

Collin
Cooke
Dallas
Denton
Ellis
Fannin
Freestone
Grayson
Henderson
Jack
Kaufman
Navarro
Parker
Rockwall
Tarrant
Wise

REGION C

Water Planning for North Texas

Fall 2008 Newsletter



Region C Water Planning Group Invites Public to Attend Public Meetings

Public attendance is welcome at all Region C Water Planning Group Meetings, and attending members of the public have an opportunity for comment on the Planning Group's activities during each meeting.

Next Meeting:

Monday, March 23, 2009, 1:00 p.m.

Meeting Location:

Trinity River Authority
Central Wastewater Treatment Plant
6500 W. Singleton Blvd.
Grand Prairie, TX 75212
(972) 263-2251

*Please Note: Persons with disabilities who plan to attend the Region C Water Planning Group meeting – and who may need auxiliary aids or services such as mobility assistance, interpreters for deaf or hearing-impaired persons, readers, large print, or Braille – are requested to contact Lee Shaffer in the TRA Central Wastewater Treatment Plant at (972) 263-2251 at least (5) work days prior to the meeting so that appropriate arrangements can be made.

For more information about the Region C Water Planning Group, contact:

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To be added to the RCWPG newsletter mailing list, send your name and mailing address to Colby Walton via e-mail to colby@cookseypr.com, or via fax to (972) 580-0852.

Visit www.regioncwater.org for the latest updates on RCWPG activities, meetings and other water planning news, or contact Tom Gooch with Freese & Nichols at tcg@freese.com.

Region C Undertakes Significant Reuse and Conservation Projects

Region C has been a state leader in developing reuse and conservation projects to use water wisely. Here's a look at some of the major Region C reuse and conservation projects that are currently underway or coming soon.

The **City of Dallas** is in the process of designing its Cedar Crest Pipeline Extension Project, which is expected to support an average supply of 1.75 million gallons of water per day (MGD), or 1,961 acre-feet per year. The project would extend an existing reuse pipeline to serve the Dallas Zoo and Rock-Tenn area in Dallas.

The **City of Fort Worth** is working on several reuse projects.

The city is on track to complete a feasibility study of a separate satellite treatment facility serving the southern area of town by the end of the year. The facility would supplement the Village Creek Wastewater Treatment Plant, which was designed to supply the central and southern parts of Fort Worth with reclaimed water. The project, with a service area that includes the Trinity River Vision Project, several golf courses, parks and an industrial area, would support an annual average demand of 2.2 MGD, or 2,466 acre-feet per year.

Fort Worth is conducting a follow-up study, slated for completion in 2009, to select a site for a satellite treatment facility in the Mary's Creek watershed. This project, which would serve new developments in western Fort Worth, would provide

water for irrigation of a golf course, green space areas and residential developments using dual distribution systems, and would support an annual average demand of 3.8 MGD or 4,259 acre-feet per year.

City officials are moving forward with design and developing customer commitments for a project that would use treated effluent – or outflow – from the Village Creek Wastewater Treatment Plant for non-drinking water service. Construction on the project, which would serve customers in far eastern Fort Worth, Dallas/Fort Worth International Airport, as well as the cities of Arlington, Euless and Grand Prairie, is slated for completion by 2010. Demand stemming from natural gas well development has caused Fort Worth city officials to update their demand projections for the project, which was originally envisioned to support an average annual demand of 2.8 MGD, or 3,138 acre-feet per year.

The **City of Denton** collaborated with Robson Communities Inc. to build a 0.25 MGD water reclamation facility to serve its residential development. Robson Communities agreed to fund the construction of the city-owned facility in exchange for 25 years of effluent for irrigation. The facility is being expanded to provide a capacity of 0.8 MGD; future expansions could increase capacity to 1.6 MGD. The distribution system is currently being designed and would provide wastewater to the community's golf course and other public areas.

Conservation Corner

The Region C Water Planning Group has recently undertaken a special study on Best Management Practices for water conservation.

The Planning Group's consultants surveyed water user groups in Region C and asked them to report what water conservation measures they have implemented, how much those programs cost and what savings they experienced. The team's findings are available for review in a series of memoranda on the RCWPG Web site (www.regioncwater.org) and have been compiled into a draft report.

