

TO: James L. App, City Manager
FROM: Brad Hagemann, Water Resources Manager
SUBJECT: 2005 Urban Water Management Plan
DATE: June 21, 2005

NEEDS: For the City Council to consider procuring services for preparation of the 2005 Urban Water Management Plan and Water Shortage Contingency Plan.

- FACTS:**
1. In accordance with California Water Code Sections 10610 through 10657 (Urban Water Management Planning Act), the City is required to prepare and submit their Urban Water Management Plan at least every five years.
 2. Todd Engineers prepared the City's initial UWMP in November, 2000.
 3. Funding for preparation of the 2005 UWMP was appropriated in January 2005 as part of Integrated Water Management Plan project.

**ANALYSIS &
CONCLUSION:**

California regulations require Urban Water Management Plans (UWMP) to be updated at least once every five years in years ending in five and zero. Our 2005 UWMP will build on and update the 2000 UWMP, accounting for recent changes in the Water Code and recent local efforts including the 2003 General Plan Update and the Paso Robles Groundwater Basin Study.

The UWMP must include certain elements in order to fulfill the Water Code requirements. These elements include: 1. Description of the Service Area, Water Supply and Water Demand. 2. Water Shortage Contingency Plan. This section will describe the City service area, quantify water supply and demand and evaluate the reliability of the water supply. 3. Water Demand Management Measures. This section will document water demand measures for water conservation and address the effectiveness of the measures.

Todd Engineers has been instrumental in providing the City water resource planning and engineering services to the City for the last ten years. Under the direction of Iris Priestaf, Todd prepared the City's initial UWMP. Awarding a contract to Todd Engineers to update our UWMP will provide the City with a Plan that provides document consistency and proven technical competency.

POLICY

REFERENCE: Water Code Sections 10610 through 10657 (California Urban Water Management Planning Act, as amended); 2000 Urban Water Management Plan.

FISCAL

IMPACT:

In January 2005 the Council adopted Resolution No. 05-007 which appropriated \$400,000 from the Water and Sewer Funds to support the Integrated Water and Wastewater Management Plan (IWMP). At that time staff anticipated that funds would be needed for additional tasks, including updating of the UWMP. Phases I & II of the IWMP were awarded in the amount of approximately at \$325,000. Sufficient funds are available from the January 2005 appropriation to fund Todd Engineer's \$57,900 proposal. No new appropriations are needed to fund this contract.

OPTIONS:

- a. Adopt Resolution No. 05-xx authorizing the City Manager to contract with Todd Engineers to prepare the 2005 Urban Water Management Plan.
- b. Amend, modify, or reject the above option

Attachments: Resolution
Proposal

RESOLUTION NO. 05-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES AUTHORIZING
CONTRACT AWARDS FOR PRREPATION OF THE 2005 URBAN WATER MANAGEMENT PLAN

WHEREAS, the California Water Code requires water purveyors to update their Urban Water Management Plans at least every five years; and

WHEREAS, the City of Paso Robles prepared their initial Urban Water Management Plan in November 2000; and

WHEREAS, Todd Engineering has provided a proposal to update the City's Urban Water Management Plan for a fee of \$57,900; and

WHEREAS, sufficient funds to pay for the Plan update were appropriated January 2005 pursuant to Resolution No. 05-007.

NOW, THEREFORE, BE IT RESOLVED THAT:

The City Council authorizes the City Manager to execute a contract with Todd Engineers to prepare the 2005 Urban Water Management Plan as documented in their proposed scope of work attached hereto and included by reference.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 21st day of June 2005 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Frank R. Mecham, Mayor

ATTEST:

Sharilyn M. Ryan, Deputy City Clerk

TODD ENGINEERS

2200 Powell Street, Suite 225
Emeryville, CA 94608
(510) 595-2120

June 7, 2005

MEMORANDUM

To: Brad Hagemann, Water Resources Manager
City of El Paso de Robles

From: Iris Priestaf and Katherine White

Re: Proposal to prepare the 2005 Urban Water Management Plan
for the City of El Paso de Robles

This memorandum outlines a proposed scope, schedule, and budget to prepare the Year 2005 Urban Water Management Plan and Water Shortage Contingency Plan (UWMP) for the City of El Paso de Robles (City). The 2005 UWMP will document the City's sources of water supply, define water demands, present a water shortage contingency plan, and describe implementation of water demand management measures.

