Plans to expand Huntsville Regional Water Supply System move forward
Huntsville approves funds to expand water supply system

Huntsville residents have voted to fund expansion and improvements to the Trinity River Authority’s Huntsville Regional Water Supply System. The city’s Proposition 1, allowing the Huntsville City Council to approve a resolution authorizing TRA to issue bonds, earned 71 percent positive votes in the early November election.

HRWSS is currently configured to deliver a total of eight million gallons of treated water per day to Huntsville as well as two Texas Department of Criminal Justice prison units in northern Walker County. The system’s firm capacity, the volume of water it is capable of delivering with one of its components out of service, is 6.0 MGD. HRWSS also delivers up to 7.0 MGD of partially treated water to Tenaska’s electric power generating plant in Grimes County.

Previously, Huntsville funded engineering design services to expand HRWSS capacity to 12.0 MGD firm and to improve the system’s processes. The passage of the city’s Proposition 1 will allow for the funding to construct these improvements.

Bringing more raw water to the plant is fundamental to increasing the system’s capacity. To that end, a new 8.0-MGD pump will be added, and a portion of the pipeline transporting raw water to Huntsville will be replaced with larger diameter pipe.

Planned modifications and additions to the filtration units at the plant are crucial to improving quality and increasing the quantity of water HRWSS can produce. The existing bank of four filters will be doubled, bringing the total number to eight. The new filters will have built-in nitrate-removal capabilities and deep beds of granular activated carbon to remove taste and odor compounds. With changes in the piping configuration, plant operators will be able to run the new filters in parallel with the old ones, or in a series.

Changes and additions to the system’s clear well capacity will also improve water quality and increase capacity. A new 1.2-million-gallon clear well, a tank that temporarily stores treated water prior to distribution, will be constructed to work in concert with the existing 0.4-million-gallon clear well. The existing clear well will have a chlorine feed system installed nearby as well as baffles inside the tank to slow down the water’s flow and increase chlorine-contact time at the plant in order to meet state regulations.

One of HRWSS’ most critical components, the high-service pump station that propels treated water to Huntsville and the TDCJ, is most in need of updating. Most of the pumps, motors and electrical equipment are more than 30 years old. With spare parts nearly impossible to find, maintenance is challenging and expensive. As a result, engineering plans call for a new high-service pump station with four 4.0-MGD pumps located on top of the new clear well.

Finally, system-wide improvements to electrical components, including backup power for the pump stations, will improve reliability for HRWSS customers.

Now that the city council is expected to approve funding, the next step in the journey toward expanding HRWSS is to receive Texas Commission on Environmental Quality approval for the engineering plans. After TCEQ approves the plans, TRA will publicly advertise the project for bids and select a contractor. Construction is scheduled to begin in June of 2012, and completion is expected by November 2013. TRA management estimates that construction and associated costs will total approximately $18.5 million.
DCRWS responds to neighborhood odor concerns

Denton Creek Regional Wastewater System Project Manager John Bennett recently hosted two plant tours and attended a meeting of the Briarwyck Home Owners Association after members reported various odors in their neighborhood. During the tours, HOA members visited each area of the plant to observe wastewater treatment processes from the raw water intake through the treatment plant to discharge to Crape Bramble.

“The tours helped HOA members understand what causes odors at the treatment plant and the steps we are taking to eliminate or minimize them,” said Bennett. “We were also able to reassure our neighbors that we may not always be able to control every odor, but that nothing they smell from our plant is dangerous to them or their families.”

In an effort to be a good neighbor, DCRWS was designed with a number of mechanisms in place to curb odors in the collection system and at the plant. Magnesium hydroxide and hydroxide ion fog are added at various locations throughout the system to prevent malodorous compounds from forming and escaping from raw wastewater. Physical barriers, including covers on solids processing areas and equipment that handle raw wastewater, help keep odors localized.

DCRWS also tracks the location and occurrence of odors with automatic odor loggers that detect and map odor concentrations across the 18-foot-wide eastern cedar trees along the brick wall between the Briarwyck neighborhood and the plant. The trees will further screen the plant from view, prevent migration of odors and also neutralize any odors that occur.

DCRWS treats wastewater for Fort Worth, Haslet, Roanoke, Southlake, the City of Tarrant County Utility Districts Nos. 1 and 3; Keller, Northlake, Flower Mound and Argyle. The system was originally built in 1990 as what was a remote area of Tarrant County to treat wastewater for three communities. TRA has since expanded the system almost continuously in response to extensive industrial, commercial and population growth in the geographic region. The most recent expansion, completed in 2010, increased the system’s capacity from 5.0 million gallons per day to 11.5 MGD.

