

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Water Resources Plan Integration
DATE: June 6, 2006

NEEDS: For the City Council to consider appropriating funds and awarding a contract to complete Phase III of the Integrated Water Resources Plan.

FACTS:

1. In January 2005 the City Council commissioned the preparation of an Integrated Water Resources Plan that included the following objectives:
 - Improve water quality;
 - Increase & diversify water supplies;
 - Increase reliability;
 - Lessen ground water basin pumping;
 - Reduce salt loading to the ground water basin;
 - Anticipate and comply with regulatory mandates;
 - Safeguard the City's water rights position; and
 - Prioritize expenditures to achieve these goals

The January 4, 2005 staff report is provided as attachment one.

2. The Integrated Water Resources Plan included preparation and review of master and storm water management plans to assist the City in managing its resources and capital projects including:
 - Water and Sewer Master plans (Boyle Engineering);
 - Storm Water Management Plan (URS Corp);
 - Well Field Assessment (Fugro);
 - Wastewater Treatment Plant Audit (Boyle Engineering);
 - Pretreatment and Source Control Program report (Boyle Engineering);
 - Nacimiento Water Treatment Evaluation (Boyle Engineering);
 - Recycled Wastewater Study (Boyle Engineering); and
 - Urban Water Management Plan (Todd Engineering).
3. The purpose of the reports are to assess the City's utilities to determine what actions, changes and improvements will be necessary to achieve the objectives outlined above, e.g., provide a safe, reliable, renewable and sustainable water resource now and in the future.
4. The treatment of waste water, management of storm waters and conservation of the City's water sources are integral to the production, management and sustainability of the City's various fresh water resources.

5. The individual reports are valuable, however, as contemplated in the Integrated Plan commissioning, their implementation options must be considered together, i.e., integrated, to assure that project prioritization yields maximum benefit and cost effectiveness in achieving Plan objectives. It is critical for the City to tie the recommendations together into an integrated water resource improvement and management plan that ensures public funds are invested in a sequence that provides the greatest public benefit.
6. Throughout Plan preparation Christine Halley of TJ Cross Engineers has provided technical project quality assurance and oversight. She is uniquely qualified to analyze and integrate Plan findings and recommendations into a single, strategic resource development and management plan. Her proposal to complete Phase III is provided as attachment two and is estimated at \$19,700.

**ANALYSIS
AND**

CONCLUSION:

Each of the reports referenced above are important elements in the City's water resources management strategy. "Phase III" of the Integrated Water Resources Plan is the final integration and implementation of the various reports into a single comprehensive strategic plan. Should the City not complete Phase III, integrating the reports into a logical long-term capital expenditure plan runs the risk of missing or miss-timing the development of programs or components important to managing the resource. Without a clear set of priorities the citizens of Paso Robles risk avoidable additional costs and/or a possibly of insufficient water resources in the future.

TJ Cross Engineering has been a key member of the City's water resources oversight team. They have actively participated in the review of many of the documents and have the experience and expertise to integrate the reports' recommendations into a single strategic plan to address Plan objectives with optimal project sequencing and pace based on community benefit, cash flow, regulatory requirements, staffing, impacts to industry and public education.

POLICY

REFERENCE:

Purchasing and Payment Procedures Manual; Paso Robles General Plan

FISCAL

IMPACT:

The Council originally appropriated \$400,000 for this work effort from sewer and water operational and impact fee funds. This amount was supplemented by an additional appropriation for \$45,000 in March 2006 to complete additional scope of work tasks. To date, \$340,000 has been expended on the Integrated Water Resources Plan. \$54,000 was diverted to the Urban Water Management Plan even though it was not included in the Integrated Plan original budget. The remaining \$51,000 is needed to complete Integrated Plan hydrogeologic investigations, analyze data and prepare final reports. Since Integrated Plan budget was diverted to complete the Urban Water Management Plan, an additional \$25,000 appropriation is needed to fund TJ Cross Engineers' integration of the study components.

Adequate funding is available in the sewer and water operations fund by appropriating \$12,500 from both the sewer and water operations fund (601.910.5224.770 and 600.910.5224.770, respectively) for a total appropriation of \$25,000 (\$19,700 contract amount plus a 25% contingency) to fund the Phase III work.

