

April/May 2010



Newsletter of the Trinity River Authority of Texas



**Board Names  
New General Office Annex for  
Danny F. Vance**

# Progress Continues on Hydroelectric Power Generating Facility at Lake Livingston

*Lake Level Will Not Change During Construction or to Generate Power*

The East Texas Electric Cooperative continues its efforts to obtain a license to generate hydroelectric power at Trinity River Authority's Lake Livingston Dam. ETEC filed an Application for License with the Federal Energy Regulatory Commission on March 31, 2009. ETEC has responded to FERC's request for additional information and on April 20, 2010, FERC issued notice of application acceptance and requested additional information.

***Lake Livingston will not be drawn down to generate power or to accommodate construction.***

ETEC anticipates that it will receive the license from the FERC in November or December of 2010.

This approval would allow for the completion of design and the initiation of construction of the hydroelectric power generating facility by December 2011. The facility is scheduled for completion

by December 2013. Lake Livingston will not be drawn down to accommodate construction.

The level of water in Lake Livingston will not be changed to generate power. Hydroelectric

power will be generated using run-of-the-river flows that pass through Livingston Dam to meet downstream commitments or to drain excess storm water runoff.

The proposed 24-megawatt hydroelectric plant will generate, on average, 124,000,000 kWh of electricity per year, enough energy to serve approximately 12,000 households. The hydroelectric plant will offset approximately 64,000 tons of carbon dioxide emissions from fossil fuel plants on an annual basis.



*The Federal Energy Regulatory Commission has accepted the East Texas Electric Cooperative's Application for License to generate hydroelectric power at Lake Livingston. ETEC anticipates receiving the license by the end of the year 2010.*



*On the cover: TRA Board of Directors look on as General Manager Danny F. Vance cuts the ribbon marking the completion of the new General Office Annex. Seen here in the front row, from left to right are Board Members Ronald J. Goldman, Nancy E. Lavinski, John W. Jenkins, Steve Cronin, Michael Cronin, Danny F. Vance, Martha A. Hernandez, Linda D. Timmerman, Patricia Carlson, Manny Rachal, Andrew Martinez and Kevin Maxwell. Back row, left to right: David B. Leonard, Herschel S. Brannen III, Keith W. Kidd, J. Carol Spillars, Harold L. Barnard, Kim C. Wyatt and Karl R. Butler. Read more on page 2.*

## Cleveland Receives NACWA President's Award

The National Association of Clean Water Agencies awarded the 2010 NACWA President's Award to Patty Cleveland, Manager of Operations for the Trinity River Authority's Northern Region, at the Association's National Environmental Policy Forum in Washington, D.C. Monday, April 19, 2010.

The Association honored Cleveland for her leadership and dedication in promoting NACWA's initiatives in utilities security. She has served as NACWA's representative on both the Water Sector Coordinating Council and the WaterISAC Board of Directors.

The Water Sector Coordinating Council is composed of water and wastewater utilities and other associations that advise the U.S. EPA and the Department of Homeland Security concerning utility security.

WaterISAC is an organization that provides a clearinghouse for government and private information to identify risks, prepare for emergencies and secure the nation's critical water infrastructure.

Cleveland earned this



*Patty Cleveland, Manager of Operations for the Trinity River Authority's Northern Region, at the National Environmental Policy Forum in Washington, D.C.*

commendation for inspiring agencies to join these groups and to share their expertise.

In addition, Cleveland co-chaired, with the Environmental Protection Agency, the Water Sector Emergency Response for the Critical Infrastructure Partnership Advisory Council Working Group. The group developed the *All-Hazard Consequence Management Planning for Water Sector* document.

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# Trinity River Authority's General Office Annex Complete

**Board of Directors Names New General Office Annex in Honor of Danny F. Vance, General Manager**

A ribbon-cutting ceremony April 28 marked the completion of the Trinity River Authority's Danny F. Vance General Office Annex.

The new annex was designed as a replica of the original office building and adds approximately 16,000 square feet of office space. The two buildings are separate, but connected by approximately 20 feet of walkway.

The expansion was needed to accommodate a 40-percent increase in the number of employees located in the General Office.

The Trinity River Authority Board of Directors named the new annex in honor of Danny F. Vance, TRA's General Manager for serving as the Authority's General Manager for 30 years.

