

TO: James L. App, City Manager
FROM: Joseph M. Deakin, Public Works Director
SUBJECT: Water Improvement Projects
DATE: October 21, 2003

NEEDS: For the City Council to consider adopting a revised Capital Improvement Program (CIP) Budget for Water Facilities.

- FACTS:**
1. In 2003, the City Council adopted a 4-year Capital Improvement Plan (FY04-FY07) including Water system projects. Water projects include rehabilitating six existing wells, constructing a small (200,000 gallon) reservoir in the Southwest quadrant of the City, installing four new water wells, investigating a surface water resource, upgrading specific segments of the distribution system, and other projects.
 2. Since adoption of the 4-year CIP, overall water system production, efficiency and capacity have been reexamined. The following critical data have been identified; a) City population has increased 31% since 1990, water production only 8%. b) Eight new wells were attempted from 1990-2003, five existing wells were shut down and six test holes were drilled but not developed due to water quality problems; and c) peak summer time daily use exceeds safe reserve production and storage capacity limits.
 3. The 4-year CIP includes funding for two reservoir projects, a Southwest Reservoir with a budget of \$3 million (all FY04) and \$800,000 (FY06 and FY07) for the southeast reservoir. The Southwest Reservoir is planned to address fire-flow demand to the southwestern region (Theater and Ramada Drives), primarily commercial developed properties. The southeast reservoir funding provides for site planning and design, with implementation expected beyond the 4-year CIP budget.
 4. The CIP budget provides \$1,045,000 for four (4) new wells. \$800,000 remains to develop 3 additional water production wells, one each in FY04, FY06 and one in FY07.
 5. The CIP budget includes \$220,000 to rehabilitate 6 water wells in FY04:
 - Sherwood Well #9
 - Thunderbird Well #23
 - Dry Creek Well #18
 - Royal Oak Well #20
 - Fox Well #21
 - Thunderbird Well #17

The total 4-year CIP budget for well rehabilitation is \$220,000.
 6. The City Council adopted Resolution 01-126 on December 18, 2001, revising water (and sewer) user rates and connection fees. The connection fee revisions followed a study to analyze costs for system needs, and to equate the fees needed to fund the costs anticipated (as described under AB 1600). The City Council, in enacting the fees, also stipulated that the fees should be reanalyzed every two years.

ANALYSIS &

CONCLUSION: Analysis of the City's water production indicates changes are needed to provide for demands. Reprioritization of planned water system improvements is needed to meet short-term (next 5 years) demand.

Reservoir Storage

Generally, water stored in reservoirs is designed to provide:

1. Operational water (provide for daily consumption)
2. Emergency water (reserved for high demand period or contingencies)
3. Fire flow (a base level sustained to provide assurance of fire fighting supplies)

Operational water is intended for daily use. Peak use is typically calculated at three times minimum sustenance demand. Emergency water is classified for well incapacitation, natural disasters, prolonged power outages and other unplanned situations. Fire-flow is water that is reserved for firefighting activities. Should the City face a water contingency, response would have to include mandatory irrigation cessation for all users.

As a standard, the 1995 Water Master Plan has a formula for water storage, that indicates with current population (about 27,000 residents) and daily peak demand (over 11 MG), storage is needed as follows:

- 10 MG in the east zone
- 4 MG in the west zone

In the west zone, there is 4 MG of storage in the 21st Street Reservoir, therefore the zone is suitably sustained. In the east zone, 8 MG storage currently exists, leaving the zone already short of needed storage (10 MG is needed). In addition, community growth indicates much more capacity on the east side for foreseeable (some already permitted) land developments.

Based upon the need for more operational and emergency storage Citywide, especially in the eastern zone, the City Council could consider reprogramming the CIP funds to consolidate southwest reservoir fire flow storage needs with Citywide operational storage demand at the southeast quadrant. Such a change will require funding an additional \$4.2 million.

Water Wells - New

New water wells are needed to assure reliable delivery and address additional demands. Four new wells are authorized in the revised Water Capital Improvement Program, two in FY04 and one more each in FY06 and FY07. One of the FY04 wells is drilled with wellhead planning and design underway.

The City Council can consider accelerating new well development to 05 & 06. However, due to increased costs, the CIP budget will need to be increased to provide \$500,000 per well.

Water Wells – Rehabilitation

The City operates 14 water production wells. Water well efficiency, calculated by comparing production history to designed yield, is 75% in the winter and 61% in the summer. Typical efficiency expectations from an engineered well should be closer to 90%.

An aggressive well rehabilitation program is proposed to improve well efficiencies. This includes rehabilitating well casings, formation, retooling well pumps, adjusting pump levels, and downsizing electrical motors. The rehabilitation work will provide more consistent flow rates and decreased electrical consumption.

The approved CIP calls for rehabilitating 6 wells, appropriating \$220,000 for the projects, all in FY04. The proposed revised Water CIP increases the well rehabilitations to 9 wells, and adding:

- Cuesta Well #2
- Osborne Well #14
- Sherwood Well #11

In addition, the proposed CIP spreads the work out evenly over the 4 years, with 2 wells per year (FY05, 06, and 07) and 3 wells in FY04. Similar to the revised cost for a new well, well rehabilitation costs per well were revised. The current estimate to perform well rehabilitation is \$100,000 per well. An addition \$680,000 will be required to rehabilitate 9 wells.

POLICY

REFERENCE: General Plan, Water Master Plan, Adopted Capital Improvement Projects Budget

FISCAL

IMPACT: See attached spreadsheet for specific modifications to the Water CIP and resulting modifications to fund balance.

