

**TEXAS STATE SOIL & WATER CONSERVATION BOARD**



**SEMI - ANNUAL REPORT**

TO THE

**GOVERNOR,  
LIEUTENANT GOVERNOR,  
AND  
SPEAKER OF THE HOUSE**

**JANUARY 1, 2008**

# Forward

In response to S.B. 1828 passed by the 78<sup>th</sup> Texas Legislature in Regular Session, 2003, the Texas State Soil and Water Conservation Board presents this review of its programs and activities. S.B. 1828 added §201.028 to the Texas Agriculture Code to provide that the TSSWCB shall prepare and deliver to the Governor, the Lieutenant Governor, and the Speaker of the House of Representatives a report, not later than January 1 and July 1 of each year, relating to the status of the budget areas of responsibility assigned to the State Board including outreach programs, grants made and received, federal funding applied for and received, special projects, and oversight of soil and water conservation district activities.

The FY08 Operating Budget with past expenditures is attached to this report. Information on grants made to local districts and other entities is incorporated within the program section it involves. Ongoing Federal grant program projects under the Clean Water Act are provided in another attachment.

The Texas State Soil & Water Conservation Board takes pride in the accomplishments and remarkable progress that have been made in soil and water conservation in this state. Often environmental successes are slow to be realized. We have realized and previously reported one success story that involves reducing the level of Atrazine in several water bodies, particularly the Aquilla Reservoir in the Hill County-Blackland SWCD.

However, we recognize there remains a continuing challenge and an ongoing need to ensure our land has the capability to produce food and fiber for future Texans. Because of changes in land use, ownership, technology, and population growth, the need for soil and water conservation programs will remain critical. Texas has a finite number of acres to provide for the needs and desires of citizens and visitors, and this places an ever-increasing demand on agricultural land. Farmers and ranchers face complex decisions concerning the best ways to manage and utilize the land available to them.

We believe that soil and water conservation programs must remain dynamic as land uses change and technology improves to make some conservation practices more capable of meeting demands on soil and water resources. We also maintain the belief that the purpose of the soil and water conservation program is to promote the wise use of our renewable natural resources and provide for the conservation and enhancement of the soil and water resources of this state through and by the dynamic decisions of local soil and water conservation districts which promotes the use of each acre of land within its capabilities and treating it according to its needs.

From the beginning, the Texas State Soil and Water Conservation Board and local soil and water conservation districts have formed an organizational framework through which various complex governmental conservation programs are delivered to local landowners and operators. This relationship has successfully been utilized to disseminate sound management techniques and practices to maintain individual productive land uses to provide for the needs of present and future generations.

To the landowners of Texas, the individual soil and water conservation district directors, and the many agencies and organizations assisting and working with our programs, we offer our sincere thanks.

## Table of Contents

	Page
Historical Background	4
Organization	6
Staff	7
Soil and Water Conservation Districts	8
Annual State Meeting Of Soil and Water Conservation District Directors	10
Director Mileage and Per Diem	10
District Technical Assistance Funds	10
Agricultural Water Conservation Grant	10
District Conservation Assistance Program	11
Programs and Activities of the TSSWCB	11
Statewide Nonpoint Source Management Program	12
Total Maximum Daily Load Program	13
Bacteria Total Maximum Daily Load Task Force	15
Watershed Protection Plan Program	16
Water Quality Management Plan Program	19
Poultry Water Quality Management Plan Initiative	22
Comprehensive Nutrient Management Plan Program	24
Statewide Bacterial Water Quality Impairment Reduction Initiative	24
Coastal Management Program	25
Background	25
Current Status	26
Information Technology	27
Public Information /Education Report	29
General Overview	29
2007 Summer Teacher Workshops	29
2008 Texas Conservation Awards Program	29
Soil & Water Stewardship Public Speaking Contest	32
Wildlife Alliance For Youth	32
State Woodland Clinic and Contest	33
Regional Woodland Clinic	33
Conservation Education Video Library	33
Nonpoint Source (NPS) Pollution Watershed Flow Model	34
Water Conservation Enhancement Program Status Report	34
TSSWCB FY08 Operating Budget	36
Ongoing Clean Water Act, §319(h) Grant Program Projects	Atch 1

## Historical Background

In the early history of the United States, those involved in agriculture often did not consider the conservation of soil and water resources. Land was cleared and put into farm production. When the land quit producing at a profitable level, the farmers merely moved on to new land farther west and started the process over again. There was no need to be concerned with soil conservation, as there was a seemingly unlimited supply of virgin land waiting to be tilled. This process continued through the 1800s and into the early 1900s. With the outbreak of World War I, farmers in the Great Plains states were encouraged to break out native grassland to grow wheat and other foodstuffs to feed the nation and the world. As a result of these and other unwise management practices and the fact that the farmlands were experiencing long periods of drought, the 1930s produced some of the worst dust storms the nation had ever seen. Clouds of dust rolled across the plains states sending dust storms through the south and into the nation's capital. At the same time, the nation was in the midst of a great economic depression. The federal government, seeking ways to put people back to work and encourage conservation, created the Civilian Conservation Corps and Soil Erosion Service. Through these mechanisms, demonstration projects were initiated to train technicians and to educate the public in ways to conserve soil resources. These programs were successful in putting people back to work, but lacked the local ties to establish lasting conservation programs.

One of the early day leaders in the national effort to control soil erosion was Hugh Hammond Bennett from North Carolina. After graduation from the University of North Carolina in 1903, Hugh Bennett took a job with the Bureau of Soils in the United States Department of Agriculture. Because of his experience, scientific knowledge and leadership ability, he was put in charge of the Soil Erosion Service when it was created in 1933. In 1935, P.L. (Public Law) 46 was passed creating the Soil Conservation Service within the U.S. Department of Agriculture and Hugh Bennett became the first Chief of the agency. He soon became internationally known for his accomplishments in conservation work.

With the help of Congressman Buchanan from Columbus, Texas, Hugh Bennett was able to persuade President Franklin Roosevelt that the soil resources of this nation were being wasted. He convinced the President that a Model Soil Conservation Act should be developed and sent to the governors of each state for passage by their state legislatures. The purpose of this Model Act would be to develop programs at the state and local level to control soil erosion.

In 1936, such a Model Act was sent to the governors with the endorsement of President Roosevelt. The Model Act, developed in Washington, was patterned after the Texas Wind Erosion Act, the Grass Conservation Acts in the Northern High Plains and certain water conservation district law.

In 1937 legislation was introduced in the Texas Legislature based on this Model Act. It is reported that as many as 25 different versions of this soil conservation law were considered before a final version was passed. There was much heated discussion of the proposed legislation. When the final version was adopted, the bill contained many undesirable features. The law would have set up Soil Conservation Districts automatically on a county basis and made County Commissioners Courts the governing body. A portion of the county tax was to be used to finance the program and county agricultural agents were to be the administrative officers.

A number of agricultural leaders from across the state had, by this time, become concerned about the newly passed legislation. It was their opinion that, if the responsibility for installing and maintaining conservation measures lay in the hands of the land owners, the control of such a program should also be

in their hands. As a result of these and other concerns, a group of landowners led by V.C. Marshall of Heidenheimer, Texas, convinced the Governor to veto the 1937 legislation.

Hard feelings among agricultural leaders resulted from the attempt to pass this soil conservation law. Under the leadership of Mr. Marshall, a concerted effort was made during the interim between legislative sessions to heal the old wounds and to put together a version of a law that would be generally accepted by the farmers and ranchers of Texas. Mr. Marshall organized a committee of leaders from across the state to promote the passage of a new Soil Conservation Law. He traveled many miles at his own expense seeking the views of agricultural leaders and promoting the idea of the Soil Conservation District Program.

The key points Mr. Marshall felt should be included in the new law were that (1) farmers and ranchers should determine whether or not a Soil Conservation District was needed and hold a local option election prior to the establishment of the district; (2) the program should be controlled by landowners; and (3) the Soil Conservation Districts should have no taxing authority or the power of eminent domain.

In 1939 the Texas Legislature passed H.B. (House Bill) 20 which incorporated those features and was the first Soil Conservation Law for the state. The law created the State Soil Conservation Board and allowed for the creation of the Soil Conservation Districts. Mr. Marshall was elected as the first Chairman of the Soil Conservation Board and later resigned to become the first Executive Director of the agency.

On April 30, 1940, the Secretary of the State issued Certificates of Organization for the first 16 Soil Conservation Districts paving the way for the program we now operate. Today, Texas has 217 local soil and water conservation districts that encompass more than 99% of the state.

As previously mentioned, the Model Act endorsed by President Roosevelt was in part patterned after the Texas Wind Erosion Act. Texas was already making attempts to address soil conservation as a result of the “Dust Bowl” days of the 1930s. The 44<sup>th</sup> Legislature in 1935 passed legislation authorizing the establishment of Wind Erosion Conservation Districts. This law provided for the creation of districts to “conserve the soil by prevention of unnecessary erosion caused by winds, and the reclamation of lands that have been depreciated or denuded of soil by reasons of winds.” Although a number of Wind Erosion Control Districts were created, the passage of the Soil Conservation District Law in 1939 resulted in those districts becoming dormant.

In 1975, Governor Dolph Briscoe, by Executive Order, designated the TSSWCB as lead agency to assume the planning and management responsibility for control of agricultural and silvicultural nonpoint source pollution as required by the Federal Water Pollution Control Act.

In 1981 the 67<sup>th</sup> Legislature passed H.B. 1436, which for the first time codified the agricultural laws of Texas. Title 7, Chapter 201 of this code contains the portion pertaining to Soil and Water Conservation.

In 1985 the 69<sup>th</sup> Legislature passed S.B. 1083 creating a Brush Control Program in Texas and granting new powers and responsibilities, without funding, to the TSSWCB and Soil and Water Conservation Districts under Chapter 203 of the Agriculture Code. In 1999, the TSSWCB received its first appropriation in the FY00-01 biennium to control water-depleting brush and trees, such as cedar and mesquite. The program received \$9.1 million to establish a pilot project in the North Concho Watershed.

In 1993, the 73<sup>rd</sup> Legislature passed S.B. 503 which named the TSSWCB the lead agency to address water quality issues relating to runoff from diffused, or nonpoint sources resulting from agricultural and forestry operations. In 1999, the Legislature expanded the TSSWCB's environmental mission and appropriated money to address water pollution from nonpoint sources under a separate, federally mandated program.

The leaders who framed the Texas Soil and Water Conservation Law in 1939 recognized that landowners and operators of private land constitute the basic resource for the conservation of our renewable natural resources. Without the support and willing participation of private landowners and operators in the development and implementation of soil and water conservation programs there is little hope of success. Local soil and water conservation districts led by farmers and ranchers who know the land and the local conditions and problems have the means to develop conservation plans that address each acre of land specific to its needs to solve or reduce the severity of its problems.

## Organization

Since inception, the TSSWCB has been governed by five board members, elected by delegates from each of five regions of the state's 217 local soil and water conservation districts. Elections occur annually at regional conventions of the local soil and water conservation districts, with members serving two-year staggered terms. However, with the enactment of S.B. 1828 by the 78<sup>th</sup> Legislature, two Governor appointees join the five elected board members to create a seven-member board. The two Governor appointed positions are listed below. The term of one member appointed by the Governor expires February 1 of each odd-numbered year, and the term of the other member appointed by the Governor expires on February 1 of each even-numbered year.

Elected State Board members must be 18 years of age or older; hold title to farmland or ranchland; and be actively engaged in farming or ranching. The Governor appointees must be actively engaged in the business of farming, animal husbandry, or other business related to agriculture and wholly or partly owns or leases land used in connection with that business; and may not be a member of the board of directors of a conservation district.

The State Board elects its own Chair and generally meets every odd month, unless specific programs or issues require more immediate action. The following list shows the current Board members and shows which State Board Region they represent.

### Texas State Soil and Water Conservation Board

<b>Member Name</b>	<b>Region</b>	<b>Term</b>	<b>Residence</b>
Aubrey L. Russell	#1	May 1, 2007 – May 5, 2009	Panhandle
Reed Stewart	#2	May 2, 2006 - May 6, 2008	Sterling City
José O. Dodier, Jr.	#3	May 1, 2007 – May 5, 2009	Zapata
Jerry D. Nichols	#4	May 2, 2006 – May 6, 2008	Nacogdoches
Barry Mahler	#5	May 1, 2007 – May 5, 2009	Iowa Park
Larry D. Jacobs	Appointed	February 1, 2006-February 1, 2008	Montgomery
Joe L. Ward	Appointed	February 1, 2007-February 1, 2009	Telephone

## Staff

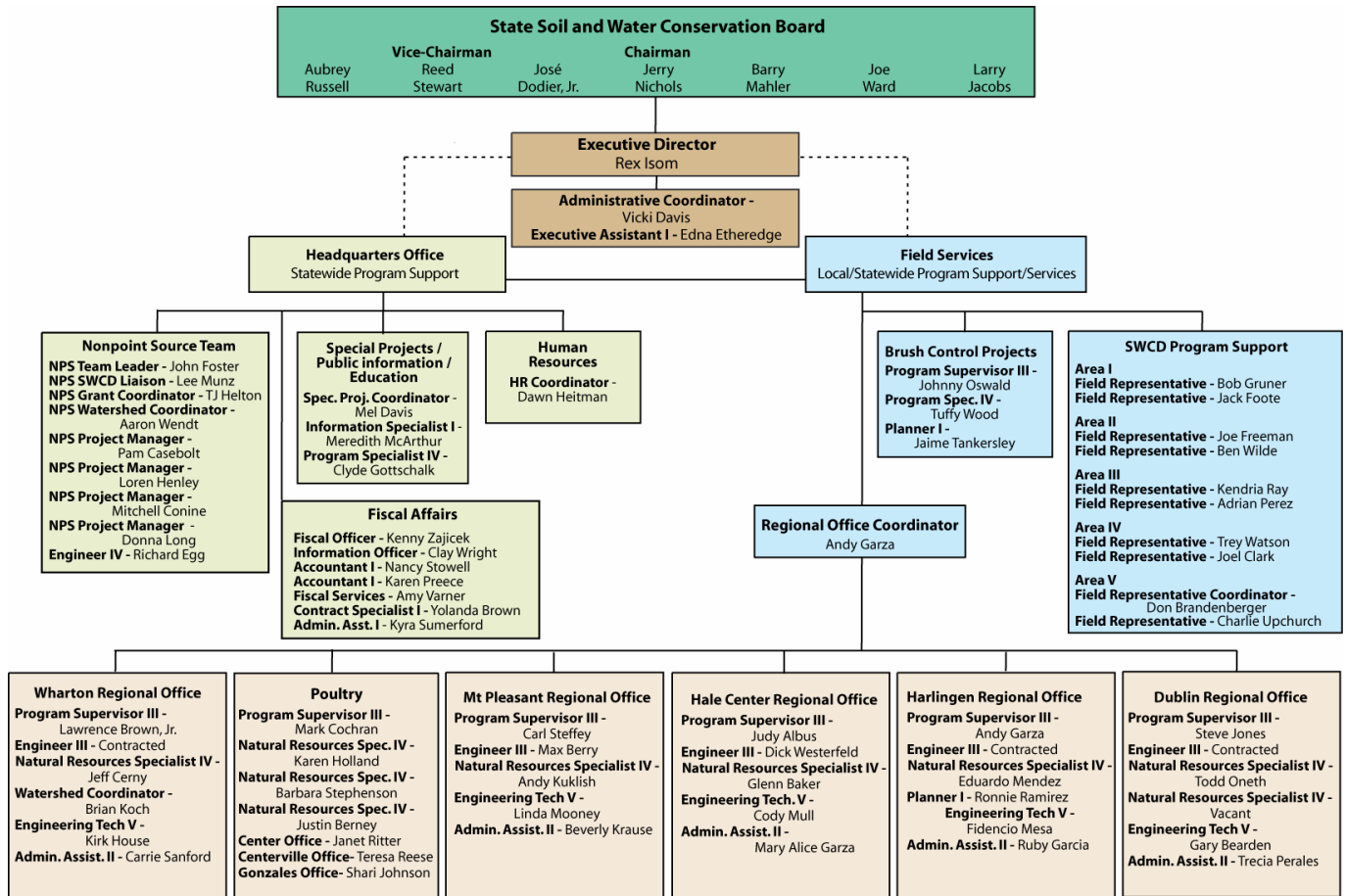
Mr. Rex Isom was named as the Executive Director in January 2004 and continues to carry out the directives of the State Board and directing staff efforts. We emphasize our agency philosophy as stated in our Strategic Plan, “The State Soil and Water Conservation Board will act in accordance with the highest standards of ethics, accountability, efficiency, and openness. We affirm that the conservation of our natural resources is both a public and a private benefit, and we approach our activities with a deep sense of purpose and responsibility.” Mr. Isom, as Executive Director, is leading the agency in that direction and expects all employees to follow that lead.