- OPTIONS:**
- a.** Adopt Resolution No. 06-xx to:
 - 1) Approve a budget appropriation in the amount of \$25,000; \$12,500 from sewer operations and \$12,500 from water operations.
 - 2) Award a contract to TJ Cross Engineers for Water Resource Plans Integration in the amount of \$19,700, as documented in their proposed scope of work attached hereto and included herein by reference
 - b.** Amend, modify, or reject the above option.

Prepared by: Brad Hagemann, P.E., Water Resources Manager

Attachments (3):

- 1. January 4, 2005 Staff Report
- 2. TJ Cross Proposal
- 3. Resolution

TO: City Council

FROM: James L. App, City Manager

SUBJECT: **Water & Wastewater Resource Management**

DATE: January 4, 2005

NEEDS: For the City Council to consider amending Boyle Engineers' Water & Sewer Master Plan contract to broaden and integrate planning for water and wastewater resources.

- FACTS:**
1. The City provides water and wastewater services to residences and businesses within City limits.
 2. The City relies on water supply from two groundwater sources – the Salinas River underflow and the Paso Robles groundwater basin. Sixteen wells produce approximately 7,500 acre feet per year but are strain to meet high summer water demands.
 3. Salinas River underflow withdrawals are expressly limited by State permit/license. Groundwater basin use is not, but is subject to competitive pressures, limited safe annual yields, and localized water level decline.
 4. Groundwater is hard, locally affected by selected constituents, and subject to diminishing quality. Water treatment is provided at each wellhead.
 5. The City recently committed to the Nacimiento Lake surface water project, which will deliver 4,000 acre feet per year of relatively high quality, raw (untreated) water beginning in approximately 2009/10.
 6. Approximately 2,900,000 gallons per day (3,300 acre feet per year) of wastewater is collected, treated, and disposed from a central plant located adjacent to the Salinas River.
 7. City water and wastewater services are regulated by a number of public agencies including:
 - San Luis Obispo County Department of Environmental Health
 - Regional Water Quality Control Board
 - State Department of Fish and Game
 - State Department of Health Services
 - State Department of Water Resources
 - State Water Resources Control Board
 - U.S. Army Corp of Engineers
 - U.S. Department of Fish & Wildlife
 - U.S. Environmental Protection Agency

8. County, State and Federal regulations control the quality (concentrations of salts and specific constituents) of water supply sources and wastewater. Regulatory limits on specific constituent concentrations are increasingly rigorous.
9. Development and delivery of water and wastewater services is also guided by the City's General Plan, Municipal Code, Urban Water Management Plan, Water Master Plan, and Sewer Master Plan.
10. Increasing water demands and ever-tightening regulations on both water and wastewater quality necessitate development of *integrated* water and wastewater management practices and more advanced treatment regimens. New management strategies need to include:
 - Identification of specific water quality targets to meet multiple objectives and rigorous requirements for public health, groundwater, Salinas River, watershed sustainability, and environmental enhancement; and
 - Definition of water treatment alternatives to achieve water quality targets, and
 - Recognition of recycled wastewater as a resource that can help address seasonal water shortages, water conservation, groundwater basin supply, watershed enhancement, and environmentally sound wastewater treatment and disposal objectives; and
 - Development of integrated management of surface water, groundwater, recycled water and river resources, so that the integrity, quality, and supply of these unified resources can be sustained for the long term.

**ANALYSIS &
CONCLUSION:**

A long-term, reliable supply of good quality water is essential to life, public health, environment, business, and a strong economy. Paso Robles water resources are limited, subject to ever-increasing demands, and at risk of water quality degradation. The management of water supplies, demands, uses, discharge and replenishment must, therefore, be a guiding criterion in public decisions.

Paso Robles provides water and wastewater service to over 27,000 people today, increasing to over 40,000 by 2025. The City's use of, and discharge to, area waters may affect even more. A long-term strategic and integrated management plan to sustain these resources and services must be developed.

