



## MEMORANDUM

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August 5, 2010

TO: Board of Mayor and Aldermen

FROM: Mark S. Hilty, Water Management Director  
David Parker, P.E., City Engineer  
Eric S. Stuckey, City Administrator

SUBJECT: Consideration of a Professional Services Agreement with CDM in the Amount of \$38,000 to Develop a Drought Management Plan

### **Purpose**

The purpose of this memorandum is to present to the Board of Mayor and Aldermen a Professional Service Agreement with CDM in the Amount of \$38,000 to develop a Drought Management Plan.

### **Background**

The City of Franklin Water Management Department during the drought of 2007-2008 had been identified by the Tennessee Department of Environment and Conservation (TDEC) as a "water system of concern" requiring that a stand-alone drought management plan be developed. Water Management Staff has attended a workshop held by TDEC in March 2010 for guidance in plan development. While some work has been performed to achieve the requirements of the plan, staff is currently unable to devote the time necessary.

There are various required components to the drought management plan including TDEC approval process, coordination and planning with neighboring utility districts, public participation and stakeholder involvement, and system modeling to develop management and operational trigger points.

The drought management plan requires refined analyses to evaluate the water system that is not yet performed in this phase of the Integrated Water Resources Plan (IWRP). Therefore a scope of services has been requested from CDM to take advantage of some of the overlapping efforts with Phase I of the IWRP including stakeholder and public involvement and coordination with TDEC and neighboring utility districts.

### **Options/Financial Impact**

Options to develop the plan include development using City staff, amending CDM's contract in the amount of \$38,000, or requesting proposals from other consulting firms to perform the work. The project is budgeted for in the proposed amendments to the Water Management Budget for FY 2011, to be presented to the Finance Committee on August 19, 2010.

### **Recommendation**

Staff recommends that the BOMA approve the PSA with CDM in the amount of \$38,000 for the development of a drought management plan.



210 25th Avenue North, Suite 1102  
Nashville, Tennessee 37203  
tel: 615 320-3161  
fax: 615 320-6560

## Attachment A

August 6, 2010

Mr. Mark Hilty, P.E.  
Director, Water Management Department  
405 Hillsboro Road  
Franklin, TN 37064

Subject: Proposal for Drought Management Plan

Dear Mr. Hilty:

CDM is pleased to provide this proposal, as an amendment to the existing IWRP contract, to support the City of Franklin with the development of a Drought Management Plan as required by the Tennessee Department of Environment and Conservation (TDEC) under provisions of the Tennessee Safe Drinking Water Act and rules. That Act is requiring the 118 systems deemed "Systems of Concern" to develop a Drought Management Plan

As you are aware, CDM has been working with the City staff to develop an Integrated Water Resources Plan (IWRP) which will be a comprehensive, implementable, and fundable program with a focus on stakeholder-derived objectives as the central measure of success. While the IWRP will provide a long-term plan to meet the City of Franklin's water resources needs, it will not meet the substantive requirements of the Drought Management Plan as described by TDEC under its "Guidance for Developing Community Water System Drought Management Plans" which has very specific requirements for components that should be included in the development of a drought management plan. CDM proposes the following tasks to meet these requirements and develop a plan that will meet TDEC's expectations for the Drought Management Plan:

### TDEC Coordination Task

As mentioned, "Systems of Concern" are required to develop a Drought Management Plan. CDM will assist the City of Franklin Water Management Department with coordination with TDEC water supply staff on the guidelines and specific requirements of the plan. It is anticipated that multiple discussions and TDEC reviews, as well as any other regulatory communication will be required throughout the project and our staff will serve as an additional representative to facilitate the approval process.



### Coordination of Regional Water Systems Task

For successful, proactive drought responses and lessened drought impacts, it is imperative that all the agencies and water systems continue to work together to manage the increasingly complex, interrelated and diverse uses of our water resources. TDEC encourages community water systems to evaluate their long-term water supply and consider regional water resources management opportunities as appropriate and has partnered with the U.S. Corps of Engineers and other entities to pilot a planning process that can be utilized in other areas of the state. CDM will review this pilot process and provide the City support in determining which, if any components of this pilot process are applicable to its Drought Management Plan. Additionally, CDM will assist the City to continue to build upon the relationships that have been developed as part of the IWRP process to coordinate regional opportunities for managing water resources as part of the Drought Management Plan.

### Hydraulic/Hydrologic Modeling Task

TDEC requires that community water systems have a drought management plan, separate from their Emergency Operations Plan. One of the most significant components of a community water system's plan is the designation of trigger points. These are the points at which certain drought response actions are required as determined by that community water system, with identified corresponding actions. For example, increases in overall water treatment demand approaching the community water system's treatment capacity may be identified as one of the water system's trigger points. Once those demand conditions are met, managers can take predetermined actions to reduce system demand, e.g., restricting certain water uses such as irrigation, contacting the media to get messages to the public regarding reductions, etc.