The revised needs identified by this revised CIP will affect the connection fees, particularly for water. In accordance with Resolution 01-126, it is timely to review water and sewer rates and fees in general, and particularly important in the advent that City Council opts to revise the Water CIP.

The City Council could authorize staff to hire a financial analyst to revise and recalculate water and sewer user rates and connection fees, as nearly two years have passed since the previous analysis. The expected outcome of such analysis would be recommended revisions to sewer and water user rates and connection fees, to be brought before City Council for adoption, through a public hearing process. The City Council could authorize a professional services contract with Foresight Consulting for a not-to-exceed fee of \$10,000 to work with the City to revise the rates and fees.

OPTIONS:

- a.
 - (1) Adopt Resolution 03-xx approving revisions to the Water Capital Improvement Project budget as shown in the resolution attachment.
 - (2) Authorize the City Manager to execute a professional services contract with Foresight Consulting for a not-to-exceed fee of \$10,000.
 - (3) Direct staff to return to the City Council with recommended revisions to utility user rates and connection fees for further consideration.
- b. Amend, modify or reject the above option.

Attachments (2)

- 1) Table 1
- 2) Resolution

RESOLUTION NO. 03-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
TO ADOPTING A REVISED WATER FACILITIES CAPITAL IMPROVEMENT PROGRAM

WHEREAS, a Water Resource Status Report was prepared and completed on September 2003; and

WHEREAS, the report reviewed the current condition of the City's water facilities; and

WHEREAS, this resulted in a changing priority and needs; and

WHEREAS, it is necessary that the adopted Water Facilities Capital Improvement program be revised to accommodate the revised priorities; and

WHEREAS, the new budget necessitates the need to review the development impact fees to allow adequate resources to meet this new priorities.

THEREFORE, BE IT RESOLVED AS FOLLOWS:

The City Council of the City of El Paso de Robles does hereby adopt the attached revised Water Facilities Capital Improvement program budget.

BE IT FURTHER RESOLVED by the City Council of the City of El Paso de Robles that a budget appropriation in the amount of \$10,000 is hereby approved to undertake a review of sewer and water development impact fees as follows:

220-140-5224-125	\$5,000
221-140-5224-125	\$5,000

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 4th day of November 2003 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Frank R. Mecham, Mayor

ATTEST:

Sharilyn M. Ryan, Deputy City Clerk

Table 1

Capital Improvement Projects Budget

Fiscal Year 2004 to 2007

	<u>Total Project Cost</u>	<u>Fiscal Year 2004</u>	<u>Fiscal Year 2005</u>	<u>Fiscal Year 2006</u>	<u>Fiscal Year 2007</u>
WATER IMPROVEMENT PROJECTS					
Beginning Cash Balance		\$ 1,365,000	\$ 5,317,100	\$ (1,411,100)	\$ (1,009,300)
Revenues (updated)		1,282,100	1,101,800	1,101,800	1,101,800
Net Transfers IN(OUT) - (from Water Operations)		7,720,000	-	-	-
Gross Available Resources		<u>10,367,100</u>	<u>6,418,900</u>	<u>(309,300)</u>	<u>92,500</u>
PROJECTS:					
- New Well Installation #8 @ Airport	500,000	(500,000)			
- New Well # 9 Installation	500,000	(500,000)			
- New Well #10 installation	500,000			(500,000)	
- New Well #11 installation	500,000				(500,000)
- Fire Flow @ South City Limits	1,000,000	(1,000,000)			
- Rehab Fox Well #21	100,000		(100,000)		
- Rehab Dry Creek Well #18	100,000		(100,000)		
- Rehab Osborne Well #14	100,000			(100,000)	
- Rehab Sherwood Well #19	100,000			(100,000)	
- Rehab Royal Oaks Well #20	100,000				(100,000)
- Rehab Sherwood Well #11	100,000				(100,000)
- Rehab Thunderbird Well #17	100,000	(100,000)			
- Rehab Thunderbird Well #23	100,000	(100,000)			
- Rehab Cuesta Well	100,000	(100,000)			
- Construct Southwest Reservoir (70% DIF)	3,000,000				
- Southeast Reservoir Siting Design & Construction	5,000,000	(200,000)	(4,800,000)		
- Install Main: Thunderbird to Charolais	2,500,000	(500,000)	(2,000,000)		
- Install Main: Highway 46: Airport to East Boundary (16-inch)	1,000,000				
- Install Main: Golden Hill Road to Dallons (24-inch)	800,000		(800,000)		
- Install Main: Oak St./1st to 4th (12-inch)	100,000				
- Rehabilitation of Sherwood Well #9	30,000				
- Rehab of Thunderbird Well #6	30,000				
- New Surface Water Source	500,000	(500,000)			
- Replace Roof of Westside Reservoir (21st Street)	1,400,000	(1,400,000)			
- Rehabilitation of Dry Creek Well #14	30,000				
- SCADA/Telemetry Improvements	30,000		(30,000)		
- Rehab of Royal Oak Well #20	50,000				
- Rehab of Fox Well #21	50,000				
- Rehab of Thunderbird Well #17	30,000				
- River Road and across 13th Street Bridge (16-inch)	150,000	(150,000)			
- Relocate Telemetry System to East Side	500,000				
		<u>(5,050,000)</u>	<u>(7,830,000)</u>	<u>(700,000)</u>	<u>(700,000)</u>
Net Available Resources	<u>\$ 14,280,000</u>	<u>\$ 5,317,100</u>	<u>\$ (1,411,100)</u>	<u>\$ (1,009,300)</u>	<u>\$ (607,500)</u>