



TEXAS STATE SOIL AND WATER CONSERVATION BOARD WATER SUPPLY ENHANCEMENT PROGRAM

2014 ANNUAL REPORT JANUARY 1, 2014 – DECEMBER 31, 2014

BACKGROUND

Scarcity and competition for water have made sound water planning and management increasingly important. The demand for water in Texas is expected to increase by about 22%, to a demand of nearly 22M ac-ft in 2060; while existing water supplies are projected to decrease by about 10%, to just over 15M ac-ft (*2012 State Water Plan*, Texas Water Development Board).

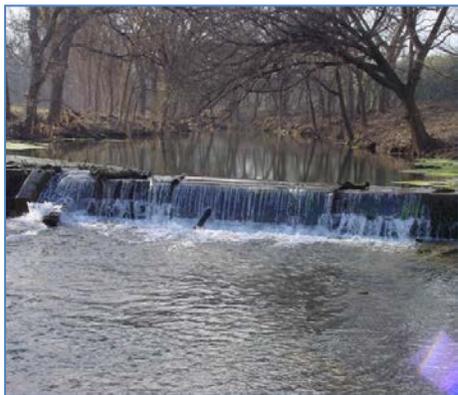
Noxious brush, detrimental to water conservation, has invaded millions of acres of rangeland and riparian areas in Texas, reducing or eliminating stream flow and aquifer recharge through interception of rainfall and increased evapotranspiration.

In order to help meet the State’s critical water conservation needs and ensure availability of public water supplies, in 2011 the 82nd Texas Legislature established the Water Supply Enhancement Program

(WSEP) administered by the Texas State Soil and Water Conservation Board (TSSWCB). The purpose of the WSEP is to increase available surface and ground water supplies through the targeted control of brush species that are detrimental to water conservation.

<u>PROGRAM BUDGET</u>		
FY2014	\$2,135,413	General Revenue
FY2015	\$2,135,413	General Revenue

The TSSWCB collaborates with soil and water conservation districts (SWCDs) and other entities to identify watersheds across the state where it is feasible to implement brush control in order to enhance public water supplies. WSEP funds may only be allocated to projects that have a completed feasibility study that includes a site-specific computer-modeled projected water yield.



The TSSWCB uses a competitive grant process to rank feasible projects and allocate WSEP grant funds, giving priority to projects that balance the most critical water conservation need of municipal water user groups with the highest projected water yield from brush control.

In watersheds where WSEP grant funds have been allocated, the TSSWCB works through SWCDs to deliver technical assistance to landowners in order to implement brush control activities. A 10-year resource management plan is developed for each property enrolled in the WSEP which describes the brush control activities to be

implemented, follow-up treatment requirements, and brush density to be maintained after treatment. Cost-share assistance is then provided through the WSEP to landowners implementing brush control activities on eligible acres consistent with their resource management plan.

In accordance with Texas Agriculture Code §203.056, the TSSWCB publishes this statutorily-required *WSEP Annual Report* which serves as a comprehensive analysis of the program's effectiveness during the preceding calendar year. This *Annual Report* documents program results, assesses the program, reports on program participant compliance with resource management plans, and reports overall projected water yield enhanced.

More information on the WSEP is available at <http://www.tsswcb.texas.gov/brushcontrol/>.

PROGRAM PURPOSE AND GOALS

The statutorily-defined purpose of the WSEP is to increase available surface and ground water through:

- the selective control, removal, or reduction of noxious brush species, such as juniper, mesquite, saltcedar, or other phreatophytes, that consume water to a degree that is detrimental to water conservation; and,
- the revegetation of land on which this noxious brush has been controlled, removed, or reduced.

Accountability for state-funded grant programs administered by the TSSWCB necessitates that for each program, the agency establish goals along with evaluation criteria, compliance monitoring, and methods for analysis. WSEP goals, as recommended by the Stakeholder Committee, were adopted by the TSSWCB and describe the intended use of a public water supply enhanced by the program and the populations that the program will benefit.



General Goals

- Enhance domestic and municipal uses, including water for sustaining human life and the life of domestic animals, agricultural and industrial uses (which means processes designed to convert materials of a lower order of value into forms having greater usability), commercial value, and environmental flows.
- Enhance mining and recovery of minerals, power generation, navigation, recreation and pleasure, and other beneficial uses.

Specific Goals

- Implement project proposals that most enhance water quantity to the municipal water supplies most in need.
- Direct program grant funds toward acreage within an established project that will yield the most water.

2014 ACTIVITIES AT A GLANCE

Since the 82nd Texas Legislature enacted House Bill 1808 in 2011, the agency has been diligently taking steps to implement the statutorily-required program modifications. In order to provide recommendations to the agency and guide the decisions of the State Board, the TSSWCB established a Stakeholder Committee of program beneficiaries and a Science Advisory Committee of technical experts. The TSSWCB hosted meetings and conference calls of both committees during 2014 to discuss program implementation issues.

