

**TO:** City Council  
**FROM:** James L. App, City Manager  
**SUBJECT:** Nacimiento Water Project ~ Peak Demand/Delivery Analysis  
**DATE:** October 5, 2004

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**NEEDS:** For the City Council to consider partnering with the Atascadero Mutual Water Company (AMWC) in a Nacimiento Water Project (NWP) peaking feasibility study.

**FACTS:**

1. Paso Robles, AMWC, Templeton Community Service District (TCSD), and the City of San Luis Obispo (SLO) have subscribed to receive water from the NWP.
2. All agencies' water demands peak during summer months.
3. Summer peak demands could be met by over sizing the NWP pipeline or possibly through an exchange of delivery times with SLO.
4. NWP participants need to indicate peaking factor requirements prior to the mid-point of project design – approximately 9-12 months from now.
5. AMWC approached the City to undertake a joint evaluation of peaking needs and options.
6. A peaking feasibility study proposal was solicited by AMWC from Christine Halley (formerly Ferrara) currently with TJ Cross Engineers (study request and proposal are attached).
7. It is proposed that the Study be supervised by AMWC with the cost split proportionately based on North County Agency NWP subscriptions.

**ANALYSIS &  
CONCLUSION:**

Water demands increase dramatically during the summer months – in Paso Robles case, a fourfold increase is not unusual. These seasonal variations need to be considered in the design of the Nacimiento Water Project pipeline.

The Project could meet a portion of peak seasonal demands by either providing an oversize pipe or by exchanging delivery schedules with the City of San Luis Obispo. Briefly, SLO would fill their peak summer water demands from sources other than NWP. During that time, North County agencies would utilize SLO's NWP capacity to meet PR, AMWC, & TCSD peak demands. Then, North County participants would repay SLO by reducing PR, AMWC, & TCSD non-peak period NWP deliveries.

The proposed study would evaluate the feasibility of the SLO/North County exchange and oversized pipeline options. The attached study request and proposal more specifically articulate the study objectives, parameters, tasks, and phases.

**POLICY**

**REFERENCE:** Resolution No. 04-162 Authorizing the Nacimiento Water Delivery Entitlement Contract.

**FISCAL**

**IMPACT:** Study Phase I cost is \$15,400; \$10,267 would be Paso Robles share. Phase II cost is \$34,600 to be divided among North County participants according to NWP subscriptions; Paso Robles share would be approximately \$22,000.

Total Paso Robles cost will not exceed \$33,000. Funding can be allocated from the Water Development Impact Fund.

- OPTIONS:**
1. **Adopt Resolution No. 04-xx appropriating up to \$33,000 for, and authorizing the City Manager to enter into a Letter Agreement with the Atascadero Mutual Water Company to, study peaking options for Nacimiento Project deliveries.**
  2. **Amend, Modify, or Reject the Option Above.**

Attachments: Resolution  
AMWC 8/23/04 Proposal Request  
C. Halley/TJ Cross 9/16/04 Proposal

RESOLUTION NO. 04-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EL PASO DE ROBLES  
APPROPRIATING \$33,000 FOR JOINT STUDY OF NACIMIENTO WATER  
PROJECT PEAK DELIVERY OPTIONS

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WHEREAS, the City of Paso Robles has committed to 4,000 acre feet of annual water deliveries from the Nacimiento Water Project; and

WHEREAS, Paso Robles, and its sister Nacimiento Water Project participants, regularly experience recurring seasonal peak water use demand periods; and

WHEREAS, the Nacimiento Water Project design effort will require peaking factor data within one year so that final pipeline and pumping station size/capacity can be specified; and

WHEREAS, peak demands may be met by means other than just pipeline and pumping station size/capacity; and

WHEREAS, the peak demand delivery alternatives may impact all project participants, cost, water quality, reliability, rights, and contractual agreements; and

WHEREAS, the Atascadero Mutual Water Company seeks Paso Robles cooperation in a joint analysis of the peak demand delivery options; and

WHEREAS, T J Cross Engineers is prepared, and uniquely qualified (given the Nacimiento Water Project and North County water expertise of their Water & Utilities Consultant Christine Halley [formerly Ferrara]), to undertake this analysis.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of El Paso de Robles does hereby approve a budget appropriation in the amount of \$33,000 from the Water Development Impact Fund to Budget Account No. 220-910-5452-750 (Nacimiento Water Project), and Authorize the City Manager to Enter into a Letter Agreement with the Atascadero Mutual Water Company to Jointly Engage T J Cross Engineers to Complete a Nacimiento Water Project Peaking Option Assessment.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 5<sup>th</sup> day of October 2004 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

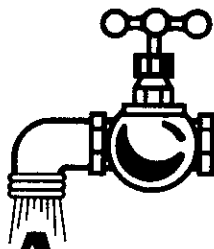
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Frank R. Mecham, Mayor

