



Council Meeting: January 29, 2013

**SUBJECT: Approval of Budget Modification No. 29 to Increase the Current Year Budgeted Amount for the Pond Sediment Removal Project at the Sunnyvale Water Pollution Control Plant (WPCP)**

**BACKGROUND**

The WPCP utilizes large ponds (440 acres) in its secondary treatment process to treat residential and low strength industrial wastewater. Solids produced from this biological process are in the form of algae that is concentrated, removed from the process and then returned back to the ponds to further decompose over time on the pond bottom. None of these solids have been removed from these ponds since the inception of secondary treatment in the 1960s. This accumulation of solids has reduced the treatment capacity of the ponds by almost 50%, significantly impacting the process performance and thereby jeopardizing permit compliance.

The WPCP has strict discharge requirements related to ammonia concentration in the WPCP effluent. Reduced capacity of the ponds due to solids accumulation impacts the ammonia removal ability of the ponds. The rate of dredging of the solids needs to be carefully monitored such that the disturbance caused by the dredging does not stir up the accumulated solids to an extent that causes further deterioration of the water quality in the ponds. As the solids on the bottom are dredged, the WPCP produces solids from everyday wastewater processing which continues to accumulate in the ponds. Due to the balanced steady dredging and the continual accumulation from everyday operations, the rate of capacity restoration of the ponds is relatively slow and needs to be spread out over several years.

A project was initiated in 2009 to address the accumulation of these solids through dredging and pumping the slurry to a centrifuge to remove water prior to hauling it off site for disposal. Originally, it was projected that the project would cost \$10.0 million over six years.

However, the project encountered significant delays in the first couple of years of operations related to logistics of establishing the dredge in the pond, setting up the dewatering facilities and other equipment challenges. Therefore, actual expenditures fell well below the budgeted amounts.

**DISCUSSION**

Given that the dredging of the ponds was occurring at a rate slower than anticipated, the project budget had been reduced to \$4.3 million over the next four years to match the anticipated cash flow needed to fund the project. The remaining amount needed is anticipated to be absorbed as part of the overall WPCP rehabilitation. The current project budget was further revised in September 2011 to re-allocate funding from this project to other wastewater projects such as critical sewer line replacements.

Over the last six months, WPCP staff has worked closely with the contractor to resolve production issues and enable longer production runs. In addition, the schedule of the dredging operation is being managed such that the dredging will only happen during the winter months (October to April) when the permit allows for higher ammonia discharge levels and suspended during the summer months (May – September) when ammonia limits are more stringent and dredging operations could jeopardize compliance with the City's permit. These improvements have resulted in much better dredging operations with the current production rate and expenditures that would exceed the budgeted amount for FY 2012/2013. It is anticipated that this rate of activity will need to continue into FY 2013/2014 and FY 2014/2015 to enable recovery of the pond capacity and improve the treatment performance of the ponds. At that point, the development of the WPCP Master Plan (the first significant step of the WPCP rehabilitation project), is expected to be completed. One of the key outcomes of the Master Plan will be to define how the ponds will be used in the future, and determine whether further dredging is required to meet that need. Therefore, the decision to continue or terminate this project will be made at that time.

### **FISCAL IMPACT**

Due to the change in operating approach, expenditures on this project will exceed the current budget. Staff is proposing to increase the current budget for Project 825521 – Pond Sedimentation Removal by \$800,00 to meet the new project funding needs. The projected funding needs for FY 2013/14 and FY 2014/15 are \$1.9 million and \$2 million, respectively, and will be presented to Council as part of the proposed FY 2013/14 budget. Overall, these changes will result in expenditures of \$5.3 million over three years rather than \$3.4 million over four years. The additional increase for FY 2013/14 and FY2014/15 will be funded as part of the overall WPCP rehabilitation project that is already budgeted in the long-term financial plan.

Budget Modification No. 29 has been prepared to appropriate an additional \$800,000 to Project 825521 – Pond Sediment Removal. To fund the additional \$800,000 towards this project, \$500,000 is being re-directed from Project 824771- Primary Sedimentation Basin Renovation Design. This project is currently under procurement for design services and staff anticipates that expenditures for the current year will be well below the budgeted amount. In addition, \$300,000 is being re-directed from Project 825331 – Replacement/Rehabilitation of Sewer Pipes. The contract bids for this project were well under the engineer's estimates, resulting in project savings.

### **Budget Modification No. 29 FY 2012/2013**

	<b>Current</b>	<b>Increase/ (Decrease)</b>	<b>Revised</b>
<b>Wastewater Management Fund</b>			
<u>Expenditures</u>			
Project 824771 – Primary Sedimentation Basin Renovation Design	\$1,500,000	(\$500,000)	\$1,000,000
Project 825331 – Replacement/Rehabilitation of Sewer Pipes	\$5,400,000	(\$300,000)	\$5,100,000
Project 825521 Pond Sediment Removal	\$650,862	\$800,000	\$1,450,862

**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 Web site.

**ALTERNATIVES**

1. Approve Budget Modification No. 29 to increase the current year budgeted amount for the pond sediment removal project at the Sunnyvale Water Pollution Control Plant.
2. Do not approve budget Modification No. 29 and instead cease operations until FY 2013/14.

**RECOMMENDATION**

Staff recommends Alternative 1, to approve Budget Modification No. 29 to increase the current year budgeted amount for the pond sediment removal project at the Sunnyvale Water Pollution Control Plant. Failing to do so could result in the current year budget being exceeded, and may also generate additional costs and operational challenges for FY 2013/14 as the project is restarted again.

Reviewed by:



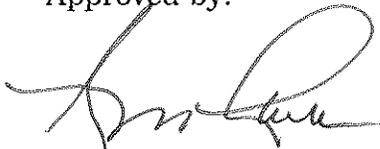
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Approved by:



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