Boyle Engineers is currently preparing the City's water and wastewater master plans, as well as a wastewater treatment plant operations audit. Their work should be expanded to integrate water and wastewater planning so that the City may amplify and galvanize its efforts to:

- Improve water quality;
- Increase & diversify water supplies;
- Increase reliability of water supplies;
- Lessen groundwater basin pumping;
- Reduce salt loading into groundwater;
- Anticipate and comply with regulatory mandates;
- Safeguard water rights; and
- Prioritize expenditures to achieve these goals.

Integrating water and wastewater master planning will fuse water source development, treatment, reclamation, disposal, use, and reuse together as a complete water cycle/system management effort. The integrated plan would be comprised of a wide range of strategies, programs and projects. Boyle Engineers is currently developing some of the plan's components:

- Sewer Master Plan update.
- Water Master Plan update.
- NPDES Wastewater Discharge Permit.
- Wastewater Treatment Plant Operational Audit.
- Water Storage Tank Site Evaluation, Design and Development.

Additional features needed to both fulfill current obligations and permits, and effect integrated water cycle/system management planning include development of:

- Nacimiento, groundwater, and wastewater treatment alternatives;
- Groundwater source analysis (well field operations and recharge options);
- Recycled Water Study update and demand analysis;
- Wastewater Pretreatment/Source Control Program;
- Salt Reduction program update; and
- Prioritized capital improvements program, schedule and cash flow analysis.

Given the complexity and broad scope of such an effort, it is prudent to take advantage of Boyle Engineer's comprehensive knowledge of, and involvement with, the City's water and wastewater systems, operations, regulatory challenges, and the Nacimiento Water Project. Accordingly, Boyle Engineers was asked to develop a supplemental proposal to integrate the City's water and wastewater master planning. Their proposal (attached) takes advantage of the work already under contract/development, and incorporates and integrates all of the features listed above.

An integrated plan will provide an approach which unifies water cycle, demand, treatment, use, discharge and replenishment management to ensure adequate, sustainable, diverse, and quality water supplies for the long-term. It is an effort vital to the community's future.

POLICY

REFERENCE: California Urban Water Management Planning Act; California Toxics Rule; Paso Robles General Plan, Municipal Code, Urban Water Management Plan, Water Master Plan, & Sewer Master Plan.

FISCAL

IMPACT: \$400,000 to be appropriated from the Water and Sewer Funds.

Phases I & II of the supplemental work are estimated at \$300,000. Phase III costs will be determined following completion of the preceding phases, but are expected to be approximately \$40-70,000. Additionally, it is possible that new, unforeseen conditions/complications will be discovered in the course of the evaluation necessitating additional work and associated costs. Accordingly, a budget of \$400,000 is sought to provide for these contingencies.

Until such time as the nature and extent of study outcome is determined, 50% of the cost will come from Water, and 50% from Sewer, resources - both retained earnings and impact fees.

The impact fee, or new development, shares will be equivalent to the cost allocations for preparation of the sewer and water master plans, 90% and 39%, respectively. This will necessitate a future minor increase in both the sewer and water impact fees. For sewer, the increase would be \$35 per residential unit and \$10 for water. A connection fee resolution will be presented for action at a future date.

OPTIONS: a. **Adopt Resolution No. 05-xx appropriating \$400,000 for, and authorizing the City Manager to amend the contract with, Boyle Engineers to prepare an Integrated Water & Wastewater Master Plan.**

b. **Amend, modify, or reject the above option.**

Attachments: Resolution
Proposal

APR 21 2006



Designers • Scientists • Consultants • Analysts • Statisticians • Technicians • Surveyors • Engineers
Public Works Dept.

Mr. Brad Hagemann, Water Resources Manager
City of el Paso de Robles
1000 Spring Street
Paso Robles, CA 93446

Subject: **Proposal for Water Resources Plan Integration**

Dear Brad:

For over a year, the City has been preparing various water resource reports, evaluating such topics as groundwater, recycled water potential, source control, and utility master planning. Boyle Engineering Corp. has been the primary author of the resource reports, working in close communication with the City's oversight team. It has been my honor to serve on your oversight team.

The reports represent a significant effort of evaluating the condition of the City's utility systems and evaluating projects and programs that could advance the City's resource goals. Each report contains recommendations and, in most cases, estimated costs to carry out those recommendations. As a result, we know much more about the condition of the City's utility systems and a vision of a self-perpetuating, balanced water resource picture is taking shape. What is needed now is an integration of the various water resource reports into a single document and a prioritized program to carry out the recommendations.