This 2005 UWMP will build on and update the 2000 UWMP, accounting for recent changes in the water code and recent local efforts including the 2003 General Plan Update and Paso Robles Groundwater Basin Study. In addition, the State of California has identified the UWMP as a foundational document for compliance with Senate Bills (SB) 610 and 221 that require documentation of adequate and reliable water supply prior to approval of large developments. Accordingly, we will prepare the 2005 UWMP so that requirements of SB 610 water supply assessments and SB 221 verifications can be fulfilled in large part through reference to the 2005 UWMP. While the water code requires documentation of water supply and demand conditions to 2025, we recommend extension of the analysis to 2030 to support any SB 610/221 assessments that may be prepared between 2006 and 2010.

Overall, it is our intent to provide the City with a UWMP that not only satisfies the water code, but is consistent with and supportive of the City's 2003 General Plan and its Integrated Water Resources Plan (IWRP). To that end, we recommend that the City apply the Paso Robles Basin Study groundwater flow computer model to issues including groundwater development and use by the City, availability of groundwater supply over time, single and multi-year drought, and water recycling. Modeling scenarios are suggested in this scope and described in greater detail in a separate memorandum.

Preparation of the 2005 UWMP will be in accordance with the relevant California Water Code sections 10610 through 01657, Urban Water Management Planning Act, as

amended. The 2005 UWMP will be based on worksheets designed by the Department of Water Resources (DWR) to fulfill the water code requirements. According to DWR, these worksheets (tables) may be presented in the UWMP according to their pertinent water code section or according to subject. We recommend the latter option, which is consistent with 2000 UWMP and results in a more readable and understandable report. Accordingly, the following scope of work is organized by subject. To ensure effective evaluation of the UWMP by DWR, we recommend provision of a cross-reference checklist that links water code sections and DWR tables to our UWMP sections and tables.

SCOPE

Task 1. Plan Coordination and Data Acquisition

Task 1 provides for coordination with City staff for data acquisition, coordination with other agencies and description of mutual water management efforts, and project management.

1.1 Kickoff Meeting and Data Acquisition. This subtask provides coordination with City staff to acquire needed information and guidance. Given the comprehensive nature of the UWMP worksheets, we recommend early identification by the City of key staff (e.g., from the City Manager's office, Public Works, and Planning Departments) to participate in the UWMP preparation. We recommend an initial meeting with key staff to focus on the UWMP scope and schedule, identify needed information, and confirm mutual responsibilities.

1.2 Agency Coordination. Like the 2000 UWMP, the 2005 UWMP will be prepared independently by the City but will include coordination with other local water suppliers and interested parties. We recommend early identification of interested parties to be notified of public meetings concerning the UWMP, provided with a draft plan for review, or contacted for assistance. This coordination will be summarized in a table. In response to new UWMP requirements, we will describe recent efforts to optimally manage local water resources, including the Paso Robles Groundwater Basin Study, Nacimiento Water Project, and the City's Integrated Water Resources Plan.

1.3 City Council Presentations and Hearing. Task 1 also includes an introductory presentation to the City Council to describe the UWMP, its purpose and scope. After completion of the draft UWMP, the City must hold a public hearing; Todd Engineers will provide an illustrated presentation summarizing the draft UWMP and will address questions and comments. We will also provide a final presentation to the City Council to describe changes in the draft UWMP and to address any final concerns.

1.4 Project Management. This subtask includes regular communication with City staff and monthly reporting of technical progress, schedule and budget.

Task 2. Description of Service Area, Water Supply and Demand

Task 2 will provide a description of the City service area and will quantify its water supply and demand. This task will provide the basis for evaluation of the reliability of City water supply and its vulnerability to seasonal or climatic shortage. Preparation of this section may involve completion and presentation of as more than 20 worksheets. We anticipate that a parallel computer modeling effort will support this task, as described below.

2.1 Service Area Description. Building on the 2000 UWMP, we will provide a description of the City service area, including climatic conditions and demographic trends. To be responsive to DWR guidelines, this text will be expanded to consider how climatic and demographic factors affect water management. The population data will be presented in five-year increments to 2025 or 2030.

2.2 Water Supply Documentation. This major section will document water supply sources and facilities. To be responsive to the water code, we will describe opportunities for use of desalinated water (which includes ocean water and brackish groundwater). DWR also encourages use of the UWMP to consider opportunities for transfers or exchanges with other water agencies to improve water supply; accordingly, we will work with staff of the City and other agencies to identify and describe such opportunities. This section will describe existing groundwater sources and the future Nacimiento supply. This section also will include the recycled water plan required for UWMPs.