The TSSWCB adopted comprehensive rules (31 TAC Chapter 517, Subchapter B) in March 2012 (effective April 2012) addressing many aspects of House Bill 1808, transitioning the rules from the “old” Brush Control Program to the “new” WSEP. Further amendments to the rules were adopted by the TSSWCB in July 2014 (effective September 8, 2014) to continue implementing provisions of House Bill 1808 and ensure consistency with programmatic policies and documents.

In accordance with Texas Agriculture Code §203.051, the TSSWCB must prepare and adopt the *State Water Supply Enhancement Plan*. The *State Water Supply Enhancement Plan* serves as the State’s comprehensive strategy for managing brush in all areas of the state where brush is contributing to a substantial water conservation problem and also serves as the programmatic guidance for the agency’s WSEP. After an extensive and inclusive public comment process during June and July 2014, including a required public hearing, the State Board adopted the new *State Water Supply Enhancement Plan* on July 28, 2014. The *State Plan* documents the goals, processes, and results the agency has established for the WSEP. The *State Plan* discusses in detail all of the changes made to the program as a result of House Bill 1808. The *State Plan* is a “living” document and must be reviewed at least every two years.

When the State Board adopted the *State Water Supply Enhancement Plan* in July 2014, staff was directed to continue working with those interested in improving the *State Plan*. Some of the issues have been referred to the Stakeholder Committee and/or the Science Advisory Committee. A series of public outreach meetings, targeted to those who originally provided comments during the public comment period, will be held in January 2015 to discuss specific topics and receive constructive input on refining the *State Plan*.



During FY2014, the agency’s internal auditor completed an audit of the WSEP. The objective of the audit was to assess all aspects of the WSEP and the changes implemented by the agency in response to House Bill 1808 in order to determine compliance with the Agriculture Code. The *Final Report* on the audit concludes that the agency “has implemented the necessary administrative rules, policies and operating procedures to comply with all provisions of... HB1808 related to the WSEP” and that the agency “is doing an excellent job of implementing the directives of the Legislature as it makes changes to the... overall operations of the WSEP.” Further, the report makes no recommendations for improvement.

On January 16, 2014, the State Board approved the allocation of \$1,448,730 in FY2014 cost-share funds to 11 WSEP projects. On May 15, 2014, the State Board de-allocated \$244,703 in unexpended FY2014 cost-share funds from 2 WSEP projects, and reallocated those funds to 4 additional WSEP projects.

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|---|--|
| <ul style="list-style-type: none"> • Edwards Aquifer Recharge Zone
– Frio River • Edwards Aquifer Recharge Zone
– Sabinal River • Edwards Aquifer Recharge Zone
– Medina River • Edwards Aquifer Recharge Zone
– Frio River (BSR1)¹ • Edwards Aquifer Recharge Zone
– Frio River (AR) • Lake Brownwood | <ul style="list-style-type: none"> • Edwards Aquifer Recharge Zone
– Upper Nueces River • Lake Travis (Pedernales River) • Edwards Aquifer Recharge Zone
– Frio River (BSR2)¹ • Lake Arrowhead (Clay County) • Carrizo-Wilcox Aquifer² • Lake Arrowhead (Baylor County) • Lake Nimitz / Upper Guadalupe River • Lake Arrowhead (Archer County) |
|---|--|

¹ unexpended cost-share funds de-allocated from this project

² this project received an allocation in both January and May

On September 18, 2014, the State Board approved the allocation of \$1,436,590 in FY2015 cost-share funds to 13 WSEP projects.

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| <ul style="list-style-type: none"> • Edwards Aquifer Recharge Zone
– Frio River • Lake Brownwood • Edwards Aquifer Recharge Zone
– Upper Nueces River • Carrizo-Wilcox Aquifer • Lake Arrowhead (Baylor County) • Lake Nimitz / Upper Guadalupe River | <ul style="list-style-type: none"> • Lake Arrowhead (Archer County) • Twin Buttes Reservoir (Schleicher County) • Lake Kemp • Twin Buttes Reservoir (Tom Green County) • Twin Buttes Reservoir (Irion County) • Canyon Lake / Upper Guadalupe River • E.V. Spence Reservoir |
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Throughout the year, WSEP staff assisted SWCDs and conservation planners with implementation of the program in project watersheds, and worked with landowners to develop cost-share contracts.

The agency’s Legislative Appropriations Request (LAR) for the 2016-2017 biennium was submitted to the Legislative Budget Board in 2014. In addition to the base request for WSEP funding, the LAR includes an exceptional item request for \$2M across the biennium for additional WSEP funding in order to partially meet unmet demand for cost-share to landowners and to conduct new feasibility studies.

On September 23, 2014, the Texas House of Representatives Committee on Agriculture and Livestock held a hearing relating to the Committee’s interim charges. The Committee heard nearly three and a half hours of invited and public testimony on the WSEP. An archived video of the hearing is available.

Throughout the year, WSEP staff participated in a variety of meetings in order to communicate and exchange ideas regarding the WSEP. Agency staff made presentations on the WSEP to the Water Conservation Advisory Council, the Texas Invasive Plant and Pest Council, and the Texas Alliance of Groundwater Districts.