In 1979, the Board of Directors named Vance the second General Manager in the history of TRA. At the age of 35, he was the youngest individual to serve as the general manager of a major Texas river authority.

During Vance's tenure as General Manager, TRA's assets increased from \$301.7 million to more than \$1.7 billion, and the annual operating budget from less than \$25 million to more than \$197 million. In addition, he has overseen the creation of four regional potable water systems, three regional wastewater systems, improvements to all nine regional systems and the addition of new customer cities to virtually every TRA operating project.

Under Vance's leadership and

***Under Vance's leadership and vision, TRA became the largest river authority in Texas, providing water- and wastewater-related services to millions of Texans in the Trinity River watershed and the greater Houston metropolitan area.***

vision, TRA became the largest river authority in Texas, providing water- and wastewater-related services to millions of Texans in the Trinity River watershed and the greater Houston metropolitan area.

Vance participates in numerous professional organizations and committees including the Texas Water Conservation Association, two separate regional water



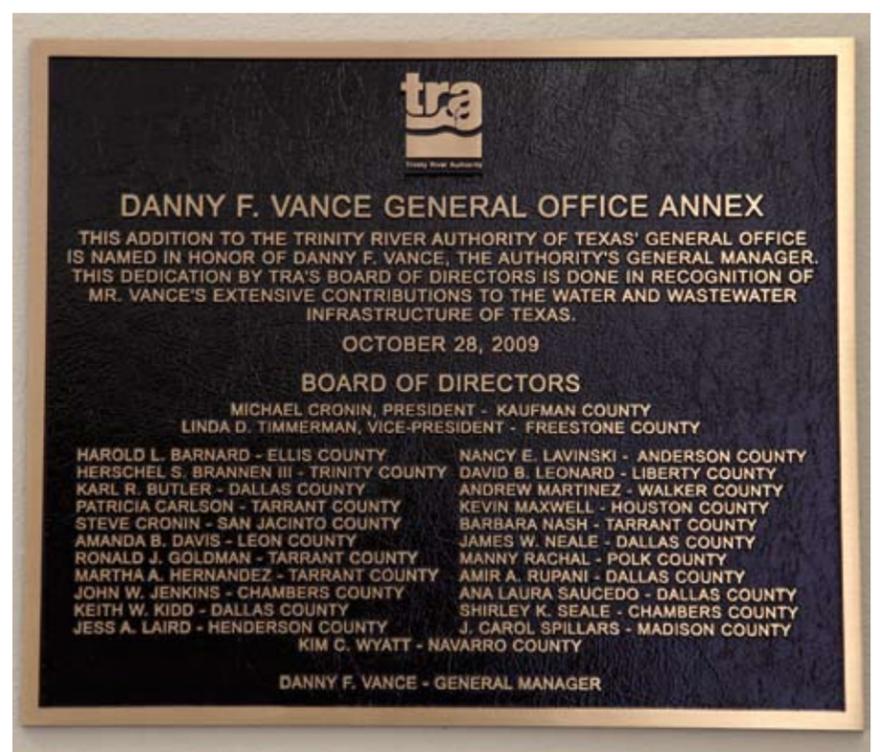
*The new Danny F. Vance General Office Annex, seen here on the right, is substantially complete and occupied. The new annex was designed as a replica of the original office building.*



*This aerial photograph, taken in April 2009 during construction, shows the footprint of the annex. The addition adds approximately 16,000 square feet of office space. The existing office and annex are separate but connected by approximately 20 feet of walkway.*

planning groups dedicated to providing for current and future water needs of more than half of the state's population, and many other organizations and groups created to balance the water needs of a growing population with those needed to meet the environmental requirements of the Trinity Basin and the Trinity Bay and Estuary.

***Trinity River Authority's Board of Directors named the new annex in honor of Danny F. Vance, TRA's General Manager. Vance earned this prestigious honor by serving as the Authority's General Manager for 30 years.***



# CReWSers Win 13<sup>th</sup> State Championship

## TRA Boys Triumph over Fierce Competition

Trinity River Authority's Operations Challenge team from Central Regional Wastewater System, the CReWSers, won an unprecedented 13<sup>th</sup> State Championship at Texas Water 2010 in Corpus Christi on April 15. The CReWSers took first place in two of the five competition events and second in the remaining three. The team's overall score was 100 points greater than the second place team.