TRA CReWSers overcome injury to finish third in nationals

TRA’s Operations Challenge team, the CReWSers, won second place in the laboratory event and third place overall during October’s Division I national competition in Los Angeles—in spite of a serious injury to key player Team Captain Dale Burrow. Burrow suffered just days before the competition in a non-work-related incident. The win marked the team’s 11th top-three claim in 13 years.

Sprinting stitches in the palm of his right hand, Burrow continued to perform crucial physical tasks in the maintenance, collection, safety and laboratory events. He used the hole saw in the collection event, one of the most physically demanding tasks in the competition. He also helped create a list of conditions for the maintenance event, another critical task that depends on the hands.

“My injury slowed us down a little, but it would have been much worse to make a last-minute substitution,” said Burrow. “I didn’t want to let the team down.”

While Burrow’s injury may have slowed the team slightly, it had a positive impact on its accuracy.

License for hydroelectric power generating facility at Lake Livingston Dam undergoing additional review

The Federal Energy Regulatory Commission recently issued a license to the East Texas Electric Cooperative to construct and operate a hydroelectric power generating plant on the Trinity River at Lake Livingston Dam. The power project is a joint effort between the city of Houston and TRA to reduce emissions as expressed in a memorandum of understanding that was signed and entered into in February 2007.

The Lake Livingston Hydroelectric Project will redirect up to 4,500 cubic feet of water per second through three eight-megawatt generators to produce up to 24 megawatts daily.

A minimum release of 200 cfs will be maintained through the spillway to sustain aquatic life in the stilling basin. The remaining water power will be generated only with flow released to meet downstream commitments or to pass stormwater runoff through the dam. Water diverted for power will not be returned to the Trinity River basin to augment conventional generation or to generate power. ETEC will pay TRA for all power generated at Lake Livingston Dam.

A tentative schedule calls for construction to begin within the next two years.

The Lake Livingston Project will generate, on average, 124 million kilowatt-hours of electricity annually, which will sell for approximately $85 million with $33 million financed through low-interest Clean Power Fund financing.

TRA’s regional wastewater systems earn Peak Performance Awards

The National Association of Clean Water Agencies has honored the Trinity River Authority’s five regional wastewater treatment systems with Peak Performance Awards for 2010. NACWA distributes Peak Performance Awards on a competitive basis to recognize compliance with NPDES permit limits. The Silver Awards recognize facilities that have received more than five new citations in a calendar year.

NACWA’s prestigious Platinum Award recognizes 100-percent compliance with NPDES permits over a consecutive five-year period. The Platinum Award status continues, year after year as long as a 100-percent compliance is maintained. Five of TRA’s regional wastewater systems achieved 100-percent compliance in 2010, earning Gold and Platinum Awards.

“IT is tremendously gratifying to receive these awards,” said Northern Region Assistant Manager Patty Clevenger. “It validates our commitment to serving the public health and our environment.”

Central Regional Wastewater Systems received a Platinum Award for an outstanding 17 years of 100-percent compliance in the system’s permit limits. CRWS is one of only 12 systems nationwide to achieve this level of performance.

Red Oak Creek Regional Wastewater System received a Platinum 11 Award for 11 years of compliance.

Ten Mile Creek Regional Wastewater System has received a Platinum 9 Award and Denton Creek Regional Wastewater System earned a Platinum 6 Award.

Texas Regional Wastewater System earned a Gold Award for maintaining 100-percent compliance with its permit limits.

TRA’s wastewater treatment plants produce water that is up to 99 percent clean when it arrives at a facility. For example, CRWS in 2010 had 196 part-per-million total suspended solids. The cleaning process remove 99.94 percent of TSS, leaving only 0.06 part-per-million.

Though CRWS has contributed nearly a trillion gallons of reclaimed water to the Trinity River basin over its long history of achieving compliance with permit limits, Project Manager Bill Tatum admits it can be a challenge, especially during expansions and water quality adjustments.

“Continuous construction activities in and around the collection system make it necessary to shut down equipment and re-route flow to the complexity of contractors sometimes have 350 people on site in addition to 175 CRWS employees,” he said.

“Making sure the operators have the necessary equipment to maintain the processes under those conditions takes planning and coordination.”

According to TRA’s Clean Rivers Program Coordinator Angela Bryan, wastewater treatment plants that consistently achieve compliance requirements ultimately benefit our environment. “Reclaimed water discharged by wastewater treatment plants provides healthy habitats for aquatic flora and fauna that would otherwise exist,” she said. During the summer months, and other periods of dry weather, almost all of the water in the Trinity River comes from wastewater treatment facilities.

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A tentative schedule calls for construction to begin within the next two years.