Additionally, WSEP staff has been actively working with the Texas Water Development Board and several of the 16 Regional Water Planning Groups to ensure the Groups are aware of the changes to the WSEP as they develop their next *Regional Water Plans*. Throughout the year, agency staff made presentations on the WSEP to Regions F, G, K, N, and O. And, specifically, WSEP staff has been working with Region G and their consultant to develop a template brush control water management strategy that could be used by any of the Groups to include the WSEP and brush control in their next *Regional Water Plans*.

STATUS REVIEWS

Cost-share agreements between the TSSWCB and landowners contain a commitment on the part of the landowner, at no cost to the State, to maintain areas for which cost-share funding for brush control was received for a period of ten years after the initial brush control is accomplished. Maintenance includes periodically re-treating the area with appropriate brush control methods to prevent brush reinfestation over the duration of the contract period.

The *State Water Supply Enhancement Plan* lays out the general schedule for follow-up treatment, which is detailed in each landowner's resource management plan:

- Mesquite, Mixed Brush, Saltcedar: Follow-up treatment is scheduled three (3) years after initial treatment if canopy (target species only) is above 5%.
- Juniper: Follow-up treatment is scheduled eight (8) years after initial treatment if canopy (target species only) is above 5%.

The TSSWCB performs status reviews of cost-share contracts to verify compliance with follow-up treatment requirements over the course of the 10-year contract and resource management plan. The *State Water Supply Enhancement Plan* describes the general schedule for status reviews:

- Status reviews will be conducted within three to five (3-5) years after initial treatment of brush.
- A second status review will be performed eight to nine (8-9) years after initial treatment.



During FY2014, the agency conducted 114 Status Reviews on FY2011 cost-share contracts throughout various project watersheds. While brush density assessments on 12 contracts (11%) did indicate the target species was above 5%, none of the contracts were deemed out-of-compliance. All of these Status Reviews were conducted during the third year after initial treatment (FY2011 contracts) which is when follow-up treatment should be scheduled. WSEP staff reminded all landowners of their follow-up treatment obligations in their cost-share contracts and the schedule of follow-up treatment detailed in their resource management plans.

ANNUAL INCREASE IN WATER YIELD FOR FY2014

During FY2014, through the WSEP, 6,215.0 acres of brush management was incentivized by the State in 9 project areas. For these acres, landowners received cost-share assistance through the program (contracts from FY2012, FY2013, and FY2014) totaling \$844,666 in state funding (\$136.55 per treated acre of brush). Based on estimates provided by feasibility studies and computer models, and depending on the climatic conditions across the state that influence the sequence of drought and rainfall events, this work is projected to enhance water yield by 2,897.75 ac-ft per year (\$292.87 per ac-ft of water).



Twin Buttes Project

Acres Target
693.0 Lake Nasworthy

Population Served
City of San Angelo

Increase in Water Yield
19,693,743.30 gal

Lake Brownwood Project

Acres Target
1,136.0 Lake Brownwood

Population Served
City of Brownwood and surrounding areas

Increase in Water Yield
119,899,518.42 gal

Little Wichita Project

Acres Target
854.0 Lake Arrowhead

Population Served
City of Wichita Falls and surrounding areas

Increase in Water Yield
156,613,676.52 gal

Upper Guadalupe Project

Acres Target
1,647.0 Canyon Lake and Nimitz Lake

Population Served
New Braunfels, San Marcos, Kyle, Boerne, Kerrville, and surrounding areas

Increase in Water Yield
80,214,750.96 gal

Pedernales Project

<u>Acres</u>	<u>Target</u>	<u>Increase in Water Yield</u>
1,140.0	Lake Travis	444,878,683.22 gal

Population Served
Cedar Park, Leander, Pflugerville and surrounding areas

Edwards Aquifer Project

<u>Acres</u>	<u>Target</u>	<u>Increase in Water Yield</u>
210.0	Edwards Aquifer Recharge Zone	33,466,836.90 gal

Population Served
San Antonio metropolitan area

Carrizo-Wilcox Guadalupe River Project

<u>Acres</u>	<u>Target</u>	<u>Increase in Water Yield</u>
60.0	Carrizo-Wilcox Aquifer Recharge Zone and Middle Guadalupe River	6,174,420.00 gal

Population Served
Victoria and surrounding areas

Edwards Aquifer Medina River Project

<u>Acres</u>	<u>Target</u>	<u>Increase in Water Yield</u>
344.0	Edwards Aquifer Recharge Zone in Medina River Watershed	63,052,792.00 gal

Population Served
Castroville, Bandera, and Medina

Edwards Aquifer Sabinal River Project

<u>Acres</u>	<u>Target</u>	<u>Increase in Water Yield</u>
131.0	Edwards Aquifer Recharge Zone in Sabinal River Watershed	20,234,129.00 gal

Population Served
Sabinal, Utopia, and Vanderpool

Grand Total: Acres Treated and Cleared

6,215.0

Grand Total: Increase in Water Yield (gallons)

944,228,550.32

Grand Total: Increase in Water Yield (acre-feet)

2,897.75