The 80<sup>th</sup> Legislature authorized appropriations for 4 additional full-time employees (FTEs) for the Water Quality Management Plan Program to conduct activities related to poultry production, and an additional 2 full-time employees to facilitate the development and implementation of Total Maximum Daily Loads.

As of December 1, 2007 the TSSWCB employed 67 staff, 22 of which work in the Temple headquarters. The remaining employees are field staff, either working out of their homes or located in seven satellite offices; five regional offices and two program specific offices, located throughout the state. Due to difficulty in recruiting engineers, two field engineer positions remain contracted. The following organization chart shows the agency’s current structure.

The current structure of the TSSWCB reflects efforts to maintain more personnel in the field and away from headquarters for a 67% to 33% ratio of Field personnel to Headquarters personnel.

The regional office staff along with the program specific staff provides on-site technical assistance to farmers and ranchers. The field staff serves as a liaison between the TSSWCB and local districts. The field staff also provides assistance to local districts and district employees concerning operations, programs, and activities. The regional office staff and the program specific staff coordinates with the Texas Commission on Environmental Quality (TCEQ), Texas Cooperative Extension (TCE), and the USDA’s Natural Resource Conservation Service (NRCS) to provide technical assistance to landowners to implement Water Quality Management Plans (WQMPs).



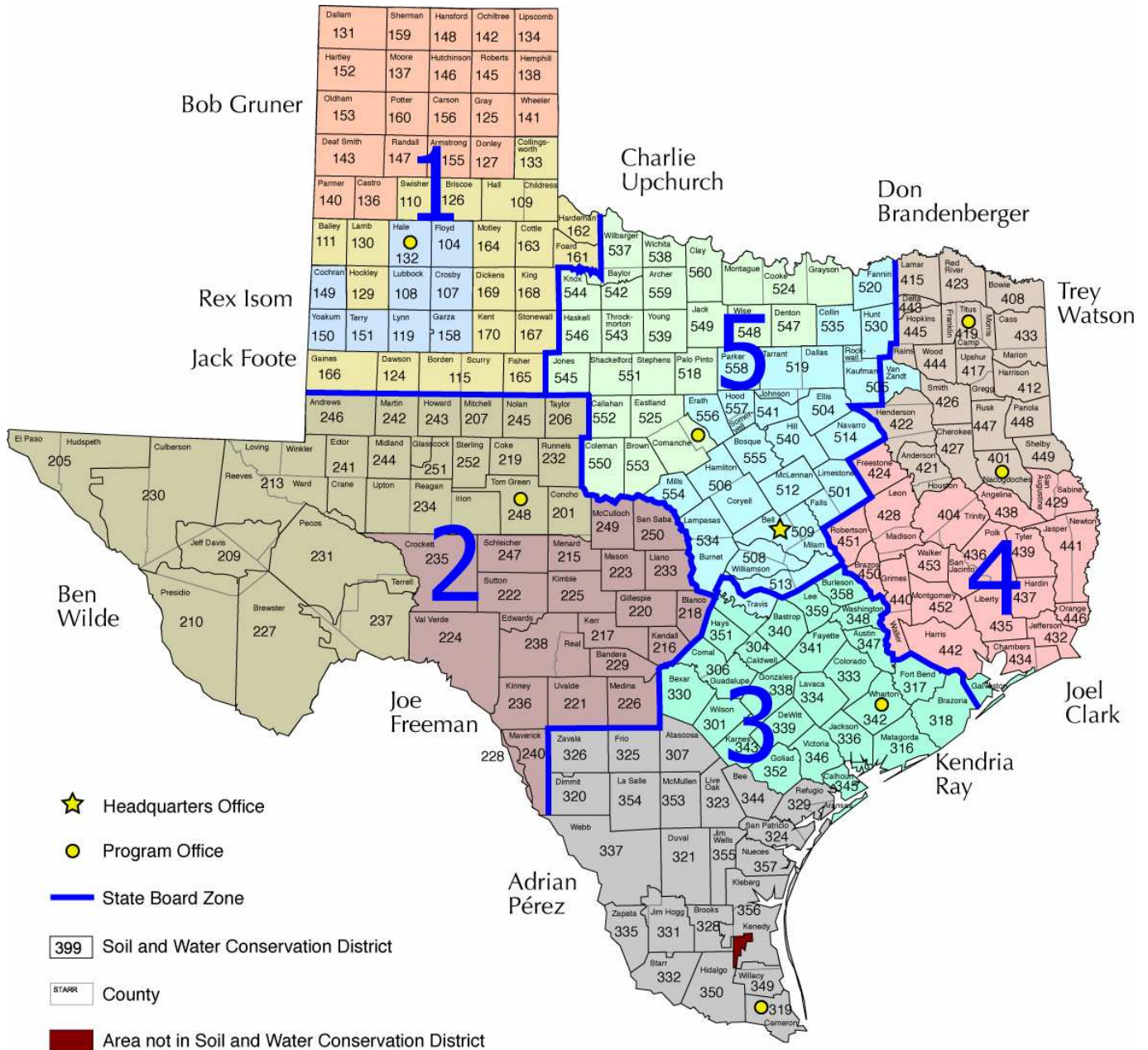
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## Soil and Water Conservation Districts

The TSSWCB performs many of its activities in coordination with the state's 217 local soil and water conservation districts. These local districts are political subdivisions of the state, established through local option elections of agricultural landowners. Districts generally reflect county boundaries, but may also follow river basin or watershed boundaries, depending on the desires of the local landowners.

The following soil and water conservation district map shows the current 217 local districts that cover almost the entire state. That portion of the state not in a soil and water conservation district is in Kenedy County and contains the privately owned King Ranch. The map also shows the grouping of the districts into the five State Board Districts that respectively elect a State Board member and shows the field staff that is assigned to work with each district within a specific area.





Landowners within these local districts elect the five district directors that comprise the districts governing body or board of directors. This board of directors administers the programs and activities of the district. Representatives of the districts within each region then elect the members of the State Board through a series of convention style-elections.

Districts do not have taxing authority and rely on locally generated funds from various activities and programs, federal assistance, county assistance, and state assistance from the TSSWCB. The USDA Natural Resource Conservation Service (NRCS) provides most of the federal assistance available to districts and through cooperative agreements provides technical assistance to farmers and ranchers requesting assistance from the district.

## **Annual State Meeting Of Soil and Water Conservation District Directors**

The Annual State Meeting of Soil and Water Conservation District Directors, required in §201.081, Texas Agriculture Code, convened in Waco October 2007. There were 122 districts represented, with 256 individual district directors that registered for the meeting. The total registration was 651.

For the 2008 calendar year, the state meeting is scheduled for September 29-30 and October 1 in Galveston.

### **Director Mileage and Per Diem**

The passage of H.B. 496 by the 80<sup>th</sup> Legislature allows for an increase in the reimbursement rate for District Director Mileage claims from 18 cents to the current state rate of 48.5 cents per mile. However, the legislation did not provide additional funding to cover the cost of the increase.

At its November 2007 Meeting, the TSSWCB approved an additional \$83,000 to supplement Director Mileage & Per Diem allocations for FY 2008 claims only. The total program appropriation for FY 2008 will be \$408,000. In FY 2009, allocations will revert back to the original program appropriation of \$325,000. The TSSWCB anticipates working with the Legislature to pursue a supplemental appropriation in January 2009.

### **District Technical Assistance Funds**

The 80<sup>th</sup> Legislature provided Districts with an approximate 40% increase in Technical Assistance Funds for the 2008-09 Biennium. The TSSWCB disburses Technical Assistance payments to Districts on a reimbursing basis to supplement their efforts in providing assistance to agricultural producers in the state. Distributions are contingent upon Districts filing annual performance reports with the TSSWCB. The FY 2008 appropriation for this program is \$1,439,445.00.

### **Agricultural Water Conservation Grant**

The TSSWCB, on behalf of local soil and water conservation districts, applied to the TWDB for grant funding to continue the agricultural water conservation program. Soil and water conservation districts provide technical and planning assistance to agricultural producers for implementing conservation best management practices on their farms and ranches.

The TSSWCB received an agricultural water conservation grant of \$100,000 from the TWDB for fiscal year 2007. The funds from the grant were allocated to eligible soil and water conservation districts to support technical assistance in planning agricultural water conserving best management practices on farms and ranches. Eligible best management practices are those that directly or indirectly produce water savings and those that reduce erosion, a cause of increased sedimentation of Texas' surface water reservoirs. The grant award of \$100,000 supplements \$100,000 in technical assistance funding allocated to local soil and water conservation districts for support of planning and implementing conservation best management practices on farms and ranches.

A total of 199 soil and water conservation districts participated in this program for FY 07. This is the third year the TSSWCB has participated in this grant program. A draft final report has been completed. The assistance performed by these soil and water conservation districts yielded in over 475,000 ac-ft of potential water savings for the State. The program in previous years has resulted in an estimated 870,000 ac-ft potential water savings for the State.

## **District Conservation Assistance Program**

The 80<sup>th</sup> Legislature provided Conservation Assistance Grants to Districts for the 2008-09 Biennium. The grants are awarded on a matching basis requiring Districts to raise funds from sources other than the TSSWCB. Districts do not have taxing authority and use locally raised funds with this matching grant to support their operational expenses. The FY 2008 appropriation for this program is \$916,364.00.

## **Programs & Activities of the TSSWCB**

The services and programs provided by the TSSWCB target rural Texas farmers and ranchers, but the results of these services benefit all Texans. For example, many of the flood control structures maintained by soil and water conservation districts serve to protect heavily populated areas from flood damage, and also prevent sediment from building up in suburban drinking water supplies. Another example is the use of best management practices, implemented through TSSWCB-certified water quality management plans, to prevent pesticides, nutrients, bacteria and other contaminants from impairing Texas waters.

The agency is responsible for numerous natural resource conservation efforts, the most prominent of which is serving as the lead state agency for the prevention, management, and abatement of nonpoint source pollution resulting from agricultural and silvicultural (forestry-related) activities. To fulfill this mandate, the agency jointly administers the Texas Nonpoint Source Management Program. As a result, the majority of the agency's programs and services aim to improve and protect water quality, including the Water Quality Management Plan Program, the Clean Water Act §319(h) Nonpoint Source Grant Program, the Total Maximum Daily Load Program and the Watershed Protection Plan Program.

The TSSWCB is also responsible for water conservation and enhancement. The major existing program addressing water conservation and enhancement is the Texas Brush Control Program, although the agency is conducting preliminary work on a new program that would provide assistance to Texas landowners who irrigate cropland from both ground and surface water sources. The Water Conservation Implementation Task Force, created by the 78<sup>th</sup> Texas Legislature through Senate Bill 1094 introduced by Senator Duncan, issued a final report to the 79<sup>th</sup> Texas Legislature recommending a state cost-share program be implemented through the TSSWCB to assist landowners in implementing best management practices that conserve water resources. If the agency is asked by the Legislature to fully develop the new program, it would likely be patterned after the Water Quality Management Plan Program created by Senate Bill 503 in 1993.

Other responsibilities include prevention of soil erosion, control of floods, maintaining the navigability of waterways, the preservation of wildlife, protection of public lands, and providing information to landowners regarding the jurisdictions of the TSSWCB and the Texas Commission on Environmental Quality (TCEQ) related to nonpoint source pollution. The TSSWCB has no regulatory functions; all of the agency's programs and services are voluntary in nature.

## Statewide Nonpoint Source Management Program

Congress enacted Section 319(h) of the Clean Water Act in 1987, establishing a national program to control nonpoint sources of water pollution. Through §319(h), federal funds are appropriated to the U.S. Environmental Protection Agency (EPA) and then granted to the states for the development and implementation of the State's Nonpoint Source Management Program. Texas' share of the §319(h) funding is divided evenly between the TCEQ and TSSWCB.

An approved management program is a requirement for receiving §319(h) grant funding. The *Texas Nonpoint Source Management Program* is jointly administered by the TSSWCB and the TCEQ. The *Program* was revised for 2005-2010 and, after going through extensive public comment and review, was approved by the TSSWCB on September 15, 2005 and by TCEQ on October 26, 2005. The *Program* was certified by the Attorney General's Office and was submitted by the Governor to EPA on December 15, 2005. The *Program* was approved by EPA on February 10, 2006.

TSSWCB currently has 87 active, ongoing §319(h) projects (Attachment 1). The \$25.5 million invested in these projects through Clean Water Act §319(h) Nonpoint Source Grants between 2001 and 2007 is being utilized to address a wide array of agricultural and silvicultural NPS issues (Figure 1). Specific project actions include developing and implementing Watershed Protection Plans (WPPs) and Total Maximum Daily Loads (TMDLs); supporting targeted educational programs; and implementing BMP's to abate NPS pollution from dairy and poultry operations, silvicultural activities, grazing operations, and row crop operations. Quarterly reports for ongoing projects were received on July 15, 2007 and October 15, 2007. To date, project reports have been received for 100% of the projects. These reports are entered semi-annually into EPA's Grants Reporting and Tracking System.

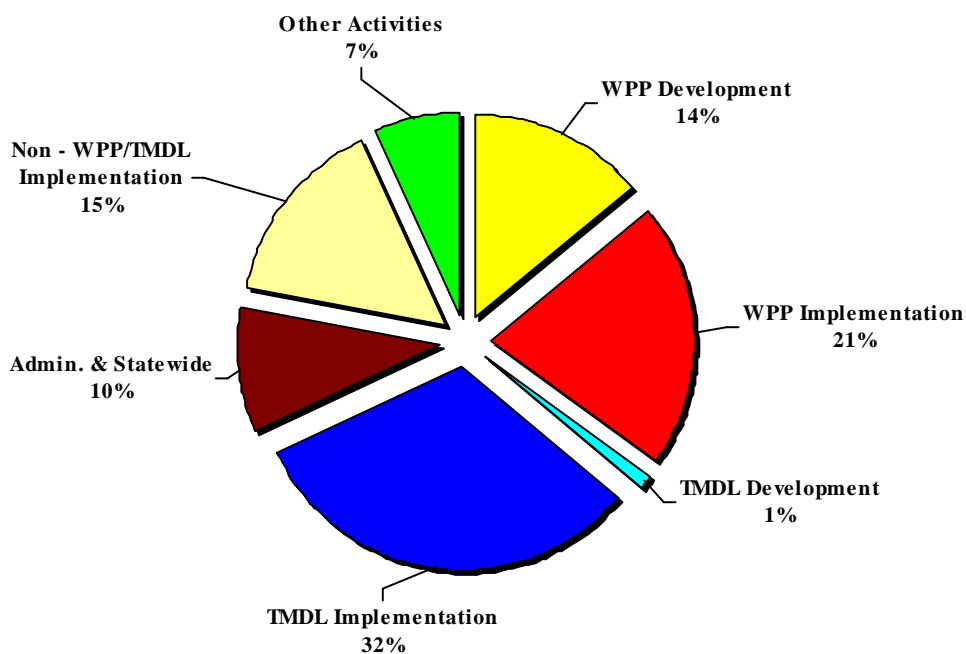


Figure 1 – TSSWCB active Clean Water Act §319(h) grants for FY 2001-2007.