With that level of performance, it may seem as if the CReWSers can't lose at the state competition. But they faced brutal competition from the second place overall team, the San Antonio Water System's Power SAWS. The Power SAWS seem to be on a mission to master every Operations Challenge event, and they have steadily improved, putting in some great runs at both state and national competitions.

All four of the Texas Operations Challenge teams were tested by new routines on the Pump Maintenance and Laboratory events. The Pump Maintenance event now involves pulling a 212-pound submersible

pump and a 180-pound mixer from a wet well, changing oil, rebuilding the pump and installing a mechanical seal. Lockout/tagout procedures are followed during the routine. The pumps are lifted with a manually operated jib crane, and the handle for operating the crane is five feet off the ground. This gave a definite advantage to teams with at least one tall guy with lots of upper body strength to lift the heavy pump and mixer. The CReWSers just don't have a team member like that at the moment. The trophy for the Pump Maintenance event went to the Power SAWS with a 21-point lead over the CReWSers, who took second in the event.

The Laboratory event underwent changes to reflect new rules established by the Texas Commission on Environmental Quality. Starting this year, the teams were tasked with growing and counting *E. coli*. This new routine may sound simple, but it is easy to contaminate samples due to the prevalence of *E. coli* in the environment, especially on human



TRA CReWSers, from left to right: Dale Burrow, CRWS Interceptor System Specialist, Team Captain; David Brown, CRWS Senior Maintenance Mechanic; Jake Burwell, CSS Construction Inspector II; Steve Price, CRWS Chief Operator; and Patrick Lynn, CRWS Operator II, Team Coach.

skin and hair. The CReWSers have traditionally been strong in the Laboratory event, and they won this year by more than 25 points.

The CReWSers also took first place in the Safety event in spite of having new equipment incorporated into the event.

This was definitely not one of those years in which the CReWSers placed first in four or five events as they have in the past. In fact, this is the first year in memory that all four of the Operations Challenge teams that competed at the state competition took home at least one first place trophy. Even the City of Austin's Dillo XXpress, a team with three new competitors, took home a first place trophy for the Process Control event. Process Control is a paper and pencil event involving multiple choice and long answer questions and plenty of calculations.

***Come out and cheer for the CReWSers at the national competition in October at WEFTEC.10 in New Orleans, Louisiana.***

It is reputed to be very difficult, the most challenging event at the competition.

"The level of knowledge and skill of the Texas teams is well known throughout the nation," said Bill Tatum, CRWS Project Manager. "The Texas teams are the ones to beat at the national competition, and the TRA CReWSers have paved the way for this recognition nationally," he added.

The CReWSers won the overall competition to continue their reign as State Champions for the 13<sup>th</sup> year in a row by putting in steady, consistent runs with no devastating errors. This has been the team's goal for the last decade, and it has kept them in the winning circle.

Next up for the CReWSers is the national competition in October at WEFTEC.10 in New Orleans, Louisiana. TRA's team has won the national competition four times in the past five years. With changes to the events and changes to the team, they will have an uphill battle this year. Come out and enjoy the exciting competition, and be sure to cheer for the CReWSers.

### CReWSers Competition Results

Laboratory .....	1st
Safety .....	1st
Process Control .....	2nd
Pump Maintenance .....	2nd
Collections Repair .....	2nd



The new Pump Maintenance event now involves pulling a 212-pound submersible pump and a 180-pound mixer from a wet well, changing oil, rebuilding the pump and installing a mechanical seal. Lockout/tagout procedures are followed during the routine. The pumps are lifted with a manually operated jib crane.

**About Operations Challenge**

Operations Challenge, supported statewide by the Water Environment Association of Texas and internationally by the Water Environment Federation, is designed to showcase the skills and education of wastewater operators. Four- and five-member teams compete in the following five events: Laboratory; Collection System; Pump and Motor Maintenance; Safety; and Process Control. Each event requires technical knowledge and physical skill. Teams are judged for accuracy and time.

# General Manager's Message

## No Consensus In Trinity-San Jacinto Rivers and Galveston Bay Environmental Flow Deliberations



General Manager Danny Vance

When SB 3 was enacted by the State Legislature in 2007, the mandate was to determine environmental flows "adequate to support a sound ecological environment and to maintain the productivity, extent and persistence of key aquatic habitats in and along the affected water bodies."