TJCross proposes to prepare the needed water resources plan integration for the City. The result would be more than just another report – rather, we would work with you to develop an integrated capital improvement program and agree upon the priority of programs/ordinance revisions to undertake. TJCross' deliverables to you could be used each year in establishing the utility CIP budgets and for future rate studies.

We propose to approach this by assembling key recommendations from each water resource report and setting priorities/sequence to those recommendations. The preliminary priority list would be based on logical steps to meet the City's resource goals. For example, one City goal is to reduce groundwater basin dependence and one recommended means of doing so is to reclaim wastewater. Priority would be given to wastewater treatment process upgrades to support reclamation ahead of transmission main construction.

Next, we would work with City staff to agree upon a reasonable pace of utility projects and programs. For example, water and wastewater are separate enterprise accounts within the City accounting system, but capital projects are managed by the same staff. Further, programs such as water conservation and source control enforcement are both important to achieving City resource goals, but undertaking multiple such programs at once may over-burden staff and be confusing to the public. These considerations would be taken into account in establishing a pace of projects.

Our proposed scope of work would be:

1. Assemble key recommendations from each of the following water resource reports and set initial priorities/sequence to those recommendations:

- a. *Source Water and Well Field Assessment* dated 2005 prepared by Boyle Engineering Corp.
- b. *Nacimiento Water Treatment Plant Evaluation* dated 2005 prepared by Boyle Engineering Corp.
- c. *Recycled Water Study Update* dated 2005 prepared by Boyle Engineering Corp.
- d. *Pretreatment and Source Control Assessment* dated 2005 prepared by Boyle Engineering Corp.
- e. *2006 Water Master Plan* prepared by Boyle Engineering Corp.
- f. *2006 Sewer Master Plan* prepared by Boyle Engineering Corp.
- g. *Salt Management Plan and Source Control monitoring programs*
- h. *2006 Urban Water Management Plan* prepared by Todd Engineers.
- i. *Storm Water Management Plan* prepared by URS in December 2004
- j. *Storm Drain Master Plan* – (status?)
- k. *Wastewater Treatment Plant Audit* dated September 2005 prepared by Boyle Engineering Corp.

The City will provide copies of all the above-listed reports.

2. Meet with water and wastewater operations staff to discuss system needs in addition to those addressed in the reports listed above. These needs may fall into the categories of safety issues, deferred maintenance, regulatory compliance, major scheduled maintenance, and routine component upgrades.
3. Meet with the City to review initial plan for sequencing the water resource recommendations. Review alternative approaches to establishing a pace of completing the projects and recommendations. Approaches may range from maintaining an even pace of capital expenditures, to consideration of the number of projects in planning, design, or construction at a given time, to varying levels of reliance on consultant support. Consult with City financing staff to discuss revenue needs and financing considerations affecting capital improvements. Discuss the preferred method to sequencing capital improvements and adjust the sequence accordingly.
4. Consider staffing impacts of completing the recommended capital projects and utility programs. Address staffing in terms of the effect on the pace of getting programs in place and projects in operation. Meet to discuss staffing assumptions that should go into the recommended CIP.
5. Based on the sequencing and pace of improvements at a given staff level discussed above, prepare a recommended integrated capital improvements program. Emphasize improvements over, say, a 10-year period. The CIP is to be accompanied by a narrative describing the logic behind the program and will be in a format that could be referenced during future year's budget cycles.
6. The deliverable resulting from this water resource integration will be one, simple document referencing the key recommendations from the reports listed above, citing the City goals that serve as the basis for prioritizing recommendations. A 10-year CIP and accompanying narrative will be submitted in hard copy and electronic form so that it could be used in future budget preparations. Ten hard copies of the integration report will be submitted to the City.

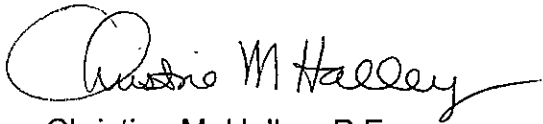
Two natural outcomes of this integration work may be a utility rate study or a staffing assessment. While neither effort is included in this base scope of services, the City may want TJCross to provide more information for use in these future efforts. For example, a cash flow tabulation to accompany the 10-year CIP would be an important element of a rate study. Let's discuss this as the integration progresses to determine if this would be of value to the City.

