

TO: James L. App, City Manager
FROM: Joseph M. Deakin, Public Works Director
SUBJECT: Award of Construction Contract for Solids Handling Facilities
DATE: June 17, 2003

NEEDS: For the City Council to consider awarding a construction contract to install Solids Handling Facilities at the Wastewater Treatment Plant.

- FACTS:**
1. In 2000, the City completed a Capacity Evaluation Study which identified capital improvements to the Wastewater Treatment Plant to accommodate the City's future growth and aging equipment.
 2. The Capacity Evaluation Study recommended a wide range of improvements, identifying the need to upgrade/modify the Solids Handling System as a top priority.
 3. The Wastewater Treatment Plant has two 55-foot diameter anaerobic digesters. The first one was constructed in 1971 and the second one was constructed in 1987. The Capacity Evaluation Study recommended adding a third digester to accommodate current demands.
 4. The Capacity Evaluation Study also recommended installation of a dewatering system to decrease the drying time of the wastewater sludge. To this end, a belt filter press sludge dewatering facility was designed for installation.
 5. On March 20, 2001, the City Council hired Carollo Engineers to prepare Plans, Specifications and Estimates (PS&E) to upgrade the Solids Handling Facility at the Wastewater Treatment Plant.
 6. A Bid Opening was held on May 22, 2003. Nine (9) bids were received, ranging from a low bid of \$3,772,914 to a high bid of \$5,598,000.

**ANALYSIS
AND**

CONCLUSION: The sewage treatment facility is regulated by the State of California Regional Water Quality Control Board, Central Coast Region (Regional Board). In 1998, the Regional Board updated the discharge permit, and issued Waste Discharge Requirements (WDR) Order No. 98-42 (incorporating NPDES No. CA0047953). In April 2000, the City hired Carollo Engineers to study the wastewater treatment facilities and report on the capacity of the treatment plant as a whole, as well as analyze each process system to prioritize projects to maintain the plant's current 4.9 million-gallon-per-day capacity.

The Draft Capacity Evaluation Study by Carollo provides a current review of overall wastewater treatment facility capacity. The treatment plant, designed to provide an ultimate treatment capacity of 4.9 million gallons per day (mgd) is currently treating 2.9 mgd. Overall, the treatment facility is in good stead, and is adequately treating wastewater to meet the standards for discharge set by the Regional Board in the City's WDR.

In order to continue the City's history of providing reliable wastewater treatment in compliance with discharge requirements, certain improvements to the treatment plant are recommended. In particular, the solids treatment processes of the plant are nearing their design capacity. As explained in detail in the Carollo report, the reason for the current shortfall in solids handling is the technology employed at the treatment facility to meet air quality emission standards for hydrogen sulfates at the waste digester gas burner. The chemical additive ferric chloride is used

in the treatment process, and has resulted in better facility performance, and lower suspended solids and biological oxygen demand (BOD) in effluent. Because of the ferric chloride addition, solids volumes have increased beyond the original design estimate at this point of hydraulic loading of the plant. In order to keep up with the solids loading, additional plant facilities are needed.

The Carollo report recommends two major improvements to the solids handling facilities: add a digester (improve mixing system of existing two), and install mechanical dewatering. The digester will provide two key process benefits; increase the retention time in the digestion process, and provide a back-up facility to allow a digester to be taken off-line for maintenance. These improvements will assure the continued production of sludge meeting disposal standards, and chemically stabilized to reduce plant odors. The addition of mechanical dewatering will provide a faster means to dry the digested sludge currently produced and dried in on-site drying beds. The drying beds are at capacity at present, and any additional loading at the plant will need to rely upon increased drying capacity. Since there is no space at the plant property to increase the drying bed size, mechanical drying is proposed. Mechanical drying also results in faster disposal of sludge, thereby improving odor control.

The attached memo from Carollo Engineers states they have reviewed the bid submitted by Kirkwood-Bly, Inc. and concluded the low bid is responsive.

POLICY

REFERENCE: Adopted Capital Improvement Program

FISCAL

IMPACT: The original budgets for the Solids Handling Project, Improvements to the Templeton Interceptor Sewer Reaches 2 and 4, and Lift Station No. 2 were as follows:

• Solids Handling	\$4,000,000
• <u>Templeton Sewer/Lift Station No. 2</u>	<u>\$4,000,000</u>
TOTAL	\$8,000,000

The projected costs to complete these projects are as follows:

• Solids Handling	\$5,200,000
• <u>Templeton Sewer/Lift Station No. 2</u>	<u>\$3,300,000</u>
TOTAL	\$8,500,000

There is a projected budget shortfall of \$500,000 for these projects. The budget shortfall will be addressed by either addressing projected revenues allocable to these projects not yet shown in the budget, or as an alternative, deferring other funded capital improvement projects in lieu of funding the added costs.