Despite the best efforts of a highly qualified Trinity-San Jacinto expert science team (15 members), followed by the extended deliberations of a dedicated stakeholders group (24 members), arriving at consensus was not possible. The underlying reason is the lack of biological and environmental science identifying flow regimes that will result in an ecologically sound rivers and Galveston Bay system. There is too much uncertainty in existing science to predict the response of the river and bay to various flow regimes.

Within the constraints of the time schedule specified by SB 3, the expert science team was unable to reach consensus on a recommended environmental flow regime, and thus submitted two separate recommendations for consideration by a stakeholders group and the Texas Commission on Environmental Quality for rule-making purposes. Working without a single starting point and within a short time frame of six months, the stakeholders were also unable to achieve consensus on the task of developing environmental flow standards. The result was two separate reports, both of which were sent to TCEQ for consideration in the rule-making process.

One of the recommendations recognized the lack of existing science and took a phased approach that would start with two sites on the Trinity River and two on the San Jacinto River at which base and subsistence flow targets would be established. Base flows are low flows that occur during routine dry weather, and subsistence flows are extremely low flows occurring during exceptionally dry weather that are capable of supporting aquatic life until the next rain event. As the available science improves, additional sites and flow parameters would be added. This is recognized as an adaptive management process.

The second recommendation forwarded to TCEQ produced environmental flow regimes by taking historical data and "crunching it" through a desktop model developed by the Texas Parks and Wildlife Department. The result is a flow regime that uses historical flows after they have been averaged

or subjected to manipulation. The result may or may not represent the amount of water that can be reserved for the environment and maintain a sound ecological system.

This statistical modeling approach does not make a connection between hydrology and biology. To make the leap from theory to a realistic application, we must have reliable science.

The model, Hydrology-based Environmental Flow Regime (HEFR), had existed for about 12 months when one group of the Environmental Science Team decided to embrace it without reservations. HEFR has never been calibrated or validated to any stream or river in Texas.

The HEFR modeling approach could require the release of stored water from existing lakes and compromise the development of new surface water supplies. This places SB 3 in conflict with SB 1, the omnibus water planning legislation passed by the Legislature in 1997 that created 16 regional water planning groups to plan for the water needs of each region for the next 50 years. These plans, which are updated every five years, establish a realistic path toward a secure water supply future for the State of Texas.

Before flow regimes are established, there should be scientific research required by the passage of SB 2. SB 2 was passed by the Legislature requiring that the rivers of Texas be studied by state agencies to make a scientific determination of environmental flow requirements. It is not possible to determine realistic environmental flows until this is completed.

The 24 members of the Trinity-San Jacinto Galveston Bay Basin and Bay Area Stakeholders did reach consensus on five policy recommendations. They are as follows:

1. The State of Texas has exercised great foresight by initiating several water planning processes to secure water supplies for the future of its residents and protection of the environment. These planning processes operate within different time frames and on different schedules. Regional water planning, groundwater planning, and environmental flows planning should be synchronized so that the work product of each planning process is available to the other planning processes.
2. The determination of in-stream flows and freshwater inflows would be aided by additional stream flow gauges, particularly gauges in certain key locations, such as a gauge located on the Trinity River near the mouth of the river but below all major diversion points. It is anticipated that the SB 3 work plan to be developed by the stakeholders group will include specific recommendations for additional gauges. The state's water resource agencies should work with local interests to ensure that needed gauges are installed and maintained.
3. The Legislature should appropriate specific funding for SB 2 in-stream flow studies and for SB 3 studies recommended in the basin and bay work plans.
4. Two of the major factors contributing to the success of the regional water planning process are the length of time allotted in each planning cycle and the financial support of the state that allows each planning group to hire a consultant team to guide and assist the group in meeting its statutorily-mandated planning requirements. The Legislature should provide adequate time and financial resources for the environmental flow determination process, including funds for facilitation and technical support.
5. The Legislature should recognize the resource contributions of the state agencies to the SB 3 process and provide adequate funding to continue that support.

Now that the recommendations have been submitted, the Texas Commission on Environmental Quality has one year to examine the science, evaluate the recommendations and draft rules to establish environmental flow standards.