Regarding schedule, TJCross would be prepared to discuss the initial sequencing plan within 5 weeks of notice to proceed and will submit the final integration report within 6 weeks after that discussion.

I would lead TJCross' services to the City, supported by administrative staff as-needed and senior engineering staff for quality control reviews. We propose to provide these services on a time-and-materials basis per the attached fee schedule. We would provide the scope of services noted herein for a fee not to exceed \$19,700 without the City's prior written authorization.

I look forward to your ideas on this water resources integration effort, Brad, and welcome your input on our approach.

Sincerely,

A handwritten signature in black ink, appearing to read "Christine M. Halley". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Christine M. Halley, P.E.
Water & Utilities Consultant

Attachment

cc: S.M. Heisler – TJC/BFL



Effective: March 01, 2006

Hourly Rates⁽¹⁾

RATE SCHEDULE for the City of El Paso de Robles
(Confidential)

Straight Time Over-Time⁽²⁾

Personnel:

Principal / Chief Engineer / Corrosion Specialist	\$ 115.00	
Sr. Project Manager / General Mgr / Manager II	\$ 115.00	
Sr. Engineering Consultant / Prin Engineer I	\$ 110.00	
Project Manager / Proj. Specialist / Sr. Systems Analyst	\$ 110.00	
Sr. Engineer / Technical Consultant / Sr Programmer	\$ 105.00	
Staff Engineer / Project Engineer / Engineering Specialist	\$ 100.00	
Systems Analyst / Sr. Accountant	\$ 95.00	
Programmer Analyst / Programmer	\$ 90.00	
Engineer / Design Leader	\$ 90.00	
Construction Manager / Scheduler / Planner	\$ 85.00	
Cad Coordinator / Lead Sup. Designer / Des Specialist	\$ 80.00	
Senior Lead Cad Designer	\$ 92.00	\$ 138.00
Project Design Coordinator	\$ 88.00	\$ 132.00
Senior Designer	\$ 84.00	\$ 126.00
Network Specialist / SCADA Technician	\$ 80.00	\$ 120.00
Instrument Technician	\$ 80.00	\$ 120.00
Designer	\$ 76.00	\$ 114.00
Drafter	\$ 66.00	\$ 99.00
Engineering Assistant / Project Assistant	\$ 58.00	\$ 87.00
Project Support / Admin Support	\$ 54.00	\$ 81.00
Drafting Tech / Intern	\$ 50.00	\$ 75.00
Clerk / Document Control Tech	\$ 48.00	\$ 72.00

Specialty Consultants:

Sr. Gas Processing Consultant	\$ 140.00
Water and Utilities Consultant	\$ 125.00
Sr. Energy Consultant	\$ 120.00

Reimbursable Expenses:

Photocopies 8-1/2" x 11" & PLC/OIU Program Printouts	\$ 0.15 ea.
Photocopies 11" x 17"	\$ 0.24 ea.
AutoCAD Reduced B&W Plots (up to 11" x 17")	\$ 3.50 ea.
AutoCAD Reduced Color Plots (up to 11" x 17")	\$ 5.00 ea.
AutoCAD and Scanned B&W Plots (up to 22" x 34")	\$ 8.50 ea.
AutoCAD Color Plots (up to 22" x 34")	\$ 12.00 ea.
Company/Employee Automobile	\$ 0.60/mi.
Computer (AutoCAD, Programming & Engr. Stations)	\$ 8.00/hr.
Engineering Simulation Software (HYSIM, CAESAR, @RISK, ETAP, etc.)	\$ 25.00/hr.
H ₂ S Monitor	\$ 16.00/day

Outside Services and Equipment

Actual Cost plus 10%

Air Fare, Car Rental, Lodging, Meals, & Misc Travel Expenses, Reproduction Firms' Charges, Long Distance and Cellular Phone Calls, Express Mail, Outside Consultant Services (Subconsultant), etc.

