

# THE TEXAS WATER SOURCE

UPDATING CALDWELL AND HAYS COUNTY  
LANDOWNERS ON LAND MANAGEMENT  
AND WATER ISSUES

November 2017

## PROTECTING SOIL AND WATER

Texas has more than 60 million acres of forests and woodlands (about the size of Louisiana and Mississippi combined) that are both economically and environmentally significant. Land operations designed to enhance grazing, property access, wildlife, aesthetics, wildfire mitigation, or other management activities have the potential to negatively impact soil and water resources if poorly planned or implemented. Best Management Practices (BMPs) are the principal means of protecting soil and water resources during these management activities.



*Riparian area buffer zones reduce the amount of sediment that enters streams. They also benefit wildlife by providing food, cover, travel corridors, and nesting sites.*

In Texas, BMPs are voluntary conservation practices that protect soil and water resources - two key elements necessary for maintaining healthy, sustainable, and productive woodlands and rangelands. BMPs can include methods such as leaving a buffer zone of trees and/or other vegetation next to a stream, installing a culvert or low-water crossing to cross a waterway, or conducting mechanical operations along the contour of your property.

Texas A&M Forest Service, in cooperation with Texas State Soil and Water Conservation Board and numerous natural resource partners, develops and periodically updates BMP guidelines, and provides education, outreach, and training on their application.

The *Texas Forestry Best Management Practices Handbook* and *Best Management Practices Pictorial Directory* are geared towards East Texas operations, but the principles and methods also apply to Central and West Texas land management operations as well. Go to [tfsweb.tamu.edu/](http://tfsweb.tamu.edu/)

**BMP** to find these documents and other resources. The BMP guidebook also comes as a free app for your phone or tablet in Android and iOS versions.

Private land stewardship, through the implementation of BMPs, is one of the principle means of protecting water resources. Treating water at its origin, and not just its destination, is an efficient, cost-effective, and sustainable way to provide clean water for Texas.

### For more information:

- <http://tfsweb.tamu.edu/BMP>
- <http://texasforestinfo.tamu.edu/mobileapps>
- <http://tfsweb.tamu.edu/water>

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### Organization Spotlight

## PLUM CREEK WATERSHED PARTNERSHIP

Striving to ensure a safe, clean, and healthy stream for all to enjoy, the Plum Creek Watershed Partnership works to boost awareness of water resource issues and protect and restore water quality in the Plum Creek Watershed. Public involvement is key to watershed stewardship, and the Partnership relies on the cooperation of numerous local stakeholders.

The Partnership, a collaboration between local citizens and entities, state and federal agencies, was established in April 2006 to address water quality issues in Plum Creek through the development and implementation of a Watershed Protection Plan (WPP). A major tributary of the San Marcos River, the Plum Creek watershed lies within the larger Guadalupe River Basin and covers portions of Hays and Travis Counties and much of Caldwell County.

The need for watershed protection was also underscored by development pressures, oil and gas production, and water pollution from a variety of sources. Through public meetings, stakeholders formed a steering committee to make decisions throughout the watershed planning process, and topical workgroups guided discussion on specific watershed issues.

The Steering Committee assisted in the development of the WPP document, and leads the implementation of the plan at the local level. They also meet to 1) identify desired water quality conditions and measurable goals,

2) prioritize appropriate best management practices and needed education and awareness programs to achieve those goals, and 3) communicate implications of the WPP to other interested individuals and groups within the Plum Creek Watershed.

The Partnership is currently facilitated by a local watershed coordinator and has received numerous grants to improve water quality and conduct outreach campaigns throughout the area. The Guadalupe-Blanco River Authority (GBRA) currently manages a Clean Water Act Section 319(h) grant from the Texas State Soil and Water Conservation Board (TSSWCB) to conduct WPP implementation activities. An Interlocal Agreement first established in 2011 and renewed in 2014 for the grant serves to allow local partners to provide the required 40%

match each year for the grant. Through the efforts of its partners, the group remains at the forefront of water quality management and has played a key role in watershed stewardship in Texas.



#### For more information:

- <http://plumcreek.tamu.edu/about>
- [http://plumcreek.tamu.edu/media/4407/PCWP\\_factsheet.pdf](http://plumcreek.tamu.edu/media/4407/PCWP_factsheet.pdf)

## FERAL HOG MANAGEMENT IN PLUM CREEK WATERSHED

As in many areas across the Texas landscape and elsewhere in the nation, feral hog numbers appear to be increasing in the Plum Creek Watershed. These animals damage crops, livestock, pets, landscaping, and natural habitat in rural and urban areas alike. Feral hogs, a non-native species, cause