For more information on the TSSWCB Statewide Nonpoint Source Management Program, visit our website at <http://www.tsswcb.state.tx.us/managementprogram>.

## **Total Maximum Daily Load Program**

The federal Clean Water Act requires Texas, and other states, to identify lakes, rivers, streams and estuaries failing to meet or not expected to meet water quality standards and not supporting their designated uses (swimming, drinking, aquatic life, etc.). This list of impaired waterbodies is known as the *Texas 303(d) List* and must be submitted to the EPA for review and approval every two years by TCEQ.

The State must then establish a Total Maximum Daily Load (TMDL) for certain waterbodies identified on the *303(d) List*. A TMDL defines the maximum amount of a pollutant that a waterbody can assimilate on a daily basis and still meet water quality standards. The pollution reduction goal set by the TMDL is necessary to restore attainment of the designated use of the impaired waterbody. The maximum amount of pollutant is determined by conducting a detailed water quality assessment that provides the information for a TMDL to allocate pollutant loads between point sources and nonpoint sources. It also takes into account a margin of safety, which reflects uncertainty and future growth.

Based on the environmental target of the TMDL, an Implementation Plan (I-Plan) is then developed that prescribes the measures necessary to mitigate anthropogenic (human-caused) sources of that pollutant in that waterbody. The I-Plan specifies limits for point source dischargers and recommends best management practices for nonpoint sources. It also lays out a schedule for implementation. Together, the TMDL and the I-Plan serve as the mechanism to reduce the pollutant, restore the full use of the waterbody and remove it from the *303(d) List*. EPA must approve the TMDL, but the I-Plan only requires State approval.

With authority as the lead agency in Texas for planning, implementing, and managing programs and practices for preventing and abating agricultural and silvicultural nonpoint source pollution, TSSWCB shares responsibility with TCEQ in implementing the Texas TMDL Program. TSSWCB is committed to funding, through federal grants and state appropriations, and collaborating on TMDL projects encompassing monitoring, assessment, modeling, planning, education and implementation (Figure 2).

On September 27, 2006, at a joint meeting, the TSSWCB and TCEQ renewed this partnership and approved a revised *Memorandum of Agreement on Total Maximum Daily Loads, Implementation Plans, and Watershed Protection Plans*. This framework for collaboration between the two agencies describes the programmatic mechanisms employed to develop and implement TMDLs and I-Plans.

On May 24, 2007, the TSSWCB approved the *TSSWCB Policy on Total Maximum Daily Loads* which provides guidance to staff on directing state appropriations for the TMDL Program. On July 19, 2007, the Board approved an operating budget for FY2008 that allocated \$1,200,494 in state appropriations to TMDL Program grants. These monies are being directed to projects that support 1) increased analytical infrastructure at Bacterial Source Tracking laboratories (49%), 2) implementation of NPS components of TMDL I-Plans (14%), and 3) development of TMDLs through the collection and evaluation of water quality data (37%).

TSSWCB is engaged in implementation activities that support approved I-Plans addressing agricultural or silvicultural nonpoint source load reductions described in approved TMDLs:

- Aquilla Reservoir – Atrazine (Approved 2002)
- Colorado River below E.V. Spence Reservoir – Salinity (Approved 2007)
- E.V. Spence Reservoir – Salinity (Approved 2001)
- North Bosque River – Nutrients (Approved 2002)

TSSWCB is collaborating with stakeholders on the development of I-Plans for approved TMDLs that contain agricultural or silvicultural nonpoint source load reductions:

- Adams and Cow Bayous – Bacteria, Dissolved Oxygen, and pH (Approved 2007)
- Gilleland Creek – Bacteria (Approved (2007)
- Guadalupe River above Canyon Lake – Bacteria (Approved 2007)
- Lake O’ the Pines – Dissolved Oxygen (Approved 2006)
- Oso Bay – Bacteria (Approved 2007)
- Upper Oyster Creek – Bacteria (Approved 2007)

TSSWCB is actively involved in the development of TMDLs for waterbodies impaired due to known or suspected agricultural or silvicultural nonpoint source pollution:

- Arroyo Colorado – Dissolved Oxygen
- Atascosa River – Bacteria
- Big Cypress Creek – Bacteria
- Clear Creek – Bacteria
- Copano Bay and Aransas and Mission Rivers – Bacteria
- Dickinson Bayou – Bacteria and Dissolved Oxygen
- Elm and Sandies Creeks – Bacteria and Dissolved Oxygen
- Lake Houston – Bacteria
- Leon River below Proctor Lake – Bacteria
- Little Brazos River Tributaries – Bacteria
- Lower San Antonio River – Bacteria
- Oso Creek – Bacteria
- Peach Creek – Bacteria
- Upper Oyster Creek – Dissolved Oxygen
- Upper Trinity River – Bacteria

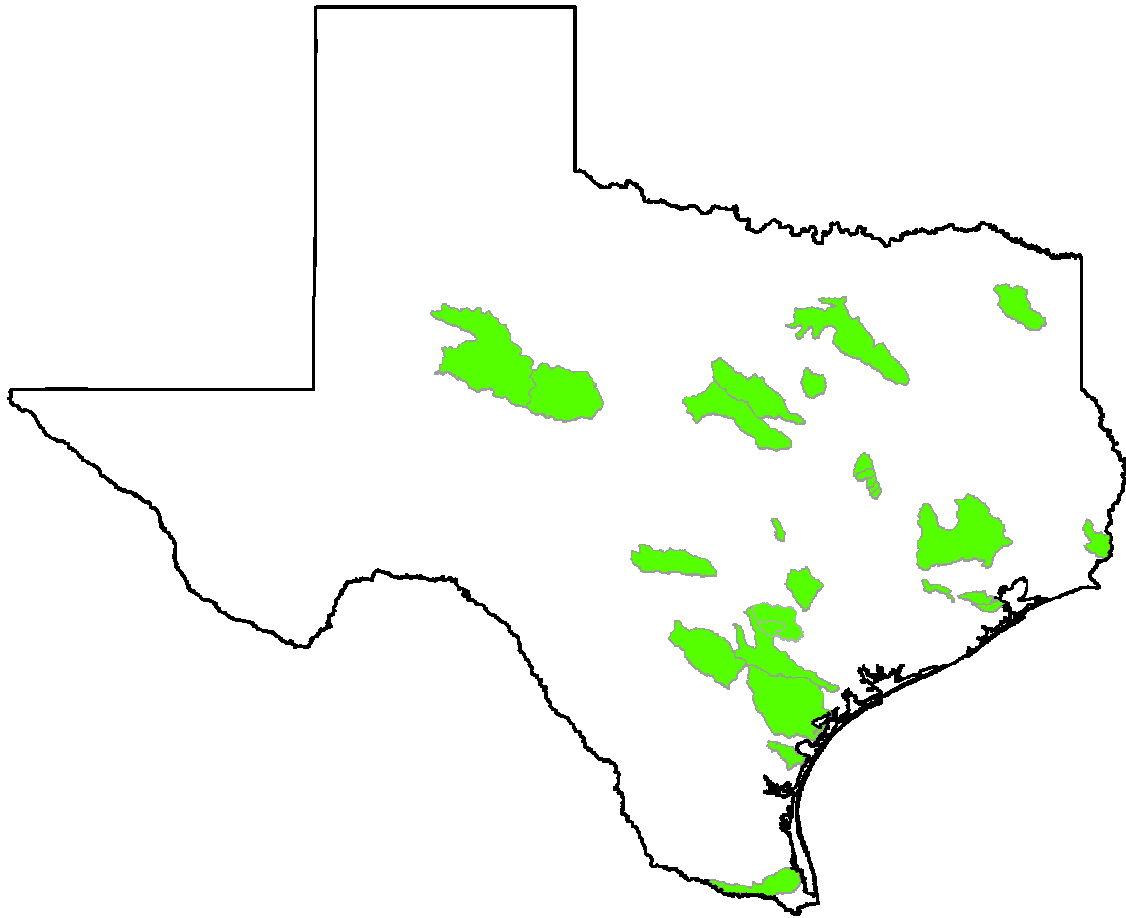


Figure 2 – Map of watersheds where TSSWCB is engaged in developing or implementing TMDLs and I-Plans.

In order to abate agricultural and silvicultural NPS pollution, TMDLs and I-Plans will implement components of other TSSWCB Programs, such as the Water Quality Management Plan Program or the Water Conservation and Enhancement Program. Additionally, the Clean Water Act §319(h) Nonpoint Source Grant Program can serve as a funding source to implement the agricultural and silvicultural components of I-Plans. These programs are described in detail in other sections of this Report.

For more information on the TSSWCB Total Maximum Daily Load Program, visit our website at <http://www.tsswcb.state.tx.us/tmdl>.

## **Bacteria Total Maximum Daily Load Task Force**

On September 27, 2006, at a joint meeting, the TSSWCB and the TCEQ established a joint technical Task Force on Bacteria TMDLs. The Task Force was charged with:

- examining approaches other states use to develop and implement bacteria TMDLs,
- making recommendations on cost-effective and time-efficient methods for developing TMDLs,
- making recommendations on effective approaches for developing I-Plans,
- evaluating the variety of models and bacterial source tracking methods available for developing TMDLs and I-Plans and recommending under what conditions certain methods are more appropriate, and

- developing a roadmap for further scientific research needed to reduce uncertainty in what we know about how bacteria behave under different water conditions in Texas.

Appointed members of the Task Force included:

- Dr. Allan Jones, Texas Water Resources Institute (chair),
- Dr. George DiGiovanni, Texas Agricultural Experiment Station–El Paso,
- Dr. Larry Hauck, Texas Institute for Applied Environmental Research,
- Dr. Joanna Mott, Texas A&M University–Corpus Christi,
- Dr. Hanadi Rifai, University of Houston,
- Dr. Raghavan Srinivasan, Texas A&M University, and
- Dr. George Ward, University of Texas at Austin.

Throughout fall 2006, the Task Force completed their assessment and developed their recommendations. During the process, the Task Force received input and guidance from approximately 50 Expert Advisors with expertise on bacteria related issues from non-governmental organizations and local, state, and federal agencies.

The 3<sup>rd</sup> draft of the Task Force Report was delivered to the TSSWCB and the TCEQ on January 25, 2007. A 4<sup>th</sup> draft correcting inconsistencies in the Executive Summary and the body of the Report was published June 4, 2007. All Task Force materials, including background resource materials, summaries of meetings, all drafts of the Report, and all comments received on the Report, are available at <http://twri.tamu.edu/bacteriatmdl/>.

The Task Force recommended the use of a Three-Tier Approach for bacteria TMDL and I-Plan development that is designed to be cost-effective, time-efficient, scientifically credible and accountable to watershed stakeholders. The Tiers move through increasingly aggressive levels of data collection and analysis in order to achieve stakeholder consensus on needed load reductions and strategies to achieve those reductions.

On June 29, 2007, at a joint meeting, the TSSWCB and the TCEQ adopted the principles and general process recommended by the Task Force. The Board directed TSSWCB staff to work with the staff of the TCEQ to:

- incorporate the principles of the recommendations into an updated joint-agency TMDL guidance document,
- move diligently to expedite the development of bacteria TMDLs that were paused during the work of the Task Force, and
- establish a multi-agency bacteria work group to continue examining the scientific research and development needs identified in the Report.

The TCEQ approved an identical set of directives. TSSWCB staff are currently working to implement these directives.

## **Watershed Protection Plan Program**

Watershed Protection Plans (WPPs) are locally-driven projects that serve as a mechanism for addressing complex water quality problems that cross multiple jurisdictions. WPPs are coordinated frameworks for implementing prioritized and integrated water quality protection and restoration strategies driven by environmental objectives. Through the WPP process, TSSWCB encourages stakeholders to holistically



address all the sources and causes of impairments and threats to both surface and ground water resources within a watershed.

WPPs serve as tools to better leverage the resources of local governments, state and federal agencies, and non-governmental organizations. WPPs integrate activities and prioritize implementation projects based upon technical merit and benefits to the community, promote a unified approach to seeking funding for implementation, and create a coordinated public communication and education program. Developed and implemented through diverse, well integrated partnerships, a WPP assures the long-term health of the watershed with strategies for protecting unimpaired waters and restoring impaired waters.

WPPs have a variety of ingredients and can take many forms. TSSWCB-sponsored WPPs are consistent with guidelines promulgated by EPA in 2003. These guidelines describe nine elements fundamental to a potentially successful plan. The TCEQ also sponsors WPPs based on EPA's guidelines. EPA requires certain expenditures through §319(h) grants to be in accordance with a WPP.

TSSWCB provides technical and financial assistance to local stakeholder groups to develop and implement WPPs through several mechanisms (Figure 3). One, a TSSWCB Regional Watershed Coordinator facilitates the WPP process in watersheds throughout their service area. Currently, the Wharton Regional Office is piloting this method in southeast and south central Texas. Two, through §319(h) grants, entities are provided financial assistance necessary to facilitate the WPP process in specific watersheds with significant agricultural or silvicultural nonpoint source pollution. Three, TSSWCB staff provide technical assistance in developing WPPs which are funded and facilitated by other entities, such as the TCEQ.

Partnerships with Texas Cooperative Extension, Texas Water Resources Institute and TCEQ are resulting in the development of training programs for local stakeholder groups and watershed coordinators. The Texas Watershed Steward Program supports the development and implementation of WPPs by promoting a sustainable proactive approach to managing water quality at the local level and by empowering individuals to take leadership roles in the stewardship of water resources. The Texas Watershed Planning Short Course will deliver training to watershed coordinators and water professionals which is needed to ensure WPPs are adequately planned, coordinated, implemented and results properly assessed and reported.

On September 27, 2006, at a joint meeting, the TSSWCB and TCEQ approved a revised *Memorandum of Agreement on Total Maximum Daily Loads, Implementation Plans, and Watershed Protection Plans*. This framework for collaboration between the two agencies describes the programmatic mechanisms employed to develop and implement WPPs.