NOTES:

- All billing rates include overhead costs and profit.
- Overtime hours are considered work hours in excess of 8 – 10 hrs/day (depending on standard work schedules) and weekends or holidays. Work hours in excess of 12 hrs/day are billed at double time. Minimum field call-out is 4 hours.
- Invoicing will be accomplished on a weekly basis. Payment terms are net 30 days. A 1.5% monthly (18% annum) carrying charge is owed on all amounts past due.
- SPC / Six Sigma consulting rates provided on an activity-by-activity basis.

Bakersfield

T.J. Cross Engineers, Inc. • 200 New Stine Road • Suite 270
Bakersfield, CA 93309 • Phone: 661-831-8782 • Fax: 661-831-5019

Ventura

T.J. Cross Engineers, Inc. • 5450 Telegraph Road • Suite 106
Ventura, CA 93003 • Phone: 805-658-3282 • Fax: 805-658-3283

Date: 4/6/06		ENGINEERING MAN-HOUR ESTIMATE		TJCross Engineers, Inc.		
Revision: B		City of el Paso de Robles				
Water Resources Plan Integration						
PROJECT TASKS	ENGINEERING		TECHNICAL SUPPORT		TOTAL HOURS	TOTAL COST
	Water/Util Consultant	Other Engineer	Engr. Assist	Admin.		
	Hrs	(\$)	Hrs	(\$)	Hrs	(\$)
		\$125		\$58		\$54
Assemble key recommendations from water resource reports and set initial priorities/sequence to those recommendations:	30	\$3,750	8	\$464	6	\$324
Meet with operations staff.	10	\$1,250	0	\$0	0	\$0
Meet with the City to review initial plan for sequencing.						
Review approaches to establishing a pace of completing the projects. Consult with City financing staff. Adjust the sequence accordingly.	16	\$2,000	4	\$232	0	\$0
Consider staffing impacts of completing the recommended CIP. Meet to discuss staffing assumptions.	12	\$1,500		\$0	0	\$0
Additional project meetings	14	\$1,750		\$0	0	\$0
Prepare a recommended integrated 10-year CIP and narrative describing the logic behind the program.	24	\$3,000	4		4	\$216
Deliver 10 copies of integration document to City.	12	\$1,500		\$0	6	\$324
Totals =	118	\$14,750	0	\$696	16	\$864
					100	16,310
Subtotal, Engineering & Project Management Direct Costs						\$16,310
				Expenses @	10%	\$1,631
Total Estimated Cost						\$17,941
Contingency @ 10.0%						\$1,794
Total Estimated Cost with Contingency						\$19,700

RESOLUTION NO. 06-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
APPROPRIATING \$25,000 FOR AND AUTHORIZING THE CITY MANAGER TO ENTER INTO
A CONTRACT WITH TJ CROSS ENGINEERS FOR WATER RESOURCE PLANS INTEGRATION

WHEREAS, In January 2005 the City Council commissioned the preparation of an Integrated Water Resources Plan that included the following objectives:

Improve water quality; Increase & diversify water supplies; Increase reliability; Lessen ground water basin pumping; Reduce salt loading to the ground water basin; Anticipate and comply with regulatory mandates; Safeguard the City's water rights position; and Prioritize expenditures to achieve these goals; and

WHEREAS, the City has prepared various water resource planning reports including: Water and Sewer Master plans (Boyle Engineering); Storm Water Management Plan (URS Corp); Integrated Water Resources Plan (Boyle Engineering); Wastewater Treatment Plant Audit (Boyle Engineering); Pretreatment and Source Control Program report (Boyle Engineering); and Urban Water Management Plan (Todd Engineering); and

WHEREAS, The initial scope of the Integrated Water Resources Plan included, but did not fund Phase "III" of the report.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Paso Robles to:

1. Appropriate \$25,000 as follows:

Water Operations Fund	\$12,500	600-910-5224-770
Sewer Operations Fund,	\$12,500	601-910-5224-770
2. Authorize the City Manager to enter into a contract with TJ Cross Engineers as documented in their April 6, 2006 proposal.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 20th day of June 2006 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

Frank R. Mecham, Mayor

ATTEST:

Cathy David, Deputy City Clerk