## Anniversaries

### 35 Years

Ruddie Hudson, Senior Maintenance Mechanic, TMCRWS  
John F. Jadrosich, Public Information Officer, GO

### 30 Years

Henry Jones, Jr., Senior Maintenance Mechanic, TMCRWS

### 15 Years

Sharon A. Gattis, Accounting Clerk, CSS

### 10 Years

Christopher Gonzales, Electronic Technician I, CRWS  
Peter L. Raiman, Operator I, CRWS  
David W. Roark, Senior Chemist, CRWS  
Rosanne R. Robertson, Senior Secretary, GO

### 5 Years

Michael R. Easley, Maintenance Mechanic II, TMCRWS  
Jerry J. Holland, Operator II, TCWSP  
James R. Spears, Operator II, TMCRWS

### 3 Years

Nathan N. Dollar, Maintenance Mechanic II, CRWS  
Brandon L. Morton, Operator I, DCRWS  
Erik S. Sanders, Maintenance Mechanic II, CRWS  
Kenneth E. Surratt, Operator I, TMCRWS  
James L. Thomas, Electronic Technician II, CRWS  
Mary L. Thomas, Senior Secretary, CRWS

**Employee Milestones**

**New Hires**

GO welcomes back **Taylor Huynh**, as Manager, Personnel Services. **Annette Morris** joined GO as Senior Secretary. GO welcomes **Michelle Clark** as Public Information Officer. **Joseph Bussard** joined TMCRRS as Operator I. TCWSP welcomes **Debra Wright** as Clerk/Messenger.

**Promotions**

**Roderick Pennon** was promoted to Senior Buyer at CRWS. **James Coleman** was promoted to Interceptor System Specialist at CRWS.

**Rodrick Shields** was promoted to HVAC Senior Technician at CRWS. **Eric Blackmon** was promoted to Operator II at DCRWS.

**Current Events**

Congratulations to **Eugene Gines**, CRWS Operator II, on receiving his B wastewater license.

**Marion Tims**, Senior Operator at TCWSP, received his Associate of Arts degree from Tarrant County College.

**Debbie Bronson**, Public Information Assistant, is pleased to announce the birth of her first grandchild May 13. Samantha Lynn was born weighing 6 pounds, 10 ounces with blue eyes and lots of wavy brown hair. Samantha's parents are Naomi and Kevin George of Hixson, Tennessee.



A big "welcome home" to SPC John Lee, son of Steve Lee, Senior Operator at TCRWSS. John returned to his home base at Fort Knox, Kentucky after serving for a year on the front lines in Afghanistan.



Patrick Mackey, son of Alison Mackey, Executive Assistant to the General Manager, graduated from Texas A&M on May 15 with degrees in accounting and finance. He will begin work for Ernst and Young in Dallas in the fall.



Leah King, stepdaughter of Mike Querry, Construction Inspection Supervisor, and his wife, Anita, graduated from Martin High School. Leah will be attending Cotey College in the fall.



Congratulations to Amber Porter, daughter of Brenda Porter, Land Records Research Specialist, on graduating from Mansfield Legacy High School. Amber will attend Tarrant County College in the fall to study elementary education. She plans to be a kindergarten teacher.



Page Hines, wife of Bart Hines, P.E., Assistant Manager of Development NR, was ordained into the Methodist Church as a Deacon in ceremonies at First United Methodist Church in Fort Worth. Ms. Hines was also awarded the Morris Walker Award in recognition of exemplary service and outreach.



Sam Thomas, Clerk/Messenger at the GO, is proud to announce that his stepson and family appeared on the TLC program, A Baby Story. Jimmy and Katy Wells are seen here with baby, Whitney.



Congratulations to Tracy Owens, CRWS Training Coordinator, on being elected as Treasurer of the Board of Directors for the Texas Water Utilities Association North Central Texas Regional School.