WPP development projects currently sponsored by TSSWCB (red in Figure 3) have significant agricultural or silvicultural nonpoint source pollution components and are all funded through §319(h) grants:

- Buck Creek – Texas Agricultural Experiment Station and Texas Water Resources Institute
- Concho River – Upper Colorado River Authority
- Lake Granger – Brazos River Authority and Texas Agricultural Experiment Station
- Lampasas River – Texas Agricultural Experiment Station
- Leon River – Brazos River Authority
- Pecos River – Texas Cooperative Extension and Texas Water Resources Institute
- Plum Creek – Texas Cooperative Extension

While WPP development projects sponsored by TCEQ (purple in Figure 3) have significant water quality issues related to urban nonpoint source pollution or wastewater treatment, most, to varying degrees, have agricultural or silvicultural nonpoint source pollution components:

- Arroyo Colorado – Texas Water Resources Institute
- Bastrop Bayou – Houston-Galveston Area Council
- Brady Creek – Upper Colorado River Authority
- Caddo Lake – Northeast Texas Municipal Water District
- Cypress Creek – River Systems Institute at Texas State University
- Dickinson Bayou – Texas Sea Grant
- Lake Granbury – Brazos River Authority and Texas Water Resources Institute
- Hickory Creek – City of Denton
- Upper San Antonio River – San Antonio River Authority

There are several other watershed planning projects across the state which are funded and sponsored by entities and agencies other than TSSWCB or TCEQ (orange in Figure 3). These third-party WPPs may or may not adequately satisfy EPA's nine elements, but those that do satisfy the nine elements may seek funds from the TSSWCB to support implementation of the WPP:

- Armand Bayou – Texas Sea Grant and Trust for Public Land
- Barton Springs – Barton Springs/Edwards Aquifer Conservation District and City of Dripping Springs
- Benbrook Lake – Texas Water Resources Institute and Tarrant Regional Water District
- Lower and Middle Brazos River – Brazos River Authority
- Bridgeport Reservoir – Texas Water Resources Institute and Tarrant Regional Water District
- Caney Creek – Caney Creek Conservation Foundation
- Cedar Creek Reservoir – Texas Water Resources Institute and Tarrant Regional Water District
- Upper Colorado River – Colorado River Municipal Water District
- Eagle Mountain Reservoir – Texas Water Resources Institute and Tarrant Regional Water District
- Nueces River – U.S. Army Corps of Engineers
- Richland-Chambers Reservoir – Texas Water Resources Institute and Tarrant Regional Water District
- Stillhouse Hollow Lake – Lake Stillhouse Hollow Cleanwater Steering Committee, Inc.

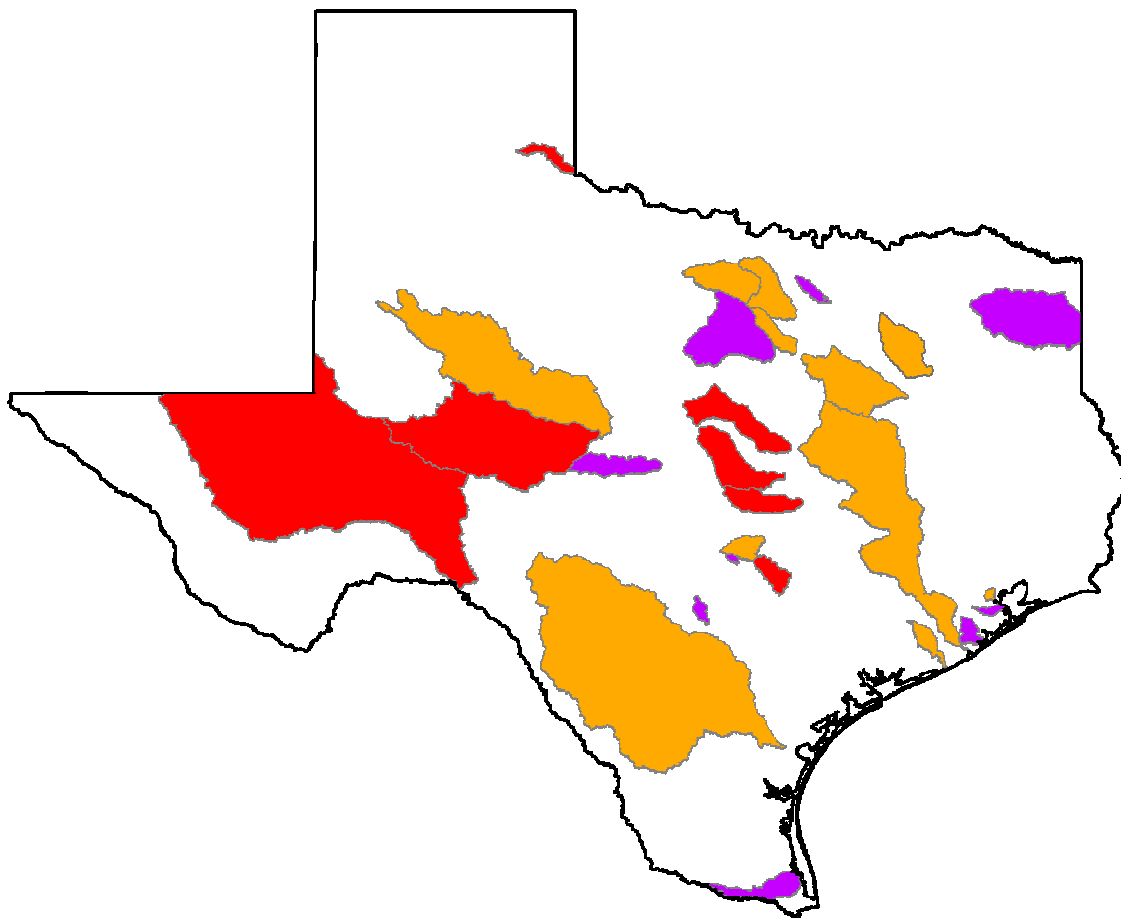


Figure 3 – Map of watersheds where TSSWCB is engaged in developing or implementing WPPs.

In order to abate agricultural and silvicultural NPS pollution, WPPs will implement components of other TSSWCB Programs, such as the Water Quality Management Plan Program or the Water Conservation and Enhancement Program. Additionally, the Clean Water Act §319(h) Nonpoint Source Grant Program can serve as a funding source to implement the agricultural and silvicultural components of WPPs. These programs are described in detail in other sections of this Report.

For more information on the TSSWCB Watershed Protection Plan Program, visit our website at <http://www.tsswcb.state.tx.us/wpp>.

## **Water Quality Management Plan Program**

In 1993, the Texas Legislature passed Senate Bill 503 that directed the TSSWCB to implement Water Quality Management Plans (WQMPs) in Texas. The agency has implemented more than 6000 WQMPs since the inception of the program.

The WQMP Program is administered from five Regional Offices around the state. A poultry WQMP office will open in Nacogdoches in January 2005. The Regional Offices are:

Dublin Regional Office  
Hale Center Regional Office

Harlingen Regional Office  
Mount Pleasant Regional Office  
Wharton Regional Office  
Poultry Program Office (Nacogdoches)

A WQMP is a site-specific conservation plan developed through (and approved by) SWCDs for agricultural or silvicultural lands. The plan includes appropriate land treatment practices, production practices, management measures, technologies or combinations thereof. The purpose of WQMPs is to achieve a level of pollution prevention or abatement determined by the TSSWCB, in consultation with local soil and water conservation districts, that is consistent with state water quality standards.

The TSSWCB selected requirements for a WQMP based on the criteria outlined in the *Field Office Technical Guide (FOTG)*, a publication of the United States Department of Agriculture's Natural Resources Conservation Service (NRCS).

Nutrient management must be included if nutrients are applied. If an animal feeding operation is involved (such as an unpermitted dairy), a WQMP will be planned with practices that individually or in combination with other practices will properly manage animal wastes. Waste utilization will be considered when agricultural wastes are applied. These WQMPs also have subcomponents for irrigation waters, erosion control, and are flexible enough to cater to a wide range of operating systems.

Agricultural and forestry landowners may enter into these cooperative agreements with their local district to control nonpoint source pollution from their operations. While the decision to develop a plan is voluntary, landowners have many reasons to do so. These plans provide for landowners to use best management practices in their operations to protect their most precious agricultural resources by controlling erosion, conserving water, and protecting water quality. In addition, certified plans have the same legal status as Texas Commission on Environmental Quality (TCEQ) point source pollution permits, without having to go through that agency's regulatory process. Landowners may also receive financial incentives to help pay for implementing these plans.

It should be noted that an animal feeding operation that is required by law to operate within the confines of a water quality permit issued by the TCEQ may not participate in the TSSWCB program.

Water Quality Management Plans are especially useful for animal feeding operations. Depending on their size, animal feeding operations may be regulated by TCEQ as a point source or are unregulated and eligible for the TSSWCB's voluntary program. Generally, these feeding operations are classified according to the number of animals they have, calculated as "animal units"; however, TCEQ has adopted rules that provide if you have or exceed a certain number of animals, you will be regulated. Animal feeding operations with more than the number of animals listed in TCEQ rules must apply for a permit. Most animal feeding operations in Texas are not large enough to require a permit, which makes this program critical to protecting Texas' water quality.

In developing the Water Quality Management Plan, the TSSWCB, SWCDs, and the USDA Natural Resources Conservation Service (NRCS) provide technical assistance to help the landowner meet the criteria of the plan. A plan establishes practices and installations on the farm that adhere to best management practices specific for that area. The various installations that a plan calls for depend on the operation. A farm may include a combination of cropland, dairy cows, poultry, hogs or cattle.

These plans may also include erosion control measures such as terraces or grass waterways; or they may address nutrient management to help landowners avoid over-fertilizing their land, or over-applying animal waste. Although a plan will take into consideration each farm's unique components, all WQMPs generally attempt to control erosion, conserve water, and protect water quality.

Upon TSSWCB certification of a WQMP, a landowner may apply for a financial incentive that will help pay for implementing the plan. Local districts have varying rates for sharing the cost of plan implementation; however cost-share may not exceed 75% with a maximum \$10,000 grant limit per plan. Landowners receiving financial incentive have approximately are now given a specific time period to implement conservation practices, otherwise, their applications are cancelled automatically and the funds are reallocated to another plan. This approach hopefully will reduce the amount of lapsed funds.

The TSSWCB allocates money to local districts for financial incentives based on whether the area has impaired water bodies as determined by TCEQ, or if the TSSWCB had previously designated it as a priority. Most of these financial incentives were appropriated from General Revenue funds. Some plans received financial incentives from federal funds. State appropriations provided to local districts in FY08 amounted to \$2,171,740.00 to carry out a WQMP cost-share program in their district.

In addition to certifying WQMPs to ensure that they help abate nonpoint source pollution, the TSSWCB monitors WQMPs to ensure they are properly implemented. Each year, the TSSWCB conducts status reviews on a minimum of 10% of the plans. Additional technical assistance may be offered to a landowner when a WQMP is found noncompliant. In the unlikely case that the landowner does not achieve compliance with the WQMP, the TSSWCB may decertify the plan.

During FY03, the WQMP Program was administered from the TSSWCB office in Temple. The staff reductions in the FY04 budget made it necessary for the program to be reorganized and the Regional Offices activities are now coordinated through the Harlingen Regional Office. Additionally, plan certification authority was shifted from the Temple headquarters to each regional office. This change is already expediting the certification process and reducing postage expenditures, while maintaining the integrity and standards of the program.

The last adjustment involved the complaint process, which was also administered out of the headquarters office during FY03. Headquarters office no longer has an individual to do complaint inspections and all complaints are investigated from the appropriate Regional Office.

## **Current Status**

Through the end of the first quarter of FY-08, a total of 165 water quality management plans have been certified by the State Board. The period for obligating cost-share funds will run from September 1, 2007 to April 30, 2008. The total cost-share allocation for FY-08 is approximately \$1,946,000.00. Three new districts received allocations for the first time in FY-08.

During the next seven months, districts will be making every effort to minimize the amount of lapsed funds for the FY-06 funding cycle which expires on August 31, 2008.

The State Board successfully processed two appeals filed by producers and pertaining to their cost-share applications.

## **Poultry Water Quality Management Plan Initiative**

In 1994, the Texas State Soil and Water Conservation Board (TSSWCB) began assisting poultry operations with the establishment of the Northeast Texas - Senate Bill 503 Cost-share Area. Since 1994, over \$300,000 of WQMP Program funding has been provided annually to six soil and water conservation districts (SWCDs) in Northeast Texas to address animal feeding operations (AFOs). Shelby SWCD began receiving SB 503 funds in FY 2005 and the Nacogdoches SWCD began receiving SB 503 funds in FY 2007.

In 1995, the TSSWCB initiated three federal Clean Water Act, §319(h) projects to demonstrate composting as a means for dead bird disposal, buffer strips, and proper land application of poultry litter. In 1996, the TSSWCB expanded its efforts by initiating a composting and marketing project. This effort to promote the installation of composters and other means of mortality management on poultry farms resulted in accelerated WQMP development.

In 1997, the Texas Legislature passed Senate Bill 1910, which required all poultry farms to have a TCEQ-approved method of dead bird disposal. The law took effect in March 1998. However, the rules were not adopted and did not take effect until fall 1999. It was during this time that requests for poultry WQMPs significantly increased due to pursuit of cost-share for mandated mortality management. This activity intensified the TSSWCB's poultry initiative.

In 1999, in response to water quality concerns and the initiation of TMDL development in the Big Cypress/Lake O' the Pines watershed, the TSSWCB began using §319 funds for cost-share in the area in addition to the Senate Bill 503 cost-share funds already directed to the watershed. The current implementation process of the TMDL has shown that the WQMP program has resulted in reduced nutrient loadings in the watershed. Due to rising concerns in nearby watersheds, the TSSWCB also included the Sam Rayburn and Toledo Bend Reservoir watersheds in its initiative in 1999. The TSSWCB expanded the poultry initiative again in 2001 to the Gonzales area.

Beginning in 2001, seven soil and water conservation district (SWCD) technicians were employed under federal Clean Water Act §319 contracts to develop WQMPs in poultry producing areas. Six of those contracts expired in 2004 and the seventh expired in 2005. An eighth §319 district technician was hired in 2003 with the Shelby SWCD and that contract expired in August 2007. Two more positions were hired by local SWCDs in FY 2007 to help with WQMP development for the Sanderson Farms expansion in the Waco area. Those contracts have also expired.

### **Current Issues**

In October 2007, two technicians were hired by local Soil and Water Conservation Districts, with one expiring in August 2008 and the other in August 2009. Because of expiring contracts and difficulty retaining temporary contract SWCD staff, TSSWCB submitted a 2008-2009 Legislative Appropriations Request for 4 additional FTEs to replace the expiring SWCD technician positions, so as to continue technical assistance for poultry producers in these areas. The budget request was approved by the 80<sup>th</sup> Texas Legislature and took effect September 1, 2007. The four new positions are located in the four most heavily poultry populated areas of the state which are Shelby, Nacogdoches, Gonzales, and Leon Counties and they will also serve the poultry producers in surrounding counties. The 4 new positions are part of the TSSWCB Poultry Program reporting to the Nacogdoches Poultry Office.

In 2001, the 77<sup>th</sup> Legislature passed Senate Bill 1339, which requires all poultry facilities in Texas to operate in accordance with a WQMP certified by the TSSWCB. The review and certification process assures the plan includes appropriate practices, management measures, and schedules of implementation.

This law provided for a staggered-schedule of deadlines by which each producer, depending on their initial date of operation, must have requested the development of a WQMP from their soil and water conservation district. Any commercial poultry facility constructed after January 1, 2002 is required to have a WQMP prior to the receipt of any birds. All other commercial poultry facilities are required to have a WQMP no later than December 31, 2007.

Currently, the TSSWCB is aware of 1359 total dry-litter poultry farms, of which 1318 (97%) currently operate under a certified WQMP. The TSSWCB estimates that 16 farms need to request a plan before December 31, 2007. The other estimated 25 farms have already requested a plan and those plans are in various stages of development. However, there is an ongoing challenge of identifying new poultry farms continually being constructed and put into production and locating other poultry farms not yet identified. Sanderson Farms may need as many as 75 more new contract farms in the Waco area to supply a new processing plant that began operation in August 2007. TSSWCB staff has already been developing WQMPs for some of these proposed new farms.