ATTEST:

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Sharilyn M. Ryan, Deputy City Clerk



5005 EL CAMINO REAL • P.O. BOX 6075 • ATASCADERO, CA 93423 • (805) 466-2428

# ATASCADERO MUTUAL WATER COMPANY

ESTABLISHED 1913

August 23, 2004

T. J. Cross Engineers, Inc.  
200 New Stine Rd.  
Suite 270,  
Bakersfield, Ca. 93309

RECEIVED  
CITY MANAGER

AUG 24 2004

Attn: Christine Halley

CITY OF PASO ROBLES

Dear Christine,

On behalf of Atascadero Mutual Water Company (AMWC) and the City of Paso Robles we request that you provide a proposal to study the feasibility of obtaining peaking from the Nacimiento Water Project (NWP) through "paper" exchanges with the City of San Luis Obispo (SLO). The benefits of such an exchange would be distributed among AMWC, Templeton Community Services District (TCSD) and Paso Robles in an equitable manner.

AMWC, TCSD and Paso Robles have a peaking requirement in the summer substantially greater than their average monthly use. There are three identified means for satisfying this peaking requirement. Peak demand can be met by use of present and/or new groundwater wells, enlargement of the NWP pipeline, or possibly through exchanging NWP delivery times with SLO. This exchange would be enabled by the availability of surface storage in Santa Margarita Reservoir and possibly Whale Rock Reservoir. NWP participants need to request peaking factors from the NWP prior to the mid-point of design of the NWP so it is important to complete this study as soon as possible.

In brief, the "paper exchange" would involve SLO taking all of their water demands during the peak demand summer months from sources other than the NWP. During that time the North County NWP participants would utilize SLO NWP capacity to meet their peak summer demands. The North County NWP participants would then "pay back" the City during their non-peak demand periods by reducing their NWP deliveries in the non-peak periods.

The purpose of the study would be to determine the feasibility of such a concept and provide Paso Robles, AMWC and TCSD with sufficient information to make a formal request to SLO if so desired by them.

The study should accomplish the following tasks:

- a.) Identify contractual requirements with the Corps of Engineers, County of San Luis Obispo and SLO.
- b.) Identify any fatal flaws to the plan in the early stages of the study.
- c.) Analyze the physical system in place to facilitate this plan and identify hydraulic capacities to identify restrictions and desired or necessary improvements.

- d.) Estimate the cost of this approach relative to the cost of NWP pipeline upsizing to meet peak demand.
- e.) Estimate costs to overcome initial or incremental hydraulic restrictions.
- f.) Determine the financial feasibility of this proposal, or at the very least provide the basic financial determinants with which to determine financial feasibility.
- g.) Confirm that this approach would not create any water rights issues.
- h.) Identify the potential for similar peaking arrangements with other present or future participants south of SLO.
- i.) Identify the potential benefits to SLO. This would include but not be limited to the beneficial impacts to dam releases required by the "live stream provision" and other factors that might increase SLO's water yield and possible positive water quality effects.
- j.) Identify the costs or liabilities incurred by SLO and the mitigation necessary to "make them whole." This would include but not be limited to water quality effects on SLO.
- k.) Determine if there would be any CEQA requirements of this proposal.
- l.) Address the impact on proposed NWP water treatment alternatives for Paso Robles and AMWC.

This list of tasks is very comprehensive and we would expect your proposal to phase the study in such a way as to address major issues and identify any possible fatal flaw early in the study. Later phases could include detailed engineering and cost estimates.

The City of San Luis Obispo, Paso Robles, TCSD, and AMWC are all aware of this study effort. Paso Robles and AMWC be the contracting entities and will be responsible for payment for services. Please feel free to contact me if you have any questions.

Sincerely,



Ken Weathers  
CEO, Treasurer

Cc: ✓ Jim App  
John Neil  
Bill VanOrden



September 16, 2004

Mr. Ken Weathers, CEO, Treasurer  
Atascadero Mutual Water Company  
P.O. Box 6075  
Atascadero, CA 93423

SUBJECT: Revised Proposal to Assess Peaking Options for Nacimiento  
Project Deliveries  
TJ Cross Proposal P04-117

Dear Ken:

Based on your request dated August 23<sup>rd</sup> and on our recent conversations, TJCross presents this proposal to assess peaking options for the Nacimiento Water Project. In general, our approach will be to first define how the project could be operated to satisfy the peak North County water requirements then to conduct a "fatal flaw" review of the proposed plan. In other words, we would assess up-front whether an exchange of deliveries with participants south of Cuesta Grade is likely to succeed, then proceed with a more detailed analysis if warranted.