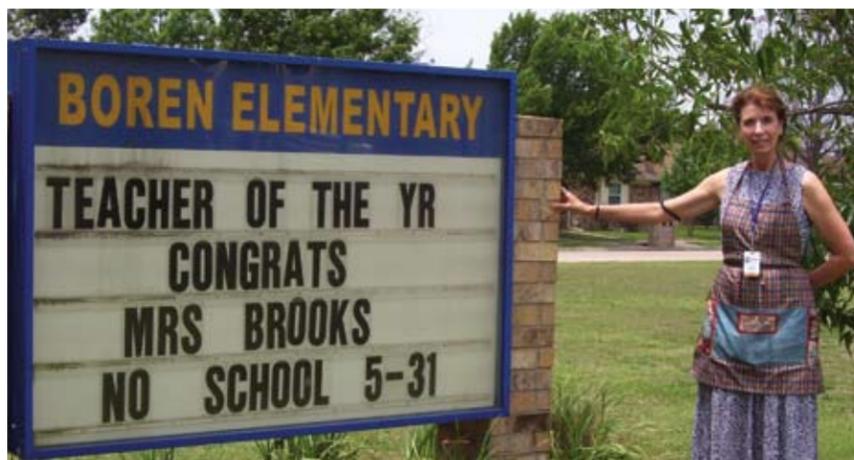
Congratulations to Justin Lesly, son of Claud Lesly, ROCRWS Senior Maintenance Mechanic, on graduating from Red Oak High School. Justin plans to attend Sam Houston State University this fall and major in criminal justice.



Thomas Seimet, Senior Maintenance Mechanic at TCWSP, welcomed a new grandson. Brenden Michael Waters, seen here with sister Leah, was born December 20, 2009, at 6 pounds, 7 ounces and 19.5 inches.



Congratulations to Edward Smotek, Senior Operator at TMCRRS, and his wife Denise on their 25th wedding anniversary. Edward and Denise were married in 1985 in Madisonville, Texas and have one child, Justin Wayne, 24.



Congratulations to Kelsey Laurie Brooks, wife of Randy Brooks, NR Manager of Engineering Services, on being chosen by her fellow teachers for the honor of Teacher of the year at J.L. Boren Elementary in Mansfield where she teaches kindergarten. Ms. Brooks has taught for more than 25 years in Mansfield and Huntsville, along with a Crow Reservation in Montana. She routinely goes above and beyond the call of duty for her students.



Patti Scott, wife of David Scott, Operator II at MCRWS, was named Teacher of the Year at Imogene Gideon Elementary. Ms. Scott teaches third grade and was chosen for this honor by her fellow teachers for putting her heart and soul into everything she does for her students.

# Striped Bass Acquisition at Lake Livingston Dam Yields Large Fish

Texas Parks and Wildlife gathered 155 adult striped bass from the tail race at Lake Livingston Dam April 13. Each year, TPWD collects fish from Lake Livingston to use in breeding programs that produce striped bass and hybrid white-striped bass.

This year, for the first time, Carter Smith, Executive Director for the TPWD, traveled from Austin to observe the process.

The Trinity River Authority participates in the fish acquisition by allowing access to the area just downstream from the dam and by preparing the river bank to

accommodate TPWD's vehicles.

This year, Brian Van Zee, Regional Director for TPWD Inland Fisheries, was impressed by the size of fish found at the dam.

"Average size of the females was 15 pounds, with the largest coming in at 25 pounds," Van Zee said. "Those females were larger than we have found in previous years."

TPWD took 84 females and 71 males for a total of 155 fish, a number approximately one quarter less than the usual harvest of 180 to 200 fish.

"Larger females produce more



*A large striped bass is prepared for transport to a TPWD fish hatchery. The average size of female bass taken this year was 15 pounds. The largest fish was 25 pounds.*



*Texas Parks and Wildlife boats are loaded with tanks in preparation for gathering large adult striped bass from the tail race below Lake Livingston Dam.*

eggs so we needed fewer fish," Van Zee said.

The adults were taken to Possum Kingdom and Dundee fish hatcheries where they will produce as many as 2.5 million striped bass and 2.5 million hybrid white-striped bass fry. Hybrid white-striped bass, also called palmetto bass, are a cross between white bass and striped bass. TPWD obtains the white bass from Canyon Lake.

The adult fish spawn about 24 hours after they leave the dam. In about four or five weeks, the young fish grow to one or two inches in length and are ready to be released

into lakes throughout Texas. TPWD stocks 10 lakes in Texas with striped bass and 24 lakes with white-striped hybrids.

Smaller striped bass are seen year-round in and around Lake Livingston, but the large adult fish are only seen in the spring when they swim up the Trinity River from the Gulf of Mexico to spawn at the tail race of Lake Livingston Dam.