OPTIONS:

- a. For the City Council to adopt Resolution No. 03-xx:
 - 1) Appropriating an additional \$500,000 to the Solids Handling Project Budget Nos. 221/601.910.5452.569; and
 - 2) Awarding a construction contract for the Solids Handling Project to Kirkwood-Bly, Inc. in the amount of \$3,772,914.
- b. Amend, modify or reject the above option.

Attachments (3)

- 1) Bid Review from Carollo Engineers
- 2) Resolution
- 3) Bid Summary

**Solids Handling Facility Expansion and Upgrade Project
DPW Project No. 01-03**

				Kirkwood-Bly, Inc. Santa Rosa, CA	James C. Cushman, Inc. Paso Robles, CA	Kaweah Construction Fresno, CA	Wysong Construction Atascadero, CA
ITEM	DESCRIPTION	EST. QTY.	UNIT	PRICE	PRICE	PRICE	PRICE
A (1)	Lump Sum Bid	1	LS	3,772,914.00	4,124,000.00	4,146,000.00	4,326,000.00
	Bid Alternate: Sheeting, shoring, and bracing, or equivalent method for the protection of life and limb in trenches and open excavation	1	LS	5,000.00	1,000.00	1,000.00	5,000.00
B (1)	Bid Alternate: Additional insurance coverage in the amount of 50% of the Lump Sum Bid against the risk of tidal wave and earthquake of any magnitude, deemed an act of God under California code	1	LS	12,000.00	15,000.00	14,000.00	-

				Pacific Mechanical Concord, CA	Whitaker Contractors Santa Margarita, CA	HPS Mechanical, Inc. Bakersfield, CA	Monterey Mechanical Oakland, CA	T.B. Penick & Sons San Diego, CA
ITEM	DESCRIPTION	EST. QTY.	UNIT	PRICE	PRICE	PRICE	PRICE	PRICE
A (1)	Lump Sum Bid	1	LS	4,475,000.00	4,590,000.00	4,782,278.00	4,791,000.00	5,598,000.00
	Bid Alternate: Sheeting, shoring, and bracing, or equivalent method for the protection of life and limb in trenches and open excavation	1	LS	2,000.00	1,000.00	5,000.00	5,000.00	10,000.00
B (1)	Bid Alternate: Additional insurance coverage in the amount of 50% of the Lump Sum Bid against the risk of tidal wave and earthquake of any magnitude, deemed an act of God under California code	1	LS	12,000.00	31,722.00	100,000.00	35,000.00	145,200.00

RESOLUTION NO. 03-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
APPROPRIATING ADDITIONAL FUNDS AND AWARDED A CONTRACT TO
KIRKWOOD-BLY, INC. FOR CONSTRUCTION OF UPGRADES/EXPANSION TO
THE SOLIDS HANDLING FACILITY (DPW PROJECT 01-03)

WHEREAS, the City completed a Capacity Evaluation Study in 2000 which identified capital improvements to the Wastewater Treatment Plant to accommodate the City's future growth and aging equipment; and

WHEREAS, the Capacity Evaluation Study recommended a wide range of improvements, identifying the need to upgrade/modify the Solids Handling Facility as a top priority; and

WHEREAS, the Capacity Evaluation Study recommended adding a third digester to the Wastewater Treatment Plant; and

WHEREAS, the Capacity Evaluation Study also recommended installing a dewatering system to decrease the drying time of wastewater sludge; and

WHEREAS, Carollo Engineers was hired on March 20, 2001 to prepare Plans, Specifications and Estimates (PS&E) to upgrade the Solids Handling Facility at the Wastewater Treatment Plant; and

WHEREAS, nine (9) bids were received at the Bid Opening on May 22, 2003 ranging from a low bid of \$3,772,914 to a high bid of \$5,598,000; and

WHEREAS, the low bid submitted by Kirkwood-Bly-Inc. was reviewed by Carollo Engineers and deemed a responsive bid; and

WHEREAS, a budget shortfall in the amount of \$850,000 could be resolved by considering cost-sharing contributions from Templeton Community Services District (TCSD) in the amount of \$590,000 for the Templeton Interceptor/Lift Station No. 2 project and \$580,000 for the Solids Handling project.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED BY THE CITY

SECTION 1. The City Council of the City of El Paso de Robles does hereby appropriate \$500,000 to the Solids Handling Project Budget No. 221-910-5452-569.

SECTION 2. The City Council of the City of El Paso de Robles does hereby award a construction contract to Kirkwood-Bly, Inc. in the amount of \$3,772,914 for expansion and upgrades to the Solids Handling Facility at the Wastewater Treatment Plant.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 17th day of June 2003 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

ATTEST:

Frank R. Mecham, Mayor

Sharilyn M. Ryan, Deputy City Clerk