DWR requires quantification of existing and planned water sources for every 5 years to the year 2025 (with the 2030 option) or to the extent that available information allows. We will document the City's existing Salinas River underflow supply and groundwater basin supply. In addition, we will provide a detailed description of the future Nacimiento water supply, including its timeline for development and normal-year and dry-year supply to the City. The 2005 UWMP will also provide a discussion of recycled water. The discussion of all existing and planned water sources will account for not only normal supply conditions, but also a single dry year and the driest three-year period of record. In addition, water quality impacts on water supply reliability will be considered.

Because groundwater is an existing source of supply, the water code requires a description of the groundwater basin. A key discussion will address the groundwater basin perennial yield and potential for overdraft. This discussion will address both basin-wide groundwater supply conditions and the declining groundwater levels in the Estrella subarea, as documented in the Paso Robles Groundwater Basin Study. We will provide a description based largely on the Paso Robles Basin Study plus up-to-date information from the IWRP groundwater evaluation and well field assessment, as available.

The Basin Study addressed the total water demand for municipal and agricultural build-out and concluded that overdraft was a possibility. However, the Basin Study did not address the timing of development. The UWMP is required to plan in 5-year increments out to 2025 (2030 optional); accordingly, the findings of the Basin Study must be re-evaluated to estimate the rates of municipal and agricultural development in terms of water demand. In addition, the Basin Study applied simplifying assumptions regarding how the City of Paso Robles would increase its municipal pumping. To recap, the Study assumed no new wells and applied the new pumping to existing wells. This resulted in substantial simulated drawdown around City wells.

To evaluate a more realistic scenario for City groundwater use and development in the future and to evaluate water supply and demand in the required five-year time steps, the City will supply us with the results of several computer model scenarios.

The first scenario would involve optimized pumping patterns and addition of new wells for the City of Paso Robles over the period to 2025 or 2030. This scenario would be comparable to the buildout scenario of the Paso Robles Basin Study, but results would be reported not only at buildout, but also in the five-year increments required for the UWMP.

The second scenario would include addition of Nacimiento water supply. This scenario would be comparable to the Basin Study's buildout with Nacimiento scenario, but again results would be reported not only at buildout, but also in five-year increments. To provide a closer comparison, we suggest two additional scenarios would involve running the Basin Study's buildout and buildout with Nacimiento scenarios without change except for reporting in the five-year intervals. This would provide a direct comparison and also demonstrate that we can replicate the results of the Basin Study.

The water code also requires a recycled water plan. This is a comprehensive description of wastewater collection, treatment, and disposal, with the clear intent of promoting water recycling. Our discussion will coordinate with the IWRP to provide an up-to-date discussion of water recycling, including identification of involved agencies and their roles; description of current wastewater quantity, quality, and disposal; and discussion of potential water recycling including potential uses, implementation actions, incentives, and projected amounts in 5-year increments out to 2025/2030.

We recommend that the computer model be applied to water recycling. This would involve another scenario results to be supply to us where existing recycled water recharge to the Salinas River channel is diverted for irrigation, thereby allowing local reduction in groundwater pumping.

2.3 Water Demand Documentation. The water demand discussion from the 2000 UWMP will be updated and extended using the 2003 General Plan Update. We will document past, current, and future water demands by specific water use sectors (e.g.,

single family residential, commercial, landscape, etc.) in five-year increments to 2025 or 2030. This will include reporting of number of water connections and water use in acre-feet per year. Unaccounted-for water (system losses) also will be documented.

2.4 Water Reliability Assessment. This section culminates in the assessment of water service reliability under normal climatic conditions. This will involve comparison of water supply and demand in normal years out to 2025 or 2030. Consistent with the 2000 UWMP, the evaluation of water service reliability in dry years will be included in the next section, Water Shortage Contingency Plan.

Task 3 Water Shortage Contingency Plan

Task 3 will evaluate the reliability of the water service system in response to water supply shortages, including single and multiple dry years and emergencies such as a regional power outage or earthquake.

3.1 Definition of Stages. For definition of droughts and water shortage stages, we will likely use those defined in the 2000 UWMP. The definition of a water shortage emergency should be reviewed in light of the December 2003 earthquake impacts on the City's water system.