Due to changes made by the U.S. Environmental Protection Agency (EPA) to the federal regulations for concentrated animal feeding operations (CAFOs), the Texas Commission on Environmental Quality (TCEQ) adopted a rule change in 2004 that required dry-litter poultry operations larger than 125,000 broilers or pullets, 82,000 layers or breeders, or 55,000 turkeys to operate under a water quality permit. However, due to a federal court decision by the U.S. 2<sup>nd</sup> Circuit Court of Appeals in February 2005, the EPA issued a notice that the date by which a permit and a Nutrient Management Plan must be obtained was extended to July 31, 2007 and EPA has since proposed that date be extended to February 27, 2009. Also in compliance with the court decision, the EPA released additional proposed rule changes in June 2006. Under the proposed new rule, farms that do not actually discharge wastes to waters of the U.S. are not required to apply for permit coverage, thereby eliminating the need for dry-litter operations to apply. In advance of EPA's final rule, TCEQ made a rule change in September 2006 to allow CAFO size dry-litter poultry farms an exemption to permitting if they obtain and follow a WQMP certified by TSSWCB. A supplemental guidance document is available from the TSSWCB for poultry producers that provides requirements in addition to the WQMP that are necessary to stay in compliance with the CAFO rules. Meetings will be held in six different poultry producing counties in January and February 2008 to inform poultry producers of those additional requirements.

In FY 2008, staff in the Poultry WQMP Program continues to develop, update, and review Water Quality Management Plans for poultry producers and provide assistance with all issues related to the Poultry WQMP Program. The Program Supervisor and three Natural Resource Specialists staff the Nacogdoches Poultry Office. There are also three Natural Resource Specialists located in Center, Centerville, and Gonzales. In addition, two new technicians were hired by local Soil & Water Conservation Districts (SWCD) in Nacogdoches and Shelby Counties to assist the Poultry WQMP Program in the Nacogdoches area. Approximately 627 (46%) of the estimated 1359 dry-litter poultry farms in Texas are located in an eight-county area surrounding Nacogdoches. Approximately 12 (2%) of the farms in those counties still need a WQMP developed. However, about 150 farms in the 8-county area are large enough to be defined as Concentrated Animal Feeding Operations (CAFO), which require annual inspections which could result in needed revisions to their WQMP. In addition, the other existing WQMPs are reviewed regularly

for needed updates and revisions. The office also assists other SWCDs in the state with poultry WQMP development and revision as needed.

## **Comprehensive Nutrient Management Plan Program**

The TSSWCB Comprehensive Nutrient Management Plan (CNMP) Program was developed in response to a control measure recommended in the TMDL *I-Plan for Soluble Reactive Phosphorus in the North Bosque River Watershed*. The I-Plan recommended that dairy producers in the watershed voluntarily develop and implement a CNMP; however, the TCEQ adopted a rule that made the recommendation a requirement. The CNMP Program is confined to the North Bosque River and Leon River watersheds by TSSWCB rule.

A CNMP is a resource management plan containing a grouping of conservation practices and management activities which, when combined into a conservation system, will help ensure that both agricultural production goals and natural resource concerns dealing with nutrient and organic by-products and their adverse impacts on water quality are achieved. A CNMP incorporates practices to utilize animal manure and organic by-products as a beneficial resource. The TSSWCB selected requirements for a CNMP based on the TCEQ rules and regulations required for permitted and unpermitted animal feeding operations and criteria outlined in the Field Office Technical Guide (FOTG), a publication of the United States Department of Agriculture's Natural Resources Conservation Service (NRCS). The FOTG represents the best available technology and is already tailored to meet the needs of soil and water conservation districts all over the nation. To be certified by the TSSWCB, the local SWCD, the producer, and the local NRCS Field Office must approve a CNMP.

As of December 14, 2007, the TSSWCB has certified 75 of the 87 CNMPs that have been submitted for approval. The TSSWCB, NRCS, and the Texas Association of Dairymen have held numerous meetings with dairy producers and technical service providers since January 2006 in an effort to facilitate development and submittal of CNMPs.

## **Statewide Bacterial Water Quality Impairment Reduction Initiative**

According to the 2004 *Texas Water Quality Inventory and 303(d) List*, one hundred ninety-seven (197) waterbodies are impaired because they do not meet surface water quality standards for bacteria established to protect contact recreation use (in freshwater or saltwater) and/or oyster water use. The magnitude of bacteria impairments in Texas is evident when compared to all other types of water quality impairments. These bacteria impairments represent over 50% of all impairments on the *303(d) List*.

As the lead agency in Texas responsible for the prevention, abatement, and management of NPS pollution from agricultural and/or silvicultural activities, the TSSWCB plays a critical role in addressing water quality impairments for bacteria. Many of these impairments have been attributed, at least in part, to grazing livestock or animal feeding operations.

In order to address these bacteria impairments, TSSWCB has continued to strengthen partnerships with industry commodity organizations including the Texas Farm Bureau, the Texas and Southwestern Cattle Raisers Association, the Independent Cattlemen's Association of Texas, the Texas Poultry Federation, the Texas Association of Dairymen and the Texas Pork Producers Association. Regular communication



includes notification of public stakeholder meetings for Total Maximum Daily Load or Watershed Protection Plan projects that will impact livestock operations.

Working with the USDA Natural Resources Conservation Service and the State Technical Committee, an Environmental Quality Incentives Program (EQIP) State Resource Concern for Water Quality in South Central Texas was established to provide livestock producers in the Peach Creek, Elm and Sandies Creeks, Atascosa River and Lower San Antonio River watersheds financial assistance in implementing best management practices (BMPs) to prevent and abate NPS pollution from their operations which may be contributing to the bacterial water quality impairment in those watersheds. This financial assistance to livestock producers supports implementation of TMDLs in these watersheds.

The magnitude of water quality impairments from excessive bacteria in Texas has resulted in a marked increase in the number of bacteria-related education, assessment, demonstration, and implementation projects initiated and directed by the TSSWCB. Most of these projects are funded through the agency's Clean Water Act §319(h) NPS Grant Program, but the agency is utilizing other funding mechanisms such as the USDA NRCS Grassland Reserve Program. Nearly two dozen projects are currently focused on the abatement of bacterial NPS pollution.

For more information on the TSSWCB Statewide Bacterial Water Quality Impairment Reduction Initiative, visit our website at <http://www.tsswcb.state.tx.us/managementprogram/initiatives/bacteria>.

## **Coastal Management Program**

### **Background**

The Texas Coastal Management Program (CMP) was created to coordinate state, local, and federal programs for the management of Texas coastal resources. The program brings in federal Coastal Zone Management Act (CZMA) funds to Texas state and local entities to implement projects and program activities for a wide variety of purposes. The Coastal Coordination Council (CCC) administers the CMP and is chaired by the Commissioner of the GLO. It comprises the chair or appointed representatives from the TPWD, the TCEQ, the TWDB, TxDOT, a member of the Texas State Soil and Water Conservation Board, a member of the RRC, the director of the Texas A&M University Sea Grant Program and four gubernatorial appointees. These members are selected to provide fair representation for all aspects concerning coastal issues.

The Council is charged with adopting uniform goals and policies to guide decision-making by all entities regulating or managing natural resource use within the Texas coastal area. The Council reviews significant actions taken or authorized by state agencies and subdivisions that may adversely affect coastal natural resources to determine their consistency with the CMP goals and policies. In addition, the Council oversees the CMP Grants Program and the Small Business and Individual Permitting Assistance Program.

The Coastal Zone Act Reauthorization Amendments (CZARA), Section 6217, requires each state with an approved coastal zone management program to develop a federally approvable program to control coastal nonpoint source pollution. The Texas CCC appointed a Coastal Nonpoint Source Pollution Control Program workgroup to develop this document. The National Oceanic and Atmospheric Administration and the U.S. Environmental Protection Agency jointly administer the program. In Texas, two agencies

hold primary responsibility for the program's development and implementation: the Texas Commission on Environmental Quality and the TSSWCB.

Section 6217 calls for implementation of management measures (§6217(g) measures or (g) measures) that will control significant nonpoint sources of pollution to coastal waters. Six source categories are addressed by these measures: agriculture, forestry, urban and developing areas, marinas, wetland/riparian areas, and hydro modification. States can use voluntary approaches combined with existing state authorities to achieve implementation of management measures. However, if the voluntary mechanisms are not effective, states must have backup enforcement authorities in place to ensure that management measures are implemented.

Texas submitted the Texas Coastal Nonpoint Source Pollution Control Program to EPA and NOAA in December 1998. In October 2000, Texas submitted the Texas Coastal NPS Control Program 15-year Program Strategy and FY 2001-2005 Implementation Plan.

Final findings were issued by NOAA/EPA in July 2003, which contained conditional approval of the program. The agricultural and silvicultural portions of the program were approved without conditions.

## **CURRENT STATUS**

The TSSWCB is responsible for implementing the agricultural and silvicultural management measures of the program. The main mechanism we have for this is the State's cost-share program for implementing Water Quality Management Plans on farms and ranches through local soil and water conservation districts (SWCD). For over eight years, more than \$300,000 of state funds has been spent annually in the coastal zone districts to provide cost-share to implement 1858 Water Quality Management Plans.

Prior to 2004, SWCDs in the Coastal Management Zone received grants from NOAA's §6217 Implementation Funds to install agricultural management measures through the TSSWCB Water Quality Management Plan program. In March 2004, NOAA issued final guidance for the program funds. The guidance no longer allows these funds to be used to implement agricultural best management practices on private lands. As a result, federal funding is no longer available for SWCDs to implement agricultural management measures beginning in FY06. In addition, the FY06 NOAA budget cut the Coastal Nonpoint Source Pollution Control Program funding by 70%. The FY06 amount Texas received was only \$112,000. No funding was available in FY07 for the coastal nonpoint source pollution control program. In the meantime, our Water Quality Management Plan program in the coastal management zone continues.

The TSSWCB works with TCEQ and other partners to implement watershed protection plans and TMDS in the coastal zone, as well as other areas of the State. The Arroyo Colorado Watershed Protection Plan Phase I, developed was finalized in January, 2007. One of the goals of the plan is to achieve the voluntary adoption of agricultural best management practices (BMPs) on 33% of the irrigated cropland (approximately 100,000 acres) by 2010 and 50% (approximately 150,000 acres) by 2015. Implementation of the silvicultural management measures in the coastal zone is through a CWA §319 grant from the TSSWCB to the Texas Forest Service.

## **Information Technology**

### **Celebrating Five Years of Open Source Network Services**

The TSSWCB IT department recently celebrated its fifth year of building, deploying and managing a statewide network of services that is based entirely on open source software solutions. Five years ago, the agency migrated its last network service off a proprietary software platform and onto an open source system, initiating what has since become a remarkable success story.

Open source software has become popular among many businesses and governments seeking to make use of applications that are often free of charge and yet have excellent track records of stability and security. The TSSWCB began its own migration following a period of problematic internal service disruptions and increases in support expenses related to its previous proprietary platform.

The advantages following the TSSWCB migration to open source systems have been numerous, though the savings in license procurement have certainly been one dramatic example. The software systems used at the TSSWCB are cost-free relative to procurement and licensing. The result of this has been that during the last five years, while the scope of IT operations increased dramatically, IT spending for network software has simultaneously dropped dramatically. During this period, agency spending on network software procurement and licensing has totaled \$0.00.

Beyond procurement savings, the advantages to the agency's user base of employees and soil and water conservation districts has included substantial increases in service availability, increased security of networked data, and a large increase in the number and types of services offered.

Using the increased savings in network software and licensing, the agency has been able to invest in more reliable and capable hardware for both its network infrastructure and its desktop PC environment. This has also led to yet another benefit by lowering the number of desktop hardware support issues and allowing employees to more productively carry out their roles of service to the state.

The TSSWCB is continuing to expand its network services, with open source solutions remaining at the forefront of its evaluation shortlist.

### **Network Migrations Bring Cost Savings and Increased Bandwidth**

Also in the later half of 2007, the agency completed its transition to digital subscriber line (DSL) service at field offices previously served by fractional T1 frame relay network connections. This project captured the twin benefits of significant cost savings and massive increases in available bandwidth.

The project was completed with the migration of offices in Dublin, Hale Center and Mount Pleasant where monthly costs for the new DSL lines are expected to net 80 percent savings when compared to the costs of the previous frame relay connections. Additionally, all offices in the project are profiting from an increase in upload bandwidth of between 50 to 100 percent and an increase in available download bandwidth of between 500 to 1,600 percent. Until recently, frame relay was the only technology available for delivering broadband service to the sites involved in this project.

The sole expense for this project was related to the purchase of the telecommunications service. The agency uses commodity PCs powered by open source software to operate as routers and provide office network services, resulting in no external costs for software, service or support.

Each of these telecommunication services were acquired through a vendor approved by the Texas Department of Information Resources. Offices in Harlingen and Wharton were previously migrated as part of this project.

### **Wireless Networking Upgrades**

Continuing the work begun during the first half of the year, the agency upgraded additional wireless access points and clients to the 802.11g wireless networking standard at offices where wireless networks are deployed.

The newer protocol provides increases in security and bandwidth for wireless local area networking. Security-sensitive areas, however, remain under the protection of additional protocols beyond those afforded by even the 802.11g specifications.

The bandwidth increases afforded by this upgrade have provided significant improvements for staff working with large data files over local networks. In many cases large data sets can be transferred between devices at a rate of two to four times that available through the previous system. The most recent upgrades occurred in the Hale Center, Harlingen, Wharton, Mount Pleasant and Dublin offices.

Wireless networks have proven themselves as a useful tool in enhancing the way agency employees are able to deploy information technology resources within agency offices. These networks allow for increased flexibility in how employees interact with representatives from other organizations and with citizens.

### **Increasing Data Security With Enhanced PC Backups**

The previous six months brought data security enhancements to most TSSWCB offices as the IT department began rolling out improved systems for desktop PC backups.

Previous methodologies required substantial interaction from employees to ensure successful backups. The new systems and methodologies being deployed automate the backup process entirely for desktop users and thereby ensure greater successes in backing up targeted systems.

### **PC Hardware Upgrades**

The second half of 2007 also saw a continuation of the work to replace the oldest and most problematic agency desktop PCs with more capable and reliable units. This work was part of a continuous process that aims to lessen the risk of unacceptable levels of downtime that could occur following PC hardware failures.

Each of the machines replaced was at or, in most cases, significantly beyond the PC life cycle recommendations from the Texas Department of Information Resources (DIR).

All purchases were made in accordance with DIR guidelines through a DIR-approved vendor. Most purchases were made using DIR's Buyer's Alert Program, which resulted in notable cost-savings during the purchase phase of this work.

## **Public Information /Education Report**

### **General Overview**

The purpose of the public information/education program is to provide leadership and coordination of information/education programs relating to the agency and district programs, services, operations and resources. The TSSWCB prepares and disseminates public information relative to the agency and district functions, programs, events and accomplishments for the public and to farmers and ranchers. TSSWCB staff coordinates seminars, conferences, workshops, displays at trade shows and training for district directors and district bookkeepers, conservation professionals, youth groups and other entities. Staff provides guidance to districts with their own individual information/education programs as well as regional and state information/education programs initiated by districts. Staff prepares and disseminates press releases, news stories and printed promotional products. The TSSWCB monitors the use of the publications and use of information. Staff represents the agency as needed with various information/education groups and entities. The TSSWCB has a cooperative agreement with the Association of Texas Soil and Water Conservation Districts to provide assistance and help coordinate district involvement and participation with Association's Information/Education Committee and its programs.

### **2007 Summer Teacher Workshops**

Several teacher workshops are held each summer for teachers interested in conservation and natural resource issues. The workshops are held in various parts of the state in cooperation with the TSSWCB. The Texas Environmental Education Advisory Committee to the Texas Education Agency approves the content of these workshops, sponsored by the TSSWCB. As an approved Environmental Education Professional Development Provider teachers are able to get credit hours toward their required continuing education units (CEUs), while experiencing nature and the outdoors.