Our base services would consist of:

1. **Define Operations to Meet Peak Demands** - Research yearly water demand pattern (current and projected) for all Nacimiento participants. Define Nacimiento operational pattern(s) to deliver San Luis Obispo City entitlement to North County purveyors (AMWC, Paso Robles, and TCSD) in peak demand months with make-up deliveries to SLO in non-peak months. Describe deliveries in normal years as well as exceptional years (i.e. when dams are spilling, when ground water levels are declined, or when a drought occurs). Prepare a memorandum describing the peaking program.
2. **Fatal Flaw Screening** - Compare that peaking program to the constant delivery approach in terms of compliance with terms of the Nacimiento Participation Agreement; contractual requirements among the Army Corps of Engineers, City and County of San Luis Obispo; anticipated hydraulic design of the Nacimiento pipeline; operating hydraulics of the Salinas system; and anticipated availability of excess capacity. Render an opinion up-front as to whether the contemplated delivery approach constitutes primarily an operational pattern or a material change in the project prompting CEQA evaluation, agreement amendments, and/or a material redesign of the delivery system. Consider water rights in fatal flaw screening as well as the extent of physical facilities needed to adhere to the peaking program. Meet to review the initial findings and determine whether additional evaluation is warranted.

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Bakersfield

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

Once feasibility is established, we propose to proceed with the following additional services:

3. **Physical System** - Define in more detail the physical system needed to make the proposed peak deliveries. Delineate facilities in addition to those existing or planned in the currently-defined Nacimiento Project. Meet with appropriate operations personnel (Gary Henderson, Rick Meeks, etc.) to discuss the existing and proposed physical systems and record their input on the peaking program. Address the impact on the proposed local surface water treatment plant(s) as documented in the 2004 AMWC water treatment plant study.
4. **Cost Estimating** - Estimate the cost of constructing and operating the physical system. Compare the cost to build and operate in peaking mode to the cost of constant deliveries and render an opinion as to the financial feasibility of this proposal. At this level of project planning, "Class 2" level of cost estimating accuracy is anticipated, i.e. +/- 30% accuracy.
5. **Water Rights Review** - Recap the contractual and water rights issues surrounding operations of the Nacimiento Project, Salinas Dam, Paso Robles Ground Water Basin, river wells, and other affected systems. Describe how the proposed peaking program conforms or deviates from these contracts and rights and opine as to whether further legal investigation into water rights is warranted. TJCross does not offer legal advice and this review is only intended to guide the North County purveyors in the scope of related legal review.
6. **Benefits and Liabilities Summary** - Summarize the benefits to all affected peaking partners, especially the City of San Luis Obispo. This would include a qualitative assessment of Salinas Dam operations relative to establishment of the "live stream", Paso Robles Ground Water Basin seasonal pumping, water quality implications, affects on yield of affected water supplies, and potential for energy savings. Recommend whether detailed investigation into impacts on safe yield (Salinas Reservoir, Paso Robles Ground Water Basin, or both) would be advised.

Similarly, summarize the liabilities of the proposed peaking program, especially to the City of San Luis Obispo. This would encompass the potential for undesirable variations in water quality. Present alternatives to mitigate foreseeable liabilities.

Render an opinion as to whether the North County purveyors should proceed with making a formal request for a peaking agreement with City of San Luis Obispo.

7. **Report Preparation and Presentation** - Record our findings in an engineering report. Provide an electronic version of the final report as well as (8) hard copies of the draft report followed

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by (15) hard copies of the final report. Present our findings at up to three staff meetings in San Luis Obispo County.

Christine Halley, Water & Utilities Consultant, would be project manager and lead engineer, supported primarily by Budge Tungate, Engineer. Budge received his mechanical engineering degree from Brigham Young University in 2001 and has been assisting on a variety of hydraulic and oil production assignments throughout Kern County with relative experience in pipeline sizing and cost estimating. He is a Lean Sigma Black Belt, trained in applying efficiency approaches/optimization techniques to a variety of engineering tasks.

We propose to present our "fatal flaw" screening to you within four weeks, with the more detailed report to follow nine weeks after that point. We propose to provide these services on a time-and-materials basis according to the attached fee schedule. Our estimated fee for the base services described above is \$15,400 plus an additional \$34,600 to prepare the more detailed report.

Thank you for this opportunity to assist you, Paso Robles, and Templeton CSD on this project, Ken.

Sincerely,

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

Attachments

cc: T.B. Couch - TJC/BFL  
S.M. Heisler - TJC/BFL  
K.E. Halley - TJC/BFL

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T.J. Cross Engineers, Inc. • 200 New Stine Road • Suite 270  
Bakersfield, CA 93309 • Phone: 661-831-8782 • Fax: 661-831-5019  
e-mail: [tjcross@tjcross.com](mailto:tjcross@tjcross.com)