3.2 Documentation of Drought Water Supply and Demand. As documented in the 2000 UWMP, the City historically has relied on groundwater basin storage to provide water through drought. This text will be updated and expanded in the 2005 UWMP to include the future Nacimiento water and potential recycled water supplies in addition to groundwater supplies.

The evaluation of water service reliability will address an extreme, single-year drought, taking into account expected changes in water demand by sector (for example, increasing landscape water use as well as effects of water conservation or rationing). As directed by current DWR guidelines, the comparison of water supply and demand for a single-year drought will be conducted every five years to 2025 (or 2030). Similarly, the evaluation of a multiple-year drought will involve comparison of water supply and demand over five-year increments, for example, droughts ending in 2010, 2015, etc.

We recommend application of the computer model to evaluate the impact of single and multiple dry years on City wells and available groundwater supply. This would involve two scenarios for single and multiple year droughts, respectively, with assessment of the drought impacts at the required five-year intervals.

3.3 Evaluation of Consumption Reduction Actions. The 2005 UWMP will build on the 2000 UWMP to define consumption reduction measures for drought, prohibitions and penalties, actions to prepare for an emergency, and actions to be taken when the emergency occurs. Measures to determine actual reductions in water use will be

identified. The 2005 UWMP will discuss potential impacts on the City's revenues and expenditures of emergency water conservation and if needed, identify measures that the City can take to mitigate financial impacts.

Task 4 Water Demand Management Measures

This task will describe the City's Water Demand Management Measures (DMMs), updating the 2000 UWMP and building on its recommendations, while recognizing that DWR guidelines for evaluation and implementation of DMMs are increasingly detailed and rigorous.

4.1 Documentation of DMMs. The Urban Water Management Planning Act requires documentation of 14 Demand Management Measures (DMMs) for water conservation, which include a range of actions from water conservation pricing to leak repair to school education. If a DMM is not fully implemented, a schedule and plan for future implementation will be provided.

4.2 Evaluation of Effectiveness. The 2005 UWMP will address the effectiveness of DMMs, including implementation, expenditures, and water savings. In addition, we will discuss the "demand-hardening" effect on the City's ability to further reduce demand.

Task 5 Draft and Final Plans

5.1 Draft UWMP. We will prepare an internal administrative draft for City staff review, which will be submitted in one copy plus an electronic copy. Following inclusion of staff comments, we will provide three bound copies of the draft report and one electronic copy to the City for distribution to interested parties and the public.

5.2 Final UWMP. We will compile both written and verbal comments on the public draft UWMP. Comments received during the circulation period and at the public hearing will be addressed in the final draft of the UWMP. Consistent with the final 2000 UWMP, we will assemble an appendix with comment letters, transcribed verbal comments, and responses to comments. The final report will be delivered to the City in three bound copies plus an electronic copy.

Staffing

The proposed project team includes Iris Priestaf as project manager, Katherine White, senior engineer, and Craig Gaites, staff engineer. Both Dr. Priestaf and Ms. White contributed to the 2000 UWMP.

Schedule

For the purposes of planning, we assume authorization the third week in June 2005. Preparation of the UWMP is initiated with a presentation to the City Council and a kickoff meeting with staff. Due to the tight time schedule, Task 2, 3, and 4 will be completed in about three and a half months. With regard to UWMP preparation, the schedule assumes a two week staff review of the internal draft UWMP and the required 45-day public review period for the draft UWMP. During the 45-day public review period, one copy of the draft UWMP will be submitted to DWR for internal review to ensure that all requirements are met. Since this draft will probably not be submitted until early November, it is uncertain if DWR will have time to review the draft before the final is due at the end of December. UWMP adoption is indicated after submittal of the final UWMP, allowing final review by the City Council prior to adoption. Adoption is indicated for the Council meeting in mid-December, just before the California Water Code deadline of December 31, 2005.

Budget

The estimated cost for preparation of the 2005 UWMP is as follows.

Task	Estimated Cost
1. Plan Coordination and Data Acquisition	\$14,805.
2. Description of Service Area, Supply and Demand	\$14,865.
3. Water Shortage Contingency Plan	\$ 4,815.
4. Water Demand Management Measures	\$ 7,570.
5. Draft and Final Plans	\$15,845.
	<hr/>
	\$57,900.

We look forward to working with you on the 2005 Urban Water Management Plan. Please call if you have questions or comments regarding this proposal.