Pedernales SWCD hosted a Teachers Workshop in Johnson City, Texas at the Franklin Family Ranch on June 12-14, 2007. Topics included grass management, soils, water cycle, plants in the Texas hill country, wildlife biology, and prescribed burning.

### **2008 Texas Conservation Awards Program**

Each year, the Texas State Soil and Water Conservation Board and the Association of Texas Soil and Water Conservation Districts co-sponsor the Texas Conservation Awards Program to recognize and honor those who dedicate themselves and their talents to the conservation and wise use of renewable natural resources. The 2008 Awards Program that is currently in progress marks the 30<sup>th</sup> year of this jointly sponsored program.

Local districts select their outstanding individuals as winners and submit them by mid-February each year for regional judging. Those selected as regional winners are honored each May at regional Awards

Banquets. From these regional winners, a state winner is selected for the Outstanding Conservation Districts, Outstanding Conservation Teacher, Poster Contest, and the Essay Contest. These individuals are invited to the Annual State Meeting for recognition.

The conservation awards program provides competition and incentives to expand and improve conservation efforts, resource development, and increase the wise utilization of renewable natural resources. As a result, soil and water conservation districts, and both rural and urban citizens of Texas are benefited.

Soil and water conservation districts may enter their local recognition honorees in any of 10 categories (East Texas has an additional category of Forestry Conservationist), depending on appropriateness to the category description. For the youth of the district, there is also a poster and essay contest. The categories and a brief description of each are:

### *Outstanding Conservation District*

Awarded to the winning soil and water conservation district in each area for the most outstanding program during the past fiscal year.

### *Resident Conservation Rancher*

Awarded to the outstanding resident conservation rancher in each area. They must be a resident of the district, perform ranching activities within the district and be a cooperater with the district from which the entry was submitted. The rancher may have other business or professional interests.

### *Resident Conservation Farmer*

Awarded to the outstanding resident conservation farmer in each area. They must be a resident of the district, perform farming activities within the district and be a cooperater with the district from which the entry was submitted. The farmer may have other business or professional interests.

### *Absentee Conservation Farmer/Rancher*

Awarded to the outstanding absentee conservation farmer or rancher in each area. They must reside outside the district, but operate farming or ranching activities within the district and be a cooperater with the district from which the entry was submitted. The person may have other business or professional interests.

### *Water Quality Management Plan*

Awarded to the outstanding Water Quality Management Plan recipient in each area. They must be a district cooperater who has a district approved Water Quality Management Plan and has incorporated water quality into their farming or ranching activities and soil and water conservation work.

### *Essay Contest –Two Categories (Those 13 and under and those 14 to 18 years of age)*

Essays (topic: “Celebrate Conservation”) are to be submitted to local soil and water conservation districts for local judging. Each local district will judge the entries and submit three essays to the TSSWCB for competition on the area level. Plaques will be awarded to 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners on the area level and state winners will be selected from the area winners. This contest is open to students, in two categories, one for those ages 13 and under, and the other category for those ages 14 to 18 years of age and does not jeopardize Texas University Interscholastic League eligibility.

### *Poster Contest*

Posters should address one of the following subjects: “Food for the Future” or “The Living Soil”. Posters shall be submitted to local soil and water conservation districts for local judging. Each local district will judge the entries and submit three posters to the TSSWCB for competition on the area level. Plaques will be awarded to the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place winners on the area level and state winners will be selected from the area winners. This contest is open to students, 12 years and under, and does not jeopardize Texas University Interscholastic League eligibility.

### *Business/Professional Individual*

Awarded to the outstanding man or woman in the business community who has rendered the most unselfish conservation service in each area. Representatives of the news media (radio, television, newspaper, magazines, etc) who contribute to or provide support for conservation shall also be considered eligible for this award. (This award is not for individual conservation practices or individuals who, because of employment, assist with or augment the work of the soil and water conservation district.)

### *Conservation Teacher*

Awarded to the outstanding teacher of conservation in schools in each area. Teachers of all grade levels are eligible for this award.

### *Wildlife Conservationist*

Awarded to the outstanding wildlife conservationist in each area. They must be a district cooperator who has incorporated wildlife conservation into their farming and ranching activities.

### *Conservation Homemaker*

Awarded to the outstanding conservation homemaker in each area. The homemaker and or family must own or operate a farm or ranch, be a district cooperator and have knowledge of the conservation programs being implemented.

### *Conservation District Employee*

Awarded to the outstanding soil and water conservation district employee who exhibits a degree of knowledge, skill, ability, and leadership that clearly results in superior job performance far above the basic requirements of the position.

### *Forestry Conservationist (Area IV only)*

Awarded to the outstanding forestry conservationist for the most outstanding farm forestry conservation program in the commercial forest areas of Texas. They must be a district cooperater or an individual who has implemented conservation practices on their land and has done missionary work for conservation and the district program.

## **Soil & Water Stewardship Public Speaking Contest**

The Soil & Water Stewardship Public Speaking Contest is open to high school FFA students interested in conservation. The contest is aimed at broadening students' interest and knowledge of conservation and how individuals must depend on and take care of the world around them for survival. The contest is coordinated through the Texas FFA, with contests at the local, area and state level. Local winners compete in the 10 state FFA areas and those winners compete for the state title. The theme of the 2007 contest is "Conservation's Power."

To prepare for the contest, students were to consult with their Agriculture Science teacher and work with their local soil and water conservation district. Students are encouraged to visit with their local SWCD to find out more about conservation practices in their area.

This project is a partnership between the Texas FFA, the Vocational Agriculture Teacher's Association of Texas, The Texas State Soil and Water Conservation Board, and the Association of Texas Soil and Water Conservation Districts. The State Winner of the Soil and Water Stewardship Public Speaking Contest is invited to attend the Annual State Meeting each year and asked to deliver their winning address.

## **Wildlife Alliance for Youth**

The Wildlife Alliance for Youth (WAY) contests offer opportunities at the local district level for 4-H and FFA students to demonstrate their knowledge of the outdoors on wildlife habitat and management, wildlife laws, sportsmanship and other factual information on wildlife. The program offers scholarships to contest winners. It is a powerful tool for students to become involved in conservation and obtain an appreciation for wildlife.

Agriculture Science students, who compete in the WAY Contest, first acquire the foundational knowledge and skills for this event through the Agscience 381 - Wildlife and Recreation Curriculum. The WAY contests address the following nine subject areas in Wildlife and Recreation Management: Wildlife Plant Identification; Wildlife Plant Preferences; Wildlife Biological Facts; Wildlife Habitat; Habitat Management; Game Laws; Hunter and Boater Safety; Compass and Pacing; and Identification Techniques. FFA and 4-H youth should have an understanding of these subject areas before they compete.

The WAY contests are held in the five Texas State Soil and Water Conservation Board areas. Area IV (East Texas) holds their contest in the fall. Area V (North Central), Area I (Panhandle), Area II (West Texas) and Area III (South Texas) all hold their contests in the spring. Each team is certified to the area level by their local SWCD. The WAY State Contest is held each year in one of the geographical areas of the state. Approximately 2,400 youth participate in the statewide competition.



The TSSWCB is the lead agency in sponsoring and organizing the contests. The Association of Texas Soil and Water Conservation Districts, USDA- Natural Resources Conservation Service, Texas Parks and Wildlife Commission, Cooperative Extension service, and the Texas Education Agency, along with local soil and water conservation districts (SWCD), all partner in the success of the youth organization.

## **State Woodland Clinic and Contest**

The Texas State Woodland Clinic and Contest is held annually in the month of April. It is a joint effort between local soil and water conservation districts, Stephen F. Austin University School of Forestry and the NRCS-USDA.

The contest is an opportunity for 4-H and FFA youth to demonstrate their expertise in different aspects of forestry management and skills in identification of needed practices and management techniques. Competition is between teams composed of four members representing either a 4-H Club or a FFA Chapter. Prior to the state contest several local districts conduct contests for 4-H Clubs and FFA Chapters within their district and the surrounding area.

The contest began in the late 1950s and was initiated by local SWCDs and timber industry personnel to develop forestry and woodland curriculum in schools in the commercial timber area of the state (East Texas Piney Woods). The clinic and contest have experienced widespread popularity and now has participation from outside of the commercial timber area on a regular basis. The state participation level for teams averages around 55 teams per year, with the vast majority of teams being composed of FFA Chapters. Winners at the state level are eligible to participate in the four states regional woodland contest held each May in one of four states. Texas, Louisiana, Arkansas and Oklahoma host the regional contest on a rotational basis.

## **Regional Woodland Contest**

The four states regional woodland contest is sponsored by soil and water conservation districts in each of the four states with program and technical support provided by USDA-NRCS and Resource Conservation and Development (RC&D), state organizations and industry personnel. The soil and water conservation districts in Texas hosted the first four states or southern regional woodland contest in 1984.

Each state is allowed to send a maximum of six teams to the regional contest. Each state has a competition that determines the six teams from that state that may enter in the regional contest. Those teams may be composed of individuals representing either a 4-H Club or an FFA Chapter.

## **Conservation Education Video Library**

The Association of Texas Soil and Water Conservation Districts has established and updates a conservation related video library that is maintained by TSSWCB staff on their behalf for the benefit of local districts and educators. Currently there are 194 conservation-related videos in the library available to districts and teachers. No rental fees are assessed to those wishing to borrow the videos from the library. However, the borrower will be responsible for return postage and insurance for the videos. Borrowing privileges are for a length of two weeks and must be returned upon date specified by the librarian. Videos can be ordered through your local soil and water conservation district or by contacting the TSSWCB.

From July to December, there have been 26 videos of various titles loaned out to districts and teachers across the state.

## **Nonpoint Source (NPS) Pollution Watershed Flow Model**

The NPS model is a hands-on representation of a landscape that allows students to understand how water sources can become polluted from nonpoint sources. The plastic landscape structure has industrial, undeveloped, agricultural, and residential and roadway features complete with individual houses, trees, cars, tractors and cows. When "rain" falls on the model, the runoff flows into a city lake. Using various products to add color to the water, the model demonstrates how potential pollutants are picked up by runoff.

The model is a layout of a watershed that includes all the factors that may contribute to polluting our water. (Urban features such as: factories, parking lots, construction sites, lawn chemicals and golf courses and Rural features such as: forested land, dairies, feedlots, cropland and pastureland). To demonstrate how each type of potential pollutant can enter a water body Kool-Aid and cocoa are used to color "runoff". Grape Kool-Aid is used to represent pollution from factories and oil from parking lots and roads. Orange Kool-aid represents pollution from lawn chemicals, golf courses, and cropland and pastureland chemicals. Cocoa is used to represent pollution from construction sites, forested land, dairies and feedlots. The Kool-aid and Cocoa are sprinkled on the model in the areas that represent each type of pollutant. Once all the pollutants are sprinkled on the model a spray bottle with water is use to represent rainfall. As the pollutants get wet and start to runoff the students can see how the water carries them to the streams and into the lake where we get our drinking water. Once all the pollutants have run into the lake the students can see how these factors have the potential to make surface waters unattractive and unsafe. This demonstration leads to a discussion about how to protect the water quality and prevent our water from looking like the model.

## **WATER CONSERVATION AND ENHANCEMENT PROGRAM STATUS REPORT**

### **BACKGROUND:**

The 80<sup>th</sup> Legislature continued funding for the Water Enhancement Program by providing \$1,848,927.00 in General Revenue Funds in FY08. These funds were directed to be used for continuation of brush control projects designated by the Soil and Water Conservation Board.

- Staff has been providing information on water yield to Dr. Rainwater and Dr. Fish for primarily the Twin Buttes, Pedernales, and Canadian River Watersheds.
- Provided the following SWCD with Brush Program Updates or Brush Program Assistance

#### **Area 1 Districts**

Dawson County SWCD

Upper Colorado SWCD

#### **Area 2 Districts**

North Concho River SWCD    Nolan County SWCD

Middle Concho SWCD        Eldorado-Divide SWCD

Tom Green County SWCD    Pedernales SWCD  
Mitchell County SWCD    Gillispie County SWCD  
Runnels SWCD    Pecos County SWCD  
Middle Clear Fork SWCD    Midland SWCD  
Trans Pecos SWCD    Sandhills SWCD  
Howard County SWCD

**Area 3 Districts**

McMullen County SWCD  
Caldwell/ Travis SWCD  
Waters Davis SWCD

**Area 5 Districts**

Archer County SWCD  
Lower Clear Fork/Brazos SWCD

- Evaluate pending application sub basin criteria from all projects
- Legislative update for Senator Duncan, Rep. Drew Darby, and Rep. Nathan Macias, and Senator Watson
- Assist TCEQ with Brush rider concerning water yield in State Brush Projects
- Met with CRMWA to discuss update on Canadian River Project and attend public meeting concerning the Environmental Impact study being conducted

The TSSWCB staff and other professionals have been discussing current water enhancement project throughout the State identifying the highest yielding areas of each project. The TSSWCB allocated money at the November 2007 meeting to the Twin Buttes and Pedernales Projects and began implementing Dr. Fish and Dr. Rainwater's selection and criteria report submitted to the TSSWCD at the November 2007 meeting. The TSSWCB staff and other professionals are currently studying the remaining projects. Money for other projects will be allocated at a later date by the TSSWCB contingent on receiving acceptable water yield data and project information based on Dr. Fish and Dr. Rainwater's report.

**SUMMARY OF BUDGET BY STRATEGY**  
80TH Regular Session, Fiscal Year 2008 Operating Budget

Agency code: **592**      Agency name: Soil and Water Conservation Board

<i>Goal/Objectives/STRATEGY</i>	<b>EXP 2006</b>	<b>EXP 2007</b>	<b>BUD 2008</b>
1 Soil and Water Conservation Assistance			
1 <i>Provide Prog. Expertise, Finan Asst. &amp; Tech Guide to All SWC Districts</i>			
1 PROGRAM MANAGEMENT & ASSISTANT	\$3,650,961	\$4,042,717	\$3,938,695
<b>TOTAL, GOAL 1</b>	<b>\$3,650,961</b>	<b>\$4,042,717</b>	<b>\$3,938,695</b>
2 Administer a Program for Abatement of Agricl Nonpoint Source Pollution			
1 <i>Reduce Agricultural/Silvicultural NPS Pollution w/ Prevention Program</i>			
1 STATEWIDE MANAGEMENT PLAN	\$4,979,361	\$4,869,571	\$5,251,094
2 POLLUTION ABATEMENT PLAN	\$4,032,722	\$4,161,758	\$4,346,251
<b>TOTAL, GOAL 2</b>	<b>\$9,012,083</b>	<b>\$9,031,329</b>	<b>\$9,597,345</b>
3 Protect and Enhance Water Supplies			
1 <i>Conserve and Enhance Water Supplies for the State of Texas</i>			
1 WATER CONSERVATION AND ENHANCEMENT	\$1,868,762	\$1,843,208	\$2,537,427
<b>TOTAL, GOAL 3</b>	<b>\$1,868,762</b>	<b>\$1,843,208</b>	<b>\$2,537,427</b>
4 Indirect Administration			
1 <i>Indirect Administration</i>			
1 INDIRECT ADMINISTRATION	\$433,826	\$478,398	\$546,323
<b>TOTAL, GOAL 4</b>	<b>\$433,826</b>	<b>\$478,398</b>	<b>\$546,323</b>

