved a Recycled Water Feasibility Study (RTC No. 13-181) outlining a strategy to expand the recycled water system for non-potable use. Over the last few years the City has also been working with the Santa Clara Valley Water District (SCVWD) on various agreements and projects to support the expansion and use of non-potable recycled water produced at the WPCP consistent with this Feasibility Study. These projects in particular are situated along Wolfe Road, to support additional recycled water customers along that alignment and also to serve the new Apple Campus.

The WPCP reconstruction program is undergoing a master planning process which overlaps with the timing of the SCVWD's long term water sustainability planning. A major component of the SCVWD's plan includes securing potable water supplies through Direct Potable Re-use (DPR)/Indirect Potable Re-Use (IPR). The WPCP master planning effort is being led by Carollo Engineers, whose contract was awarded by Council on May 27, 2013 (RTC No. 13-108). The work includes plans for re-building the treatment plant to address aging infrastructure and also to meet new regulatory requirements for treated wastewater.

The timing of this rebuild presents a great opportunity for the City to partner with the SCVWD in aligning mutual goals for the benefit of both parties and provide value for the region. Over the last several months staff from the SCVWD and the City have been working on agreements for treating wastewater to a quality that is required for IPR/DPR. A summary of these various agreements and Council actions is presented in Attachment 1.

As presented to the Council at the study session on June 24th, 2013, the WPCP Master Plan lays out the conceptual plans for rebuilding the facility, starting with the primary treatment process currently under design. For the secondary treatment process, the City would utilize the technology of Conventional Activated Sludge (CAS) treatment to replace the current oxidation pond treatment system. CAS is a cheaper technology to implement to meet the current discharge permit requirements and produce non-potable water to meet the recycled water customer demands as laid out in the Recycled Water Feasibility Study. However, if the SCVWD is interested in using the Sunnyvale WPCP treated water as a potential source for future IPR/DPR projects, then the implementation of CAS technology would create physical space constraints at the new WPCP; the CAS footprint would use up all available space at the WPCP site and would not leave room for the implementation of any future advanced treatment facilities required for IPR/DPR.

As a result, the SCVWD has requested that the City include a provision in the WPCP Master Planning process to consider an alternative technology, such as Membrane Bioreactor (MBR) for implementation as the secondary treatment technology at the new WPCP. A long-term frame work for recycled water agreement between the City and District, with the potential to include supply of MBR quality water was approved by the Council on September 30, 2014 (Attachment 2).

The City and SCVWD staff have worked to develop terms and conditions related to the inclusion of MBR as part of the WPCP Master Plan and the associated logistics of completing the CEQA work, including the costs associated with evaluating a second alternative as part of the Master Planning process. The original scope of services for Carollo Engineers was to include only one option. The following are the key terms of the "MBR Agreement" (Attachment 3):

1. Cost for Development of MBR Alternative

The SCVWD will pay the City an amount not to exceed \$618,735. This includes the Carollo contract amendment in the amount of \$507,160 for costs associated with evaluating the MBR alternative as part of the Master Plan and the CEQA documentation; a 15% contract contingency in the amount of \$76,074; and an additional \$35,501 for overall program costs on the part of City staff and the Program Management Consultant (PMC). The PMC for the project is CDM Smith, Inc., through a contract awarded by Council in March 2014 (RTC 14-0264). The Carollo contract amendment is contained in Attachment 4.

2. Design of Additional Electrical Capacity:

As part of the design for the new Headworks and Primary treatment facilities at the WPCP, a new electrical switchgear building is being designed, which provides a new PG&E feed into the facility and with sufficient capacity to provide the anticipated needs of the entire facility. Since MBR technology uses more energy than the CAS alternative, this switchgear would have to be upsized to accommodate higher electrical loads.

Since the decision to go towards MBR as the secondary treatment technology is contingent upon the SCVWD's interest in pursuing WPCP effluent for additional IPR/DPR use, Staff and the SCVWD worked on an arrangement to allow for two alternative electrical designs to be developed. Carollo Engineers will prepare separate contract documents for the new electrical switchgear building and 12kV ductbank design in sufficient detail to develop two separate detailed engineering estimates for the CAS and MBR design. These additional design costs are included in the total \$618,735 that the SCVWD will be reimbursing to the City.

The design for the new Headworks and Primary treatment facilities is estimated to be completed in early 2016, by which time the SCVWD and City would have to make a decision regarding the secondary treatment technology to pursue and fund the actual construction of the upsized electrical infrastructure, or revert to the base case design that would accommodate the CAS technology.

3. Work Cessation Clauses:

The SCVWD and the City recognize the complexities associated with developing projects and partnering agreements associated with recycled water and especially IPR/DPR projects. Several issues, such as the permitting processes, public outreach efforts and funding, have to be resolved before the projects can be implemented. To allow for flexibility of timing to accommodate the resolution of these issues while not delaying the reconstruction of the WPCP, several "off-ramps" have been built into the agreement to allow for mutual termination.