TRA and the city of Houston have jointly filed a request for rehearing with FERC to clarify specific language in the license. ETEC has filed a similar request for rehearing as well.

“TRA and Houston support the development of clean, renewable energy to help TRA reach its goal of reducing our nation’s energy needs,” said TRA Director Region Manager Jim Sims.

“The primary purpose of Lake Livingston is to provide water for Houston and other communities. We want to make sure those provisions continue to be protected in the language of ETEC’s license.”

Tamada accepts Congressional Gold Medal on behalf of father

Tamada, Northern Region Environmental Services Manager

Northern Region Environmental Services Manager Ron Tamada recently attended a Congressional Gold Medal ceremony on behalf of his father, who served in one of three Japanese-American U.S. Army units during World War II. Kay Tamada died in 1995.

Ron Tamada joined 1,200 people, including veterans or their surviving family members, for three days of ceremonies honoring two combat units as well as the Military Intelligence Service.

Kay Tamada’s family was among the thousands of Japanese-Americans who relocated from the U.S. during World War II. The two Japanese-American combat units chose their own. “Remember Pearl Harbor.” The two combat units were the most decorated in World War II.

The future of the generations of Japanese-Americans that came after the war was built on the sacrifices made by the men in those three units,” said Ron Tamada.

Unlike many other, second-generation Japanese-Americans, Kay Tamada spoke Japanese and was recruited to join the MIS to put that skill to use. The MIS was tasked with interpreting intercepted documents and messages, interrogating prisoners of war and preparing informational materials.

The Congressional Gold Medal, considered the highest presidential civilian award in the United States, is awarded for performing outstanding deed or act of service to the security, defense or national interest of the country.

The U.S. Congress awarded three medals, one to each unit.

Each individual unit member, or a surviving family member, received a replica of the medal.

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General Manager’s Message

Henry Ford once said that the highest use of an organization’s capital is not to make more money, but to make money do more for the betterment of life. I’ve learned, during my first round of budget preparation with the Trinity River Authority, that a similar philosophy permeates our organization. While budget preparation and approval dominate our activities throughout the summer and early fall, our staff is committed to a budgeting process that ensures the equitable treatment of our customers, along with the provision of essential services that directly improve and maintain the quality of life for millions throughout the Trinity River basin.

As a political subdivision of the state, TRA exists without the benefit of a tax base and/or appropriations from either the state or the federal government. All of TRA’s projects are independent financial entities, which allows us to ensure that no one project, city or group of cities ends up subsidizing any other project or group. Because TRA operates on a fund accounting basis, the entire recently approved TRA budget for Fiscal Year 2012 actually consists of 38 individual budgets that together represent our financial operations for the coming fiscal year. Developing these separate budgets is a massive undertaking, but we believe it is the best approach to maintaining the fiscal integrity of our relationship with each customer, along with the long-term financial health of our facilities.

This year’s process culminated as part of the regularly scheduled October meeting of TRA’s board of directors, during which board members approved a total FY 2012 budget of $201.8 million. This figure represents an increase of approximately 1 percent over FY 2011’s budget total of $199.7 million, primarily attributed to increases in costs for personnel services, capital outlays and scheduled debt service payments. We are very pleased to have so closely held the line on this budget. In the midst of booming populations and a slow financial recovery for many of our customers, plus rising costs for raw water and infrastructure needs, we have kept top-of-mind our commitment to responsible fiscal planning. We have also balanced that commitment with increasingly stringent regulatory requirements. We have challenged ourselves to be savvy and innovative in the way we approach our operations costs, and that philosophy has led to savings in everything from electricity rates to prices of chemicals that we can then pass on to our customers. Above all, we remain dedicated to providing the highest level of service and technical expertise on which TRA has built its professional reputation.

We also haven’t developed our budgets in a vacuum. The customers of each water or wastewater project played a tremendous role in establishing financial goals during customer advisory meetings throughout August and September. Our customers are certainly the most knowledgeable about population growth and other factors that affect service within their respective communities, and their participation in the budgeting process is invaluable. I am pleased this year to have continued TRA’s long-standing tradition of presenting the board an overall budget that has been approved by all customer civic entities.

The result is that we now have in place our roadmap for FY 2012 – a planning document that represents TRA’s best judgment as to the activities we will accomplish during the coming year. Moving forward, we take very seriously our role to implement and finance projects that lie within our sphere of operations outlined by the Texas Legislature; are economically justifiable; are technically feasible; and will benefit all or part of our designated service area. We are committed to the betterment of life for everyone throughout the Trinity River basin who depends on us for essential water and wastewater treatment services.