**SUMMARY OF BUDGET BY STRATEGY**

80th Regular Session, Fiscal Year 2008 Operating Budget

Agency code: 592

Agency name: Soil and Water Conservation Board

<i>Goal/Objectives/STRATEGY</i>	<b>EXP 2006</b>	<b>EXP 2007</b>	<b>BUD 2008</b>
<b>General Revenue Funds:</b>			
1 GENERAL REVENUE FUND	\$9,507,022	\$9,462,747	\$12,596,809
	<b>\$9,507,022</b>	<b>\$9,462,747</b>	<b>\$12,596,809</b>
<b>Federal Funds:</b>			
555 FEDERAL FUNDS	\$5,304,228	\$5,932,905	\$4,022,981
	<b>\$5,304,228</b>	<b>\$5,932,905</b>	<b>\$4,022,981</b>
<b>Other Funds:</b>			
777 INTERAGENCY CONTRACTS	\$154,382	\$0	\$0
	<b>\$154,382</b>	<b>\$0</b>	<b>\$0</b>
<b>TOTAL, METHOD OF FINANCING</b>	<b>\$14,965,632</b>	<b>\$15,395,652</b>	<b>\$16,619,790</b>
<b>FULL TIME EQUIVALENT POSITIONS</b>	<b>60.1</b>	<b>60.4</b>	<b>67.0</b>

## *Active CWA Section 319(h) Projects*

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
01-01 Administration of the FY2001 CWA Section 319(h) Agricultural/Silvicultural NPS Management Program	Administer/manage the FY01 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	4 /1 /2008	\$243,674
01-02 Statewide NPS Pollution Management Project	Provide technical assistance for FY01 CWA 319(h) agricultural and silvicultural projects and ensure that projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	4 /1 /2008	\$308,390
01-15 WQMP Initiative for the Pork Industry	The objective of this project is to determine the steps needed to assist unpermitted nonpoint source pork producers in meeting the requirements of the Texas Water Code and Texas Administrative Code §321.47 through the successful development of water quality management plans (WQMPs) certified in accordance with Texas Agriculture Code §201.026. The project will consist of the development, implementation, and demonstration of WQMPs containing cost-effective alternative manure and wastewater storage facilities on two pork operations chosen by the Texas Pork Producers Association (TPPA).	Texas Pork Producers Association	2 /3 /2006 3 /1 /2007	\$21,000
01-16 Environmental Regulatory Oversight	The objective of this project is to provide the Texas State Soil & Water Conservation Board guidance and assistance related to state/federal environmental requirements for unpermitted animal feeding operations.	TAMU & Eco-Environmental Services	2 /28/2006 2 /29/2008	\$161,000
01-17 Extending TMDL Efforts in the NBR Watershed	This project will provide storm and routine monitoring of tributaries that contribute nonpoint source loadings to an impaired water body in order to assess agricultural NPS reductions.	Texas Institute for Applied Environmental Research	3 /31/2006 3 /30/2008	\$441,755

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
01-18 Seymour Supplemental	The main goal of this project is to demonstrate management practices that mitigate nitrate movement in the soil within the Seymour Aquifer region. This project will generate and extend new knowledge to enhance Best Management Practices (BMPs) for nutrient and irrigation management within the Seymour Aquifer through establishment of a subsurface drip irrigation system at the Chillicothe Research Station. This project will also provide additional resources for quantifying and verifying the effectiveness of BMP implementation in reducing nitrate levels within the aquifer.	TWRI	3 /15/2006 3 /31/2008	\$83,254
01-20 TSSWCB NPS Team Support	This project will provide technical assistance for FY01 - FY05 (and beyond) CWA 319(h) agricultural and silvicultural projects to ensure that the projects meet all requirements.	TSSWCB	3 /1 /2006 1 /1 /2008	\$42,400
01-21 Maintaining Sediment Prevention through Repair of Floodwater-Retarding Structures in McCulloch County	This project will involve cooperative efforts between the TSSWCB, McCulloch SWCD #249 and the USDA-NRCS in an effort to provide technical and financial assistance for restoration of local floodwater retarding structures. Baylor University will conduct sedimentation surveys and sediment core analysis.	McCulloch SWCD #249	5 /1 /2006 1 /31/2008	\$338,398
01-22 Improvement and Standardization of Laboratory Quality Assurance and Quality Control for Mehlich III Soil Test Methodology: Phase 1	The objective of this project is to develop appropriate and standardized quality assurance/quality control and standard operating procedures (SOP) for use of the Mehlich III soil test extractant.	TCE- Soil and Crop Sciences	9 /1 /2006 3 /1 /2008	\$228,097
02-01 Administration of the FY2002 CWA Section 319(h) Agricultural/Silvicultural NPS Management Program	Administer/manage the FY02 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	4 /1 /2009	\$304,132
02-02 Statewide NPS Pollution Management Project	Provide technical assistance for FY02 CWA 319(h) agricultural and silvicultural projects and ensure that projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	4 /1 /2009	\$311,290

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
02-05 Little River Atrazine Remediation	This project will provide corn & sorghum producers in the Little River watershed with an opportunity to participate in water quality educational activities, technical assistance, and financial assistance for implementation of BMPs, to reduce atrazine runoff.	Central Texas SWCD #509	4 /9 /2002 4 /30/2008	\$483,482
02-11 Field Validation of the Texas Phosphorus Index	The objectives of this project are to determine the effects of selected soil properties on measured and predicted P runoff, compare and correlate different soil test & soil solution extractable P levels to runoff P, and validate and/or modify the TX P Index as a predictive tool for classification of field sites relative to P loss potential.	TCE- Soil and Crop Science	9 /27/2002 3 /31/2008	\$203,178
02-12 Three - Technicians	Three technicians will work under the direction of SWCDs, with assistance when needed from the TSSWCB regional offices, and NRCS to assist landowners in the development, implementation, &/or maintenance of WQMPs/BMPs. Technicians will be placed in three SWCDs and will work in adjacent SWCDs through cooperative agreements between the participating SWCDs.	Southmost SWCD	9 /11/2002 8 /31/2007	\$700,803
02-13 Oso Creek/Oso Bay Watershed Implementation Assistance	This project will consist of TSSWCB working cooperatively with the Nueces SWCD #357 in the Oso Creek/Oso Bay Watershed to provide technical and financial assistance to landowners in the implementation of WQMPs.	Nueces SWCD & TAES AREC (CC)	12/1 /2002 3 /31/2008	\$596,067
02-15 Water Quality Information/Education	Through the development of newspaper articles, informational brochures/flyers, display exhibits and promotional materials that include both water quality and water conservation messages a strategy can be developed to heighten the public awareness of the importance of protecting and conserving water resources.	TSSWCB	3 /31/2002 3 /31/2008	\$135,000



<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
02-21 SWAT Model Simulation of the Arroyo Colorado Watershed	This project will simulate the current nutrient, BOD, and sediment loading to the Arroyo Colorado using the SWAT model. Model output will provide the needed input for the EFDC model. To achieve this, the following objectives will be accomplished:(1) Collect meteorological, landuse, crops, flow, soils, topographic, irrigation and nutrient management, wastewater discharges, water quality, and other necessary data needed to model the Arroyo Colorado with SWAT(2) Calibrate SWAT watershed model to measured flow, sediment, BOD and nutrients(3) Simulate/validate flow, nutrient, BOD and sediment loads for current conditions(4) Simulate load reduction scenarios for a suite of management measures specified by the TSSWCB	Texas Water Resources Institute	6 /1 /2007 3 /1 /2009	\$94,997
03-01 Administration of the FY2003 CWA Section 319(h) Agricultural/Silvicultural NPS Management Program	Administer/manage the FY03 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	5 /3 /2010	\$154,231
03-02 Statewide NPS Pollution Management Project	Provide technical assistance for FY03 CWA 319(h) agricultural and silvicultural projects and ensure that projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	5 /3 /2010	\$245,109
03-06 E.V. Spence Saltcedar	This project will provide technical and financial assistance toward implementation of targeted brush control activities for the purpose of reducing NPS loadings from saltcedar in the E.V. Spence Reservoir.	TSSWCB	11/1 /2003 3 /31/2008	\$2,208,446
03-07 Bacteria Monitoring for Buck Creek	The objective of the project is to monitor water quality as related to bacterial NPS pollution in Buck Creek by in-stream water sampling to facilitate TMDL definitions and guidance if needed.	Texas Water Resources Institute	11/18/2003 9 /30/2007	\$247,198
03-08 Nitrate Impacts in Groundwater	The objectives of this project are to demonstrate the effectiveness of winter cover crops in removing nitrate-nitrogen from the soil profile to minimize nitrate leaching, demonstrate the ability of zeolite to reduce atrazine and arsenic concentrations in water, and assess the extent of atrazine and arsenic detections in private groundwater in the Seymour and High Plains of Texas.	Texas Cooperative Extension	11/24/2003 4 /30/2008	\$98,341

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
03-09 Central Texas WQMP Implementation Supplemental	The project will provide additional funding for the ongoing implementation efforts in the Little River watershed. TSSWCB projects (02-5 & 02-6) entitled Central Texas Atrazine Remediation Project.	Central Texas SWCD	10/31/2003 4 /30/2008	\$424,080
03-10 Technologies for Animal Waste Pollution	The objective of this project is to evaluate up to six technologies for decreasing nonpoint source pollution and improving surface water quality, through on-site demonstrations of reduction of total and soluble P in dairy effluent applied to waste application fields.	Texas Water Resources Institute	11/24/2003 3 /31/2008	\$227,793
03-11 Leaf Beetle Demonstration	The project will demonstrate the usefulness of biologically treating saltcedar in the Colorado River Basin in an effort to reduce NPS pollution loadings resulting from saltcedar on agricultural lands.	USDA- ARS	1 /15/2004 3 /31/2008	\$99,246
03-12 Navarro WQMP Implementation Supplemental	This project will provide corn and sorghum producers in the Richland Chambers Reservoir watershed with an opportunity to participate in water quality educational activities, technical assistance, and financial assistance to implement BMPs to reduce the runoff of atrazine.	Navarro SWCD #514	12/10/2003 8 /31/2008	\$430,279
03-15 Reducing Atrazine Losses in Central TX	The primary objective of this project is to demonstrate in field plots alternative means of protecting water quality from atrazine contamination and assess their impacts by simulating field conditions over a long period of time.	Texas Cooperative Extension	11/24/2003 8 /31/2007	\$101,271
03-19 SWQM for Plum Creek WPP	Generate data of known and acceptable quality for surface water quality monitoring (routine ambient, targeted watershed, stormflow, 24-hour DO, effluent and springflow) of main stem and tributary stations on Segment 1810 (Plum Creek) for field, conventional, flow, bacteria and effluent parameters to support development of a WPP for the Plum Creek watershed in Caldwell, Hays and Travis Counties.	Guadalupe-Blanco River Authority	6 /1 /2007 10/31/2008	\$109,000
04-01 Administration of the FY2004 CWA Section 319(h) Agricultural/Silvicultural NPS Management Program	Administer/manage the FY04 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	6 /1 /2011	\$154,220

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
04-02 Statewide NPS Pollution Management Project	Provide technical assistance for FY04 CWA 319(h) agricultural and silvicultural projects and ensure that projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	6 /1 /2011	\$375,231
04-03 Athletic Field Topdressing as a Commercial Market for Compost from Dairy Manure (Field of Dreams Project)	The purpose of this project is to gain commercial acceptance of blend of compost and sand for topdressing of athletic fields through demonstration on athletic fields.	Leon-Bosque RC&D	8 /4 /2004 1 /1 /2008	\$300,000
04-04 Field Validation of the Texas P Index in the Poultry Areas of Texas	The objectives of this project are to determine the effects of selected soil properties in Sam Rayburn Reservoir and Lake O' the Pines watersheds and other poultry producing areas of the state in East & South Central Texas to measure & predict P runoff and compare and correlate Mehlich III and soil solution soluble P extracts to runoff P.	TCE	8 /18/2004 9 /30/2008	\$390,657
04-05 Creekside Conservation Program Project	The purpose of this project is to protect Central Texas Highland Lakes by providing technical/financial assistance to landowners through the LCRA's Creekside Conservation Program and assess NPS reductions resulting from Creekside Conservation Program.	LCRA	8 /3 /2004 8 /31/2008	\$507,300
04-06 Modeling Nutrient Loads from Poultry Operations in the Toledo Bend & Sam Rayburn Reservoir Watersheds	This project will simulate nutrient loadings for pre and post implementation conditions in the Toledo Bend Reservoir and Sam Rayburn Reservoir watersheds.	USDA NRCS-WRAT	4 /11/2005 3 /31/2008	\$96,000
04-07 Technical Assistance and Implementation in West Fork of the Trinity River Watershed	This project will provide technical assistance to landowners in developing and implementing WQMPs within the West Fork of Trinity River Watershed.	Jack SWCD	8 /12/2004 8 /31/2007	\$100,000
04-08 WQMP Implementation Assistance in Falcon Reservoir	This project will coordinate technical assistance activities in the Falcon Reservoir Drainage Area in Zapata County between TSSWCB, SWCD, NRCS, & Kika De La Garza PMC and provide technical/financial assistance to landowners to aid in development/implementation of WQMPs.	Zapata SWCD	8 /17/2004 4 /30/2008	\$461,290

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
04-09 Seymour Aquifer Water Quality Improvement	This project will provide irrigators in Haskell, Knox, and Jones counties with opportunity to participate in water quality educational activities, technical assistance, financial assistance for implementation of BMPs, in order to improve water quality in Seymour Aquifer.	TWRI and Haskell, Knox and Jones SWCD	8 /19/2004 8 /31/2008	\$764,054
04-10 Phytoremediation of excessively high phosphorus soils and subsequent reduced P runoff into North Bosque River	The objective of this project is to develop and demonstrate year-round forage systems for both abandoned and currently used waste application fields that can reduce P loads that soon will or already exceeds safe levels of plant-available P on the North Bosque River drainage.	TAES - Stephenville	8 /30/2004 8 /31/2008	\$238,859
04-11 Watershed Protection Plan Development for the Pecos River	This project will assess the Pecos River Basin, increase landowner and stakeholder involvement through educational efforts, and develop a Watershed Protection Plan based on the river basin assessment.	TWRI	8 /25/2004 2 /29/2008	\$709,381
04-12 Assessment of Springtime Contributions of Nutrients and Bacteria to the NBR	This project will provide storm and routine monitoring of tributaries to the NBR in order to assess ag NPS reductions. The project will focus on springtime contributions of nutrients and bacteria to water quality within tributaries of the NBR, assessing reductions in pre- and post-TMDL implementation periods.	TIAER	8 /15/2004 8 /31/2008	\$90,090
04-13 Development of a Watershed Protection Plan for the Concho River Basin	This project will provide assessment of existing and potential water quality threats related to on-going NPS water pollution within the Concho River basin and develop a Watershed Protection Plan.	UCRA	8 /25/2004 2 /29/2008	\$375,240
04-14 Assessment and Mitigation of Agricultural and Other NPS Activities in the Cypress Creek Basin.	The primary goal of the project is to evaluate the effectiveness of selected BMPs in reducing nutrient inputs to Big Cypress Creek and Lake O' Pines by documenting runoff quality from sites representing dominant soil & land use types, with/out BMPs.	NETMWD	8 /3 /2004 3 /31/2008	\$442,805