The consultants found that there wasn't sufficient hard data to precisely evaluate the water conservation programs. While the cost of low-flow toilets or shower heads may be easy to quantify, other costs, such as staff time spent on a project, are harder to itemize.

Another challenge was accounting for one of the most significant factors in water use – the weather. A public education program may be making strides, but hotter weather from one year to the next could still translate into higher consumption levels.

Additionally, while a water user group may be experiencing overall water use savings, it's difficult to determine how effective each program is when several programs may be in place at the same time.

While the Planning Group has not made any official recommendations regarding documentation of conservation savings and reporting of results in a consistent manner, it's definitely something we are considering for the future.

The **City of Frisco** completed the first phase of modifications to its reuse system, which included expanding the existing reuse pump station at Stewart Creek Wastewater Treatment Plant and installing a back pressure sustaining valve in a pipeline. The modification was part of a plan laid out in the city's 2006 Reuse Water Master Plan. Two additional phases will follow. In the future, the Panther Creek Wastewater Treatment Plant will become the primary source of reuse water and will have an average daily capacity of up to 20 MGD, or 22,418 acre-feet per year.

The **Tarrant Regional Water District's** (TRWD) George W. Shannon Wetlands Water Recycling Facility, which is adjacent to the Richland-Chambers Reservoir, will soon begin a 200-acre expansion that will add 15,750 acre-feet per year of water supply. The project, which will be completed in 2010, will enable the wetlands to transition from being used for research to providing an estimated 63,000 acre-feet of water supply each year.

The project uses constructed wetlands to treat Trinity River water prior to its introduction into the Richland-Chambers and Cedar Creek reservoirs.

The district's Cedar Creek Reservoir Wetland Project, which will produce 52,500 acre-feet per year of water, is currently under design.

The TRWD's conservation program enabled the district to experience only a 0.59 percent increase in water consumption during two similarly wet years – 2004 and 2007 – while population grew 5.9 percent over the period. This year, the district created a new conservation committee to share ideas and discuss strategies. The TRWD partnered with NTMWD and Dallas Water Utilities (DWU) for a regional conservation symposium focusing on best practices for programs including toilet replacement programs, irrigation audits and water conservation pricing.

The **North Texas Municipal Water District (NTMWD)** recently approved \$1 million in funding for the fiscal year that began October 1 to continue its Water IQ program, which encourages consumers to consider how their lifestyle may impact water consumption and communicate the role conservation may play in ensuring water supplies for the future. The district estimates the program has helped conserve about 200 MGD during peak summer months, or 10 to 12 percent of annual water savings between June 2006 and June 2007. The program has been in place since 2006.

Under the **DWU's** 5-year water conservation plan, the goal is to reduce per capita use by 1 percent each year by reducing seasonal peak demand, reducing water loss and waste, and decreasing water use by individual users on a daily basis. As of 2007, the program had reduced consumption by an average of 2.8 percent annually.

The **Trinity River Authority's (TRA)** public campaign promoting water conservation continues to pay off. The authority planned to expand its 87 MGD water treatment

plant serving Bedford, Colleyville, Euless, Grapevine, and North Richland Hills this year. However, as a result of the conservation campaign that started in late 2006 encouraging residents to refrain from watering between 10 a.m. and 6 p.m., the peak demand for water declined enough to allow TRA to delay the expansion project. TRA's latest forecasts now call for expansion in 2014 or 2015.

Update on State Water Plan Funding Project Prioritization

The Water Infrastructure Fund (WIF) provides low-interest loans for the planning, design and construction of State Water Plan projects. The fund was created by the 80th Texas Legislature in 2007 and is authorized to issue up to \$440 million in projects through the current biennium. Qualified projects must be recommended water management strategies in the most recent Texas Water Development Board (TWDB)-approved Regional Water Plan or in the State Water Plan.

Projects were recently prioritized for WIF monies by the TWDB based on a series of factors, including whether the project would create a new, usable supply of water, how urgently the project was needed and whether the project would achieve significant water conservation savings.

