TWDB Offers Regional Water and Wastewater Facility Planning Grant

By Stephanie Griffin, P.E., CFM

The Texas Water Development Board (TWDB) has allocated $1 million for regional water and wastewater facility planning grants for fiscal year 2011. The grant is for studies and analyses to:

- Evaluate and determine the most feasible alternatives to meet regional water supply and wastewater facility needs;
- Estimate the costs associated with implementing feasible regional water supply and wastewater facility alternatives; and
- Identify institutional arrangements to provide regional water supply and wastewater services for areas in Texas.

These grants are regional in nature, requiring two or more water or wastewater service entities to participate together in a proposed study that provides service to more than one service area. Eligible applicants include political subdivisions (i.e., cities, towns, counties, districts or authorities) that have the authority to plan, implement and operate regional water supply or wastewater facilities.

The grant also requires a water conservation plan and a drought contingency plan. If the entity requesting the grant does not have one or both of these plans, then it must include preparation of the plans as part of the proposed scope of work in the grant application.

The grant will provide 50 percent matching funds and the local communities will provide the balance. In cases of economically disadvantaged communities, the grant may provide up to 75 percent matching funds.

Grant applications are due to TWDB by noon on Monday, December 20, 2010. Request for Applications for the grant was published in the Texas Register on October 8, 2010 and can be accessed at http://www.sos.state.tx.us/texreg/pdf/backview/1008/1008is.pdf (see page 9163). Additional information can be found on the TWDB’s Web site at http://www.twdb.state.tx.us/assistance/financial/fin_regionalfacilityplan/RegionalPlanning.asp.

See Planning Grant, page 2
Here are some helpful tips in preparing a regional planning grant application.

- Regional facility planning grants for water cannot duplicate the SB1 regional water planning process.
- The TWDB checklist provides key guidance for preparing applications.
- The information required for the grant application is not excessive but it does take time to assemble.

Start compiling this early in the application development process.

- Notifications must be delivered to entities impacted by the proposed study prior to submitting the application. Allocate enough time for delivery and confirmation of the notices.
- TWDB staff is very helpful. Feel free to call them directly for assistance at 512-936-0852 or e-mail at David.Meesey@twdb.state.tx.us.

FNI has helped our clients obtain more than $1 million for water and wastewater projects with this fund, including Regional Wastewater Facility Concept Planning for the Upper East Fork Basin Areas of North Collin and South Grayson Counties for the Greater Texoma Utility Authority and the Regional Water Supply Facility Planning and King’s Creek Wastewater Regional Facility Planning Studies for the City of Terrell.
Industry Trend: Risk-Based Approach to Infrastructure Renewal
By Scott Cole, P.E.

With aging water and wastewater infrastructure and budgets shrinking, Texas utilities are working proactively to prioritize system renewal with a risk-based approach. System renewal consists of systematically evaluating rehabilitation and replacement options to address potential problems associated with aging facilities. This identifies assets with the most exposure and uses a quantitative method to prioritize CIP dollars. This approach provides an analytical basis to justify and prioritize investment in aging assets. The risk analysis consists of two components: condition and criticality.

Condition
The condition of existing system assets is evaluated using field inspections and available data, including maintenance history, work order databases, customer complaints, closed-circuit television inspection data and GIS databases that store age, material and size information. A condition scoring system is developed to provide a quantitative assessment of the condition of each infrastructure asset. Condition scoring parameters typically include asset age, material, repair history, soil type and field inspection data.

Criticality
A scoring system also is developed to evaluate the criticality of existing system assets. Criticality parameters are specific to the needs of each utility and can include population served, redundancy, infrastructure size, proximity to high-impact or environmentally-sensitive areas, number of upstream customers, response time and access issues.

See Risk-Based, page 7
Federal Actions Signal Major Shift in Storm Water Quality Protection

By Trey Shanks

A single paragraph in 2007’s Energy Independence and Security Act (EISA) could be the beginning of a fundamental shift in water quality protection from urban storm water runoff. Section 438 of the EISA requires many federal development or redevelopment projects to maintain or restore the runoff conditions of the property to its predevelopment state. In December 2009, the Environmental Protection Agency issued technical guidance for the implementation of Section 438 storm water management requirements with details about approaches to maintain or restore the pre-development hydrology during the development or redevelopment process by using green infrastructure/low impact development infrastructure tools.

Options
Design engineers have two options in the technical guidance to maintain or restore pre-development hydrology. Option 1 is to retain the 95th percentile storm event on site for infiltration, evapotranspiration and/or harvesting for reuse. Option 2 allows for a site-specific hydrologic analysis of the pre-development condition. With either option, “the post-construction rate, volume, duration and temperature of runoff should not exceed the pre-development rates and the predevelopment hydrology …”

For now, these requirements are limited to federal facilities, but the concept of volume control is gaining traction within EPA. Indicative of this policy shift is EPA’s current storm water rule making efforts. In January 2010, the EPA announced that it would initiate new federal rule making on storm water including these considerations:

- Expand the area subject to federal storm water regulations.
- Establish specific requirements to control storm water discharges from new development and redevelopment.

See Major Shift, page 7

For more information on changes to EPA’s proposed storm water rules:
http://cfpub.epa.gov/npdes/stormwater/rulemaking.cfm

For more information on changes that have already occurred for federal facilities:
http://www.epa.gov/owow/NPS/lid/section438/

Conceptual storm water quality management approaches for a development
A firm Principal, Ray Longoria has more than three decades of engineering experience in the evaluation and design of municipal water and wastewater treatment facilities and systems, and wastewater reuse feasibility studies. He supervises the planning, design and construction administration for municipal projects and the preparation of studies, plans, and specifications for site evaluation and site layout for large-scale, multiple contract projects. Ray is a Board Certified Environmental Engineer of the American Academy of Environmental Engineers – Water Supply and Wastewater. He may be reached at 214/217-2252 or rrl@freese.com. Or, click on his name above for a direct e-mail link.

Texas water and wastewater utilities have a long history of participating in the Drinking Water and Clean Water State Revolving Fund (DWSRF and CWSRF) programs. The DWSRF provides low-interest rate loans to finance projects that facilitate compliance with Safe Drinking Water Act regulations. The CWSRF provides similarly subsidized loans for projects that facilitate compliance with Clean Water Act regulations. Since their inception in the mid-1990s, the programs remained relatively unchanged. However, major changes were adopted and became effective this past August. In summary, the changes include a trade off of greater interest rate subsidies for more administrative requirement, less money for mainstream projects and the elimination of combined design/construction financing commitment at the project inception.

Another major change is the suspension of Tier II CWSRF funding. The Clean Water program had matured to the point that enough money was repaid to create a separate fund, one that was considered de-federalized. Tier II funds were available without the prerequisites of Tier III, but at a slightly higher interest rate. In recent years, more CWSRF Tier II funds were available than Tier III and most requests were satisfied. It is uncertain if Tier II funding will be made available in the future.

Additional Changes
- Planning, acquisition and design (PAD) funding will be separate from construction funding.

Applicants must resubmit for the construction phase, which may not be funded.
- Compliance with the Davis-Bacon Act wage rates and all federal crosscutting requirements apply for all projects.
- Funding for mainstream projects is greatly reduced. Approximately 50% of the funds are reserved for economically disadvantaged communities and green projects.
- Higher-rated projects may be bypassed in favor of lower-rated projects to achieve funding parity. Many utilities which had relied on SRF funds may no longer be able to obtain funding.
- Individual entities will be limited to funding in an amount not to exceed 15% of total funds available
- Funding amounts may not increase by more than 10%. Legitimate project cost increases from unforeseen circumstances and inflation may impede the project completion.
- Shorter deadlines for applying for funds and loan closings.

Although the changes are significant, TWDB believes that the changes will improve the long-term sustainability of the SRF programs (benefitting both TWDB and entities seeking SRF funding), increase the transparency of the funding decisions and allow for greater flexibility in responding to future changes in federal requirements. ☝

Coy Veach is a Vice President of the firm and a Senior Consultant for the Construction Services Group. He serves on the Legislative and Government Affairs Committee for the Texas Society of Professional Engineers and served on a coalition promoting the adoption of legislation authorizing Alternative Project Delivery Methods for municipalities in Texas. He may be reached at 817/735-7222 or cmv@freese.com. Or, click on his name above for a direct e-mail link.

The Texas Water Development Board (TWDB) recently adopted a rule change that would make the use of alternative methods of project delivery eligible for available financial assistance. Until now, owners have not been able to take full advantage of the benefits alternative project delivery systems can offer for their projects under the current TWDB rules and guidelines.

TWDB’s processes and procedures were based on the traditional design-bid-build project delivery method — a linear approach to project delivery that makes it easy to interject the regulatory requirements associated with grant and loan funding. Each stage of the traditional project provides a natural gate where the process can be put on hold during reviews and paperwork. In alternative project delivery systems such as Construction Manager at Risk and Design Build, the design and construction procurement activities can occur simultaneously in the project delivery continuum. While this has the advantage of accelerating project delivery, it presents real challenges in planning and contract documents review and the staged release of funding.

Revisions to Texas Administrative Code (TAC) 375.81(d) adopted in early September provide TWDB with the flexibility to look at combinations of planning, design and construction funding and the review, approval and release of funds processes for alternative delivery projects. These guidelines will have a significant impact on when a project’s guaranteed maximum price is set, how contingencies are managed and the documents review process. The challenge facing TWDB will be in writing rules that facilitate the use of alternative project delivery methods while providing the safeguards needed to make the best use of public funds.

**Construction Trend:**
**TWDB Prepares for Alternative Project Delivery**

By Coy Veach, P.E., CCM

In revising their guidelines, the leadership role taken by TWDB will make it possible for owners to take advantage of funding opportunities and use alternative project delivery methods to obtain best value for the design and construction of their projects.

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**Alternative Project Delivery**

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<tr>
<th>Construction Manager at Risk</th>
<th>Design Build</th>
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<td>Delivery method in which the owner selects an architect/engineer to design the project and separately selects a CMAR to serve as General Contractor. The CMAR assumes the risk for construction for a guaranteed maximum price and provides design phase consultation by evaluating cost, schedule and constructability.</td>
<td>Delivery method in which a single entity is contracted to provide both design and construction. The Design Build team consists of an builder, architect and engineer. The Design Builder contracts directly with subcontractors and is responsible for delivery of the project.</td>
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The scoring system is applied to each system asset using spatial analysis in GIS, hydraulic models and other available databases.

The scores of each asset combine to provide an overall risk rating. This risk rating is typically displayed in a risk matrix that summarizes the condition and criticality categories. For instance, an asset with poor condition and a high degree criticality would be categorized as a high risk asset. The results are used to develop renewal alternatives such as rehabilitation, replacement or further inspection. Each project is evaluated on an individual basis to determine the best renewal alternative. Coordination with transportation projects and utility growth Capital Improvement Plan (CIP) projects should be considered and can impact the priority of some projects. Projects that address high risk assets are typically programmed into the short-term CIP.

### Major Shift — cont. from page 4

- Develop a single set of consistent storm water requirements for all Municipal Separate Storm Sewer Systems (MS4).
- Require MS4s to address storm water discharges in areas of existing development by retrofitting the sewer system or drainage area with improved storm water control measures.
- Explore specific storm water provisions to protect sensitive areas.

It remains to be seen whether or not the expected proposed storm water rule will expand requirements of EISA Section 438 to include more than just federal facilities. But it is evident that EPA does not intend to continue with a business-as-usual approach to water quality protection. FNI will continue to track the progress of EPA’s activities and the potential effects to the regulated community.

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**Municipal CIP Funding: Getting Prepared for When the Economy Returns**

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<th>Date</th>
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<tbody>
<tr>
<td>December 8, 2010</td>
<td>Grapevine Convention Center, 1209 South Main Street, Grapevine, 76051</td>
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<tr>
<td>December 9, 2010</td>
<td>City of San Marcos Conference Center, 1001 East McCarty Lane, San Marcos, 78666</td>
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