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
04-15 Mathematical Model for Dispersal of Leaf Beetle, <i>Diorhabda Elongata</i> from Old World released in U.S. for Biological Control of Invasive Saltcedar	The goal of the project is to aid in the Implementation Plan for Sulfate and Total Dissolved Solids (TMDLs) in the J.B. Thomas, E.V. Spence and O.H. Ivey Reservoirs by biological control of saltcedar in riparian areas along the Colorado River of Texas and its tributaries.	ARS-USDA	10/27/2004 8 /31/2008	\$136,724
04-16 Nueces Basin Headwaters Stewardship Project	Using public education, the project will concentrate on water quality concerns, impairments, and threats to water quality and streambed conditions in five headwater stream segments of the Nueces River Basin.	NRA	9 /1 /2004 2 /28/2008	\$170,703
04-17 Plum Creek WPP	The purpose of this project is to coordinate the development of a Watershed Protection Plan for the Plum Creek Watershed and to facilitate beginning phases of implementation.	TCE	2 /24/2005 8 /31/2008	\$440,503
04-18 BMP Verification in Richland-Chambers Watershed	The purpose of the project is to verify the effectiveness of nutrient load reduction BMPs in the Richland-Chambers watershed.	TAES-Blackland	8 /1 /2005 7 /1 /2008	\$237,722
04-19 Regional Watershed Coordinator	The objective of this project is to successfully facilitate and coordinate watershed planning activities in the Wharton Regional Office service area.	TSSWCB	8 /31/2008	\$145,249
05-01 Administration of the FY2005 CWA Section 319(h) Agricultural/Silvicultural NPS Management Program	Administer/manage the FY05 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	9 /1 /2011	\$104,480
05-02 Statewide NPS Pollution Management Project	Provide technical assistance for FY05 CWA 319(h) agricultural and silvicultural projects and ensure that projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	9 /1 /2011	\$310,426

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
05-03 Ellis Prairie SWCD Project	This project will provide technical/financial assistance to qualifying producers on appropriate BMPs to reduce sediment, nutrient, and pesticide runoff and provide water quality educational events.	Ellis-Prairie SWCD	8 /1 /2005 8 /31/2008	\$433,700
05-04 Silvicultural NPS Abatement	This project will reduce significant risks to water quality from silvicultural NPS pollution by implementing BMPs and increasing silvicultural NPS awareness by completing a statewide evaluation of silvicultural BMP implementation, providing technical assistance, education, coordination, and monitoring the effectiveness of forestry BMPs.	TFS	9 /1 /2005 8 /31/2008	\$574,521
05-05 Watershed Education	The purpose of this project will be to develop and deliver an educational curriculum which functions to support the TSSWCB's effort to prepare a Watershed Protection Plan in the target watershed.	TCE	9 /1 /2005 8 /31/2008	\$358,041
05-06 PLAN	The objective of this project is to educate 3rd party applicators of poultry litter to the environmental benefits of using proper application management techniques on new sites.	TCE	9 /1 /2005 8 /31/2008	\$210,002
05-07 Impact of Proper Fertilizer Management	The objective of this project is to implement fertilizer management practices on cultivated and pasture fields to demonstrate the importance of using proper management relating to application method, timing, and rate, and conduct demonstration/educational activities on the importance of proper organic fertilizer management.	TCE	9 /1 /2005 8 /31/2008	\$186,352
05-08 Peach Creek Project	This project will provide agricultural producers in the Peach Creek watershed with an opportunity to participate in water quality educational activities, technical assistance, and financial assistance for the implementation of Best Management Practices (BMPs), in order to improve water quality.	Gonzales SWCD	9 /1 /2005 8 /31/2008	\$465,123

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
05-09 Lake Granger Project	The Brazos River Authority will facilitate the development of a Watershed Protection Plan for the Lake Granger Watershed. This project will also provide the Little River-San Gabriel and Taylor SWCDs with funding for technical/ financial assistance to implement BMPs through conservation planning.	BRA & Little River-San Gabriel and Taylor SWCD's	9 /1 /2005 8 /31/2008	\$814,168
05-10 Arroyo Eduation Project	The purpose of this project is to educate agricultural producers on how to better produce and manage their acreage and support and promote associated programs implementing BMPs related to water quality protection.	TWRI	9 /1 /2005 8 /31/2008	\$103,959
05-12 Arroyo WQMP Project	This project will provide technical assistance to landowners to aid in the development and implementation of a minimum of 78 WQMPs in the Arroyo Colorado Watershed.	Hidalgo & Southmost SWCDs	9 /1 /2005 8 /31/2008	\$970,478
05-13 Composting Support - DMES	The project consists of the TSSWCB working cooperatively with participating entities, dairy producers, manure haulers, and others in the Bosque and Leon River watersheds to provide financial assistance to manure haulers in the creation and removal of a marketable-composted product.	TSSWCB	9 /1 /2005 9 /30/2007	\$228,000
06-01 Administration of the FY2006 CWA Section 319(h) Agricultural/Silvicultural Nonpoint Source Management Program	Administer and manage the FY2006 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	10/1 /2006 9 /1 /2011	\$294,343
06-02 FY06 Statewide NPS Pollution Management Project	Provide technical assistance for FY06 CWA 319(h) agricultural and silvicultural projects and to ensure that the projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	10/1 /2006 9 /1 /2011	\$487,998
06-03 TSSWCB NPS Team Support	Provide technical assistance for FY01 - FY06 CWA 319(h) agricultural and silvicultural projects to ensure that the projects meet all	TSSWCB	10/1 /2006 9 /1 /2011	\$44,000

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
06-04 Improvement and Standardization of Laboratory Quality Assurance and Quality Control for Mehlich III Soil Test Methodology: Phase 2	The purpose of this project is to develop appropriate and standardized quality assurance/quality control and standard operating procedures (SOP) for use of the Mehlich III soil test extractant.	Texas Cooperative Extension	10/1 /2006 9 /30/2009	\$100,786
06-05 Lone Star Healthy Streams	This project will reduce the levels of bacterial contamination of Texas watersheds from grazing livestock (beef cattle) by developing an educational curriculum that delivers current knowledge training in production and environmental management of grazing lands and their associated watersheds, evaluating and demonstrating the effectiveness of BMPs in reducing bacterial contamination of streams and water bodies from grazing lands, testing the functionality of the education program and make necessary changes and program modifications based on the results, and promoting Statewide adoption of appropriate best management practices (BMPs) and other watershed / water quality protection activities through education, outreach and technology transfer.	Texas Water Resources Institute	10/1 /2006 9 /30/2009	\$404,673
06-06 Envirocast Phase II	The principal goal of e-Life is to continue developing public understanding and awareness of watershed issues through environmental stories and features broadcasted during e-Life segments. The second phase will build upon the e-Life broadcasting platform and Web tools established during the first phase. By continually exposing the North Central Texas public to e-Life concepts, the project aims to help the public adopt NPS pollution prevention behaviors.	NCTCOG	2 /1 /2007 4 /30/2008	\$272,785
06-07 Monitoring and Educational Programs Focused on Escherichia coli Bacteria and Nutrient Runoff on Dairy Operations in the Leon Watershed	The objectives of this project are to evaluate the presence of E. coli bacteria and nutrients on livestock operations and determine the risks of movement of E. coli and nutrients to surface waters, educate livestock producers about best management practices to decrease E. coli bacteria and nutrients in runoff from livestock operations, and determine the source(s) of E. coli in runoff from the sites and its relative contribution to the E. coli populations downstream of the waste application fields.	Texas Cooperative Extension	10/1 /2006 9 /30/2009	\$438,357



<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
06-08 Education Program for Improved Water Quality in Copano Bay	The objective of this project is to improve the water quality in Copano Bay and its tributaries by increasing awareness of the water quality issues throughout the watershed and providing education and demonstrations for landowners and livestock owners in the watershed on practices to decrease or prevent bacteria from entering waterways.	Texas Water Resource Institute	10/1 /2006 9 /30/2009	\$211,794
06-09 WQMP Implementation in the Middle and South Bosque River Watersheds	This project will provide technical and/or financial assistance to landowners to aid in the development and implementation of WQMPs and compile information on the location and types BMPs for each WQMP implemented.	TSSWCB	11/1 /2006 9 /30/2009	\$527,770
06-10 Arroyo Colorado Agricultural Nonpoint Source Assessment	This project will better characterize agricultural runoff in the Arroyo watershed, demonstrate, and evaluate BMP effectiveness, and measure progress in achieving water quality goals in the watershed. The objectives of the project are to perform a complete historical data review and analysis related to water quality and agricultural best management practices implemented in the watershed, investigate site-specific differences and temporal variation of water quality in drainage from agricultural production areas, and collect data for future recalibration of SWAT model to better estimate the total nonpoint source loading into the river.	Texas Water Resources Institute	10/1 /2006 9 /30/2009	\$430,650
06-11 Buck Creek WPP	The objectives of this project are to identify specific sources of the bacteria in Buck Creek, evaluate potential management alternatives for restoring the waterbody and educate landowners on the best management practices, and develop a watershed protection plan to restore the waterbody through a stakeholder driven process.	Texas Water Resources Institute	10/1 /2006 9 /30/2009	\$430,181
06-12 Leon River WPP	The objectives of this project are to use a locally-driven, stakeholder process to develop a Watershed Protection Plan for the Leon River Watershed above Lake Belton; enhance data collection efforts to support and facilitate implementation activities; provide the TSSWCB and the TCEQ with recommendations on implementation strategies that can be incorporated into the TMDL Implementation Plan; and provide an overall assessment of the Leon River Watershed above Lake Belton.	Brazos River Authority	10/1 /2006 9 /30/2009	\$440,525

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
06-13 Three EQIP Technicians	The objective of the project is to provide technical assistance to landowners to aid in the development, implementation, and/or maintenance of WQMPs through SB503, Clean Water Act (CWA) Section 319(h) and EQIP funds and compile information on the location and types BMPs for each WQMP implemented.	Karnes, Atascosa, & Dewitt SWCDs	12/1 /2006 9 /30/2009	\$387,900
06-15 SWQM for Copano Bay TMDL	The objective of this project is to provide quality assured surface water quality monitoring data to support development of bacteria TMDLs for Copano Bay and Mission and Aransas Rivers in Aransas, Bee, Goliad, Karnes, Refugio, and San Patricio Counties.	Nueces River Authority	1 /1 /2007 9 /30/2009	\$214,388
07-01 Administration of the FY2007 CWA Section 319(h) Agricultural/Silvicultural Nonpoint Source Management Program	Administer/manage the FY07 CWA 319(h) cooperative agreement between EPA and TSSWCB. Coordinate with project cooperators on administrative related issues and manage the financial aspects of each contract.	TSSWCB	10/1 /2007 9 /30/2010	\$290,000
07-02 FY2007 Statewide Agricultural/Silvicultural NPS Management Program	Provide technical assistance for FY07 CWA 319(h) agricultural and silvicultural projects and ensure that projects meet all technical requirements and are successfully completed in a timely fashion.	TSSWCB	10/1 /2007 9 /30/2010	\$460,000
07-03 Adaptation of AVGWLF watershed model for use in Texas: Phase I	The purpose of this project is to test and modify the AVGWLF watershed model for use in selected areas of Texas and surrounding states.		10/1 /2007 9 /30/2010	\$122,623
07-04 Management Repository of Agricultural and Silvicultural Environmental Data	Development of a comprehensive, user-friendly database that will house data collected via CWA §319(h) Grant Program funds allocated to and through the Texas State Soil and Water Conservation Board.	Blackland Research & Extension Center	10/1 /2007 9 /30/2010	\$323,342

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
07-05 LCRA Soil and Water Stewardship Program	Protect the Texas lower Colorado River basin by providing educational, technical and financial assistance to landowners through the Lower Colorado River Authority's Soil and Water Stewardship Program. Assess NPS reductions resulting from the Soil and Water Stewardship Program. Join with local soil and water conservation districts in promoting and educating agricultural producers and local stakeholders on abatement of NPS pollution through implementation of conservation practices and promotion of Water Quality Management Plans.	LCRA	10/1 /2007 9 /30/2010	\$458,224
07-06 Fate and Transport of E. coli in Rural Texas Landscapes and Streams	The main objectives of this project are to identify, characterize, and quantify E. coli loads resulting from various sources in an impaired watershed, monitor survival, growth, re-growth, and die-off of E. coli under different environmental conditions, monitor re-suspension of E. coli in streams, and educate stakeholders by disseminating qualitative and quantitative information acquired in this monitoring and demonstration project.	TWRI	10/1 /2007 9 /30/2010	\$300,000
07-07 Assessment of NPS Pollution from Cropland in the Oso Bay Watershed	The long-term goal of this project is to support program implementation efforts of the TSSWCB, the Nueces SWCD #357, and the TCEQ established to protect and restore the water quality of the Oso Bay and Oso Creek water bodies from NPS. Goals and objectives pursued in the project are the assessment of runoff-related loadings of nutrients, selected inorganic ions, suspended sediments, and bacteria (Enterococcus) from the Oso Creek's watershed and (the development of a better understanding of the role of these runoff-related loadings on the dynamics of water quality properties in these water bodies	TAES-CC	10/1 /2007 9 /30/2010	\$165,050
07-08 Regional Watershed Coordinator	The objective of this project is to successfully facilitate and coordinate watershed planning activities in the Wharton Regional Office service area.	TSSWCB	10/1 /2007 9 /30/2010	\$194,000

<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
07-09 Statewide Implementation of the Texas Watershed Steward Program	The objective of this project is to facilitate statewide implementation of the Texas Watershed Steward (TWS) program through watershed-based group trainings and computer-based distance training components. · This project will increase stakeholder involvement in the WPP and/or TMDL development processes by educating and organizing local citizens and to promote healthy watersheds by increasing citizen awareness, understanding, and knowledge about the nature and function of watersheds, potential impairments, and watershed protection strategies to minimize nonpoint source pollution.	TCE	10/1 /2007 9 /30/2010	\$520,000
07-10 Broad-based Communication and Forecasting for Environmental Quality (Envirocast- Houston)	This project will develop a plan of action to create and maintain a website for water quality & other environmental issues and environmental quality broadcast spots to educate the public in the target watersheds in partnership with StormCenter Communications Inc. and Houston Channel 11 (CBS Affiliate); develop partnerships with state, federal and regional agencies and local governments as local content providers to provide information for the website and broadcast spots; publicize and promote the project; train partnering station and local content providers on developing, implementing and utilized the Envirocast tools; evaluation of Phase I; project administration.	HGAC	10/1 /2007 9 /30/2010	\$725,000
07-11 Lampasas River Watershed Assessment and Protection Project	The purpose of this project is to work in concert with federal, state and local partners to coordinate a stakeholder driven process for the development of a WPP in the Lampasas River Watershed that is consistent with EPA's nine essential elements fundamental to a potentially successful WPP.	TAES- BREC	10/1 /2007 9 /30/2010	\$498,422
07-12 Assessing Water Quality Management Plan Implementation in the Middle and South Bosque River and Hog Creek Watersheds	This project will provide storm and routine monitoring of the Middle and South Bosque River and Hog Creek watersheds in order to assess ag NPS reductions associated with implementation of WQMPs within waterbodies of concern for nitrite-nitrate nitrogen. A secondary objective is to monitor reductions in bacteria concentrations through routine grab sampling.	TIAER	10/1 /2007 9 /30/2010	\$308,640

	<i>Project Name</i>	<i>Project Description</i>	<i>Lead</i>	<i>Period</i>	<i>Federal</i>
07-13	Identify and Characterize NPS Bacteria Pollution to Support Implementation of Bacteria TMDLs in the Oso Bay Watershed	To provide information on nonpoint sources of enterococci in the upstream section of Oso Creek to state agencies and local planning entities in support of the Implementation Phase of the Oso Creek/Oso Bay watershed TMDL	Texas A&M University-Corpus Christi	10/1 /2007 9 /30/2010	\$442,372
07-14	Agricultural NPS Remediation in the Cedar Creek Reservoir Watershed	The project's goal is to reduce nutrient and sediment loading to Cedar Creek Reservoir by implementing BMPs on crop and pasture lands. The objectives are to encourage BMP implementation by providing landowners with technical and financial assistance through the Kaufmann-Van Zandt SWCD and educational programs through Texas Cooperative Extension. Effectiveness of BMPs will be assessed by TAES.	Kaufman-Van Zandt SWCD #505	10/1 /2007 9 /30/2010	\$736,619