Visit <http://www.youtube.com/TexasParksWildlife#p/c/DD326D97517E327F/2/nmnS8ovs4s> to see a video of striped bass collection at Lake Livingston Dam.

## Construction Begins on New Booster Pump Station for TCWSP

At its April meeting, the Trinity River Authority Board of Directors awarded a contract to construct a new booster pump station for the Authority's Tarrant County Water Supply Project. Crescent Constructors, Inc. will construct the Colleyville West Booster Pump Station for the amount of \$2,227,000.

TCWSP provides drinking water to the Cities of Bedford, Colleyville and Euless, along with portions of Grapevine and North Richland Hills.

In 2004, TRA increased production capacity at TCWSP's treatment plant from 72 million gallons per day to 87 MGD. The new Colleyville West Booster Pump Station is one of several projects designed to increase capacity in the project's distribution system to handle the rise in production capacity at the plant.

The Colleyville West Booster Pump Station will deliver water to the City of Colleyville's potable water distribution system during periods of high water demand. This newly designed pump station will replace a 30-year-old facility.

The new pump station will house three 4.5-MGD pumps with a firm capacity of nine MGD and a total capacity of 13.5 MGD. Firm capacity is the pumping capacity

with one pump offline. The pump station will deliver water to a 20-inch pipeline in Colleyville's distribution system and to one of the city's elevated storage tanks.

The Colleyville West Booster Pump Station will be located next to State Highway 26, about 400 feet from the existing facility. The new location was chosen to accommodate future expansion of the highway.

The exterior of the facility is architecturally designed to blend in with the surrounding residential and commercial community. Outside walls will be an attractive combination of tan blocks and red brick.

Other distribution system improvement projects to serve the increased capacity at the TCWSP plant include a new 60-inch transfer service main that transports water from the plant to the Murphy Drive Treated Water Storage and Pump Station. This project, currently under construction, will complement the existing 48-inch transfer service main.

In addition, the Murphy Drive Treated Water Storage and Pump Station have recently undergone construction to increase capacity. Construction on the new Glade Road Pump Station that will deliver

water to North Richland Hills is underway and nearing completion. Finally, design of a new 30-inch water line, which will run from

the Glade Road Pump Station to the City of North Richland Hill's distribution system, is ongoing.



*The new Colleyville West Booster Pump Station will look similar the Glade Road Booster Pump Station seen here under construction.*



*The new pump station will house three 4.5-million-gallon-per-day pumps, like those seen here, with a firm capacity of nine MGD and a total capacity of 13.5 MGD.*

# Construction Begins on DCRWS Alternative Discharge Pump Station and Pipeline

At its April meeting, the Trinity River Authority Board of Directors awarded a contract to Red River Construction Company in the amount of \$3,814,600 to construct an alternative discharge pump station and pipeline for the Authority's Denton Creek Regional Wastewater System.

DCRWS provides water reclamation services to 11 communities in north Tarrant and southern Denton counties. The system's customers include the Cities of Fort Worth, Haslet, Keller, Roanoke and Southlake, along with the towns of Argyle, Flower Mound, Northlake, and Westlake, plus the Circle T Municipal Utility District Nos. 1 and 3. The Alliance Airport Development Area and the Texas Motor Speedway are located in this area.

Since the project went online in 1990, DCRWS has increased treatment capacity several times due to population growth and development in the system's service area. Construction to expand the system's capacity from 5.0 million gallons per day to 11.5 MGD is underway and expected to be substantially complete by August 2010.

DCRWS currently discharges reclaimed water into Cade Branch, a tributary of Denton Creek that flows into Grapevine Lake.

In 2007, The Texas Commission on Environmental Quality changed the method for assessing the impact of reclaimed water on receiving waters when those waters are tributary to a reservoir.