In order to identify trigger points and response actions, it will be necessary to conduct some limited system modeling. This will include a review of the distribution system network model, as well as the hydrology of the Harpeth River, which serves as one of the primary sources of potable water for the City. It may be necessary to update existing models that have been developed for the distribution system as well as the IWRP as part of this task.



### **Public Participation**

The number and diversity of customers of the water system require a public participation component to the Drought Management Plan. As part of the plan, TDEC is encouraging community water systems to adopt measures to increase the efficiencies of their systems, including the promotion of water-efficient products and practices to their customers. CDM will support the City of Franklin in developing specific Public Participation goals and education materials as part of this project. Additionally, CDM will continue to work with the City's Public Relations staff to conduct any necessary public meetings and distribute educational materials.

### **Cost and Schedule**

The staff that will assist with this project will be those currently supporting the City with these issues on the IWRP and include Mr. Chris Provost, Mr. Zack Daniel, Dr. Kati Bell, and Mr. Kirk Westphal who will serve as the technical lead for the work. CDM may use other water resources experts as necessary to complete the analysis and evaluations, but individuals listed above will direct this work and represent CDM in meetings with the City, public, and other agencies as required throughout the project.

The tasks described above are estimated to take 6 months to complete and CDM is ready to initiate this task immediately upon your notice-to-proceed. The cost to complete the scope as defined in the tasks identified above is estimated to be \$38,000. We propose to complete this task on a time and materials basis with a not-to-exceed limit of \$38,000, and in no case would the upper limit be exceeded without written authorization from the City. Actual costs will be billed and tracked on a monthly basis according to the attached table of labor billing rates while other direct costs (travel, reproduction, etc.) will be billed at CDM's cost. The billing rate table, as negotiated under the current IWRP contract, is provided below:



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**Table 3**  
**Billing Rate Table**  
**For the Franklin Integrated Water Resources Plan**

| <b>Labor Category</b>       | <b>Billing Rate (\$/hour)</b> |
|-----------------------------|-------------------------------|
| Project Manager             | \$185                         |
| Senior Technical Specialist | \$185                         |
| Task Manager                | \$170                         |
| Senior Engineer             | \$140                         |
| Engineer                    | \$120                         |
| Junior Engineer             | \$100                         |
| Administrative/Clerical     | \$75                          |

CDM appreciates the opportunity to provide this proposal to you, and I am confident we can continue to successfully assist you and the City of Franklin. If you have any questions, please do not hesitate to contact me or Dr. Kati Bell at 615-320-3161.

Very truly yours,

Zack A. Daniel, P.E.  
Client Service Manager  
Camp Dresser & McKee Inc.

JAN 11 PM 12:15



STATE OF TENNESSEE  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
**DIVISION OF WATER SUPPLY**  
6th Floor L&C Tower, 401 Church Street  
Nashville, Tennessee 37243-1549  
Telephone 615/532-0191  
Fax 615/532-0503

January 11, 2010

JOHN SCHROER, MAYOR  
FRANKLIN WATER DEPT  
109 3RD AVENUE, SOUTH  
FRANKLIN, TN 37064

RE: Development of a Water System Drought Management Plan  
Workshop and Division of Water Supply (DWS) Requirements

Dear Sirs,

The drought of 2007-2008 was a critical event for many public water systems in Tennessee. State officials and administrative staff have met many times and have discussed ways to improve water system capabilities during emergencies and particularly during droughts.

The water system you manage was a "water system of concern" during the 2007-2008 drought. Systems that encountered a source problem, treatment capacity limitation, pumping-distribution issue, or bought or sold water from or to a system that activated conservation or required some other management, became a "water system of concern." Your system may have addressed the problems that caused your system to become a system of concern. Your solutions are not wasted, but you may also find additional things that can be done or refinements that can be made that would benefit your system.

Nevertheless, water systems of concern are being required to write, or completely revise their current drought management plan according to guidance specifically prepared to assist water systems. A downloadable document, entitled "Guidance for Developing Community Water System Drought Management Plans" can be found at URL:

[http://www.state.tn.us/environment/dws/pdf/droughtmgtpan\\_guidance.pdf](http://www.state.tn.us/environment/dws/pdf/droughtmgtpan_guidance.pdf)

In addition to this guidance, a training workshop and drought planning workshop is being planned. Environmental Field Office (EFO) staff, TAUD staff and others are being invited to this training to assist you and your staff. Water systems of concern are also being invited to attend, to learn firsthand what will be required in developing a plan. The workshop will be held on March 16, 2010

in Murfreesboro at the Fleming Training Center (FTC), 2022 Blanton Drive. It will be a day-long event, beginning at 8:30. It should conclude by 3 pm.

Should you have any questions regarding the Division's requirement that water systems write or revise their drought management plans or this workshop please feel free to call Lee Keck at (615) 532-0157.

Sincerely,

A handwritten signature in black ink that reads "Tom Moss". The signature is written in a cursive, slightly slanted style.

Thomas Moss, Acting Director  
Division of Water Supply

CC: NASHVILLE ENVIRONMENTAL FIELD OFFICE  
File: TN0000246