The agreement provides for work to be discontinued in March 2015 if the California Department of Water Resources (DWR) does not approve use of the MBR technology for DPR/IPR. City staff may also choose to terminate the agreement, should the resolution of the permitting issues or any other stakeholder engagement cause for the delay of the WPCP rebuild. In such instances the City would continue with the development of the Master Plan with the base case of CAS as the core secondary treatment technology for the new WPCP.

As noted above, completion of the work related to including MBR as a treatment alternative will require the City to amend the existing contract with Carollo Engineers. The CEQA work related to the WPCP Master Planning will be at a programmatic level and will include the approval of a site plan for siting a future advanced treatment facility on the WPCP site. However, the SCVWD will still have to pursue a comprehensive environmental review process related to IPR/DPR expansion before the actual construction of the advanced treatment facility at the WPCP site. The layout and approval of the site plan with MBR would "preserve" that option for the City and the SCVWD, until the City is ready to proceed with the design of the secondary treatment facility, currently estimated to be in late 2016.

As summarized in Attachment 1, the next step for City staff will be to continue working with the SCVWD on developing a long-term recycled water agreement in accordance with the "Framework" that was approved by Council on September 30, 2014 (Attachment 2). Negotiations on the long-term

agreement are anticipated to take place over the next year and will lay the ground work for the key decision related to production of the WPCP effluent for SCVWD uses for IPR/DPR. Other interim actions related to non-potable recycled water, as noted in Attachment 1, will be coming forth to Council in the next several months as well.

FISCAL IMPACT

The agreement has no fiscal impact to the City as the SCVWD is bearing the cost of all associated expenditures related to the inclusion of the MBR technology in the Master Planning process for the WPCP rebuild. Budget Modification No. 32 has been prepared to increase the project budget funding by \$618,735 to allow for this additional work. The additional work would be billed to the SCVWD and reimbursed to the City on a monthly invoice schedule.

Budget Modification No. 25			
FY 2014/15			
	Current	Increase/ (Decrease)	Revised
<u>Wastewater Management</u>			
<u>Fund</u>			
<u>Revenues</u>			
<u>Santa Clara Valley Water</u>	\$0	\$618,735	\$618,735
<u>District MBR</u>			
<u>Reimbursement</u>			
<u>Expenditures</u>			
Project 830250 - WPCP	\$3,202,323	\$618,735	\$3,821,058
Master Plan			

PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

ALTERNATIVES

1. Authorize the City Manager to execute the MBR Agreement with the Santa Clara Valley Water District, in substantially the same format as Attachment 3, regarding funding of CEQA review and design costs to retain MBR option at the WPCP;
2. Approve Budget Modification No. 32 to appropriate additional funding of \$618,735 to Capital Project No. 830250 (WPCP Master Plan) as required for the project;
3. Authorize the City Manager to execute an amendment with Carollo Engineers, in substantially the same format as Attachment 4, in an amount not to exceed \$507,160.
4. Approve a 15% contract contingency in the amount of \$76,074.
5. Other actions as determined by Council.
6. Do not pursue the agreements and contract amendment at this time.

STAFF RECOMMENDATION

Alternatives 1, 2, 3 and 4: 1) Authorize the City Manager to execute the MBR Agreement with the Santa Clara Valley Water District, in substantially the same format as Attachment 3 to the report,

regarding funding of CEQA review and design costs to retain MBR option at the WPCP; 2) Approve Budget Modification No. 32 to appropriate additional funding of \$618,735 to Capital Project No. 830250 (WPCP Master Plan) as required for the project; 3) Authorize the City Manager to execute an amendment with Carollo Engineers, in substantially the same format as Attachment 4, in an amount not to exceed \$583,234; and 4) Approve a 15% contract contingency in the amount of \$76,074.

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Reviewed by: Grace K. Leung, Director of Finance

Reviewed by: Mansour Nasser, Water & Sewer Systems Division Manager

Reviewed by: John Stufflebean, Director of Environmental Services

Reviewed by: Manuel Pineda, Director of Public Works

Reviewed by: Robert A. Walker, Assistant City Manager

Approved by: Deanna J. Santana, City Manager

ATTACHMENTS

1. Status of Council Actions Related to Recycled Water
2. Framework of the Long-Term Agreement to Supply Recycled Water from the WPCP For Potable Water Reuse
3. Draft Agreement with the Santa Clara Valley Water District Regarding Funding Of CEQA Review and Design Costs to Retain an MBR Option at the WPCP
4. Draft First Amendment to Consultant Services Agreement with Carollo Engineers