At issue are state-mandated stream standards for dissolved oxygen that apply to lake backwaters or coves. A level of 5.0 milligrams of dissolved oxygen per liter of water is specified as necessary to support a healthy fish community. The main bodies of most lakes have 5.0 mg/L, or greater, of dissolved oxygen as wind and wave action mix air



*Three brand new blowers stand ready to aerate activated sludge basins at Denton Creek Regional Wastewater System's treatment plant in Roanoke, Texas. This equipment is part of a new 5-million-gallon-per-day treatment train that is part of the plant's expansion in capacity from 5 MGD to 11.5 MGD. DCRWS was required by the Texas Commission on Environmental Quality to expand in response to growth in the system's service area. However, TCEQ denied permission for DCRWS to increase discharge into Cade Branch, making it necessary for the system to seek an alternative discharge site.*

and water, causing oxygen to be absorbed. Sunlight allows algae to carry on photosynthesis, which adds oxygen to the water as well.

Coves and backwaters, those narrow fingers of water around the perimeter of a lake, can be naturally low in dissolved oxygen. The water tends to be tranquil with little agitation or movement. Wind and sun can be blocked by vegetation overhanging the water or the stream banks. Other cove conditions contribute to low levels of dissolved oxygen as well, sometimes bringing the naturally occurring level below 5.0 mg/L. The TCEQ cannot permit a discharge of reclaimed water if it cannot be demonstrated that stream standards will be met.

The calculations used by the TCEQ to evaluate potential effects of a discharge on receiving water indicate that dissolved oxygen standards will not be met in Grapevine Lake if the discharge from DCRWS is increased. Even though DCRWS' effluent has an average of about 7.5 mg/L of dissolved oxygen, levels of dissolved oxygen drop off as the water makes its way down Cade Branch and Denton Creek to Grapevine Lake.

As a result, DCRWS was denied permission to increase discharge into Cade Branch, and the system sought a second site to discharge treated effluent. After much investigation, White's Branch, located approximately 10

miles from the DCRWS treatment plant, was chosen as an alternative discharge site.

In October of 2009, the TCEQ issued an interim permit for DCRWS to treat and discharge 7.0 MGD to Cade Branch during construction of the alternative discharge pump station and pipeline.

In addition to White's Branch, DCRWS is considering a wastewater reuse project to serve areas in the City of Fort Worth. That option would require an associated discharge location on Henrietta Creek, including a pump station and pipeline. The alternative discharge pump station and pipeline have been designed to allow flexibility to implement either option.



*This snazzy new facility is the Preliminary Treatment Unit that handles grit at the DCRWS treatment plant. In a proactive effort to be a good neighbor, this unit encloses raw wastewater to keep odors to a minimum. In addition, the overhead lights are capped to illuminate the unit but not the area around the unit.*

## TCWSP Opens the Tap for the City of Fort Worth Water Department

The Trinity River Authority's Tarrant County Water Supply Project provided potable water to the City of Fort Worth's water utility customers in Centreport, near the Dallas/Fort Worth International Airport, from May 5-7 during an emergency pipeline repair.

TCWSP provides drinking water to the Cities of Bedford, Colleyville and Euless, along with portions of Grapevine and North Richland Hills.

The Fort Worth Water Department took two water lines out of service to make emergency repairs.

Tarrant County Water Supply Project and the City of Fort Worth maintain an emergency connection in order to provide back-up service during emergency situations.

"There is a long history of mutual assistance and cooperation between TRA and Fort Worth," said Gerald Null, Project Manager, TCWSP.

TCWSP provided 11-12 million gallons of treated water for Fort Worth's customers while the two lines were out of service.



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# Peace, Love and Relay

*During the weekend of May 3, Trinity River Authority's Lake Livingston Project and Livingston Recreational Facility personnel participated in the American Cancer Society's Relay for Life. This year's theme was the 60s—Peace, Love and Relay. TRA's team raised over \$3,000 to fight cancer. Seen here are Joe Sheets, Field Inspector; Marie Burns, Custodian; Terry Burks, Senior Maintenance Mechanic; and Stacy Rosetta, Accounting Clerk.*



*TRA's team won the trophy for Best Campsite in Polk County's Relay for Life. Seen here, from left to right, are Terry Burks, Senior Maintenance Mechanic; Johnny Hooks, Maintenance Mechanic II; Mark Waters, Assistant Project Manager; Jacob Young, Field Inspector; Linda Kuntz, Office Coordinator; Debbie Baker, Permit Administrator; Kristie Munoz, Biologist; Lisa Lantrip, Permit Administrator; Marie Burns, Custodian; Stacy Rosetta, Accounting Clerk; Joe Sheets, Field Inspector; and Eddie Knight, Park Supervisor.*