General Manager J. Kevin Ward
Drought likely to continue but may weaken

While Texas is currently no stranger to drought, this summer’s scorching heat and lack of rain blasted state records and created dry conditions that stubbornly persisted throughout the state. Currently 92 percent of Texas continues to experience extreme or exceptional drought, along with 87 percent of Oklahoma and 63 percent of New Mexico. According to Mike Halpern, the National Oceanic and Atmospheric Administration’s 278-site Drought Prediction Center, Texas is likely to remain warmer and drier than normal during the winter, chiefly because La Niña – an intermittent Pacific Ocean phenomenon that was the root of the present drought – has returned. It appears “weaker than last winter,” according to Halpern, but experts don’t rule out the possibility of its strengthening.

La Niña is expected to cause a pattern of drier than normal weather across most of Texas through at least late winter, and while some rain will fall, it is not expected to have a significant effect on the ongoing drought. And La Niña isn’t the only factor affecting Texas weather. The upcoming fall and early winter months could see a return of the El Niño Southern Oscillation (ENSO), which many climatologists believe is a likely scenario. These prolonged dry conditions are likely to continue well into next year, according to Dr. John Nielsen-Gammon, Texas’ state climatologist, who recently penned an op-ed for the Austin American-Statesman: "If you’re looking for some rain this fall, it is not expected to have the impact that’s typically expected in late winter, and while some rain is possible, it’ll be over in a couple of years, or it might last another 15 or 20 years. It seems likely to last another decade." And a decade of drought-friendly weather patterns may mean that we’ll see more dry years than wet years in Texas for the foreseeable future.

But there is a silver of good news – back-to-back La Niñas, which have a history of shrinking the Gulf of Alaska, the probability for a third occurring the 2012-13 window is fairly low – no more than 10 to 15 percent. And according to Bob Rose, chief meteorologist for the Lower Colorado River Authority, second years of La Niña are historically viewed as warmer and drier, and giving hope that there’s little chance of repeating the unprecedented severity of this year’s drought.

A quick glance at the page suggests that fishing was phenomenal throughout the season. For example, in early March, a guest caught and released a 40-pound catfish. In late March, two friends snagged several more big ones, but the greatest catch came in August when a family hauled in 112 pounds of fish in a single day.

Many families enjoyed good times on the lakes as they gathered for family reunions, an Easter egg hunt in April, and many activities throughout the season. For example, White’s fishing team competed on winning teams at the Underground Construction Technology Association’s Regional Water Supply System – Rocky Mountains Regional Water Supply System – Regional Water Supply System – Eastern Region – modernization event. It is expected that these conditions will remain prevalent for the next few months until further notice,” said Neilson-Gammon. “This period, with both the Pacific and Atlantic working against us, might be over in a couple of years, or it might last another 15 or 20 years. It seems likely to last another decade.”

As the Texas drought passes into another decade, it is likely to return to more of the frequent Texas drought until further notice," said Neilson-Gammon. “This period, with both the Pacific and Atlantic working against us, might be over in a couple of years, or it might last another 15 or 20 years. It seems likely to last another decade.”

The Climate Abyss – The Texas Drought

While Texas continues to experience drought, it may be necessary for water managers to consider alternative strategies to reduce water use. One potential strategy is to use alternative water sources, such as reclaimed water or desalinated water, to meet the needs of various water users. These alternative water sources can be used to meet the needs of various water users, including municipalities, industries, and agricultural. In addition, water managers may need to consider the potential for drought-related impacts, such as reduced water supply or increased water demand, and develop strategies to address these challenges.
Anniversaries

25 Years
Peggy Stewart, executive secretary, financial services

20 Years
David Odom, chief operator, HRWSS
Eddie Grant, senior electronic tech., CRWS

15 Years
Robert Burchett III, maint. mech., SRSS

10 Years
James Wright, chief pilot, executive services
Darrell Davis, maintenance supervisor, LLP
Patrick Oyinatumba, senior chemist, CRWS
Cloise Miller, chief operator, CRWS

5 Years
Jeffrey Finch, operator I, CRWS
Douglas Raggett, senior park ranger, LRF

3 Years
Yesha Rai, senior secretary, Northern Region
Hong Wu, planning and environmental management assistant, executive services
Charles Cotton, security guard, LLP
Clyde Thomas, electrician II, TCWSP

TCWSP Operations and Maintenance Chief Sid McCain, left, receives his 35-year anniversary certificate from Project Manager Gerald Null. McCain joined TRA in 1975 as an operator trainee. He was promoted several times, ultimately reaching his present position in 2001.

Wolf Creek Park Maintenance Supervisor Douglas Scott Raggett, right, celebrated his five-year anniversary with a certificate from Park Supervisor Charles “Eddie” Knight.