Region C projects in the running to receive WIF monies during this year's second round of applications include:

- City of Dallas (East Side water treatment plant expansion)
WIF funds requested: \$94,720,000
- North Texas Municipal Water District (Tawakoni-Terrell/Lawrence pipeline)
WIF funds requested: \$26,155,000
- North Texas Municipal Water District (Lower Bois d'Arc permitting and mitigation)
WIF funds requested \$23,350,000
- North Texas Municipal Water District (Pipeline from Wylie water treatment plant)
WIF funds requested: \$17,825,000
- Greater Texoma Utility Authority (Northwest Grayson Co. WCID 1 storage, pump station and transmission)
WIF funds requested: \$10,005,000
- City of Corsicana (Lake Halbert Water Treatment Plant)
WIF funds requested: \$2,000,000

The TWDB is scheduled to take action on funding for the projects later this year.

North Texas Water Providers Agree to Jointly Pursue Oklahoma Water

The Tarrant Regional Water District (TRWD), the City of Dallas and the North Texas Municipal Water District have agreed to work together to negotiate a deal to pump water from Oklahoma.

The proposal to pump water from the Kiamichi River, Cache Creek and Beaver Creek basins would help the North Central Texas region better weather drought conditions as its population grows over the coming decades. The groundbreaking agreement would mean the three water providers would share water brought from Oklahoma.

The TRWD will take the lead role in the negotiations with Oklahoma, which implemented a moratorium on out-of-state water sales in 2001. TRWD has challenged the state's moratorium with a lawsuit, and the case is now pending before a federal court in Oklahoma. In October, the 10th Circuit U.S. Court of Appeals in Denver ruled that the TRWD's suit could proceed in the lower court.

In August 2008, the City of Irving signed an agreement to purchase water from Hugo Lake in Oklahoma. As part of the agreement, Irving is assisting Hugo officials with a pending legal challenge against Oklahoma's moratorium.

The Upper Trinity Regional Water District (UTRWD) previously filed two separate water rights applications for 115,000 acre-feet of water each from the Kiamichi River and Muddy Boggy Creek Basins. These applications are still pending technical review by the Oklahoma Water Resources Board. The UTRWD is not part of the pending lawsuits.

New Water Supply Projects Coming Online

Here are some of the major new water supply projects that have recently come online or are about to be completed in Region C.

The **Upper Trinity Regional Water District's** Tom Harpool Water Treatment Plant was activated in December 2007 with "membrane filtration" technology that uses high-grade plastic material with microscopic pores to purify water of pollutants and other health risks such as Giardia and Cryptosporidium. Tom Harpool WTP has an initial treatment capacity of 20 million gallons per day and will serve customers in the areas north and east of Lewisville Lake. The site's master plan will allow the treatment capacity to expand to 240 MGD of treatment capacity.

The **North Texas Municipal Water District's** \$246 million East Fork Raw Water Supply Project will naturally filter raw water from the Trinity River near Crandall to be sent 40 miles to the north end of Lavon Lake. Construction on the 1,840-acre man-made wetland is undergoing testing and will be online later this year. The conservation and reuse project, which is among the largest man-made wetlands in the nation, helps the district in its effort to produce the equivalent of a Lavon Lake, or 100,000 acre-feet per year. The district's Upper Sabine Basin River Water Supply Project, which is expected to augment raw water supplies by 50,000 acre-feet per year, went online in July 2008.

The **City of Dallas'** Lake Fork Pipeline and Pump Station Project is scheduled to come online by the end of 2008. The project will pump water 29 miles from Lake Fork and connect to the discharge pipe at the Iron Bridge pump station at Lake Tawakoni. The \$200 million project, which began in 1997, will allow the pump station to supply 107 MGD, or 117,165 acre-feet of water per year. At its maximum capacity, the station would be able to supply as much as 240 MGD or 262,800 acre-feet per year.

The **Tarrant Regional Water District's** (TRWD) Eagle Mountain Pipeline Connection was completed in March of 2008 and began testing in May. It will be available to pump water if necessary during Winter and Spring 2009. The pipeline will allow TRWD to pump water from its two East Texas reservoirs, Richland-Chambers and Cedar Creek, so that Eagle Mountain Lake is as close to conservation level as possible by June 1 in order to meet high summer demands. By using imported water from East Texas, the city hopes to meet increased water demands in rapidly growing northwest Tarrant County without exclusively using water from the watershed of the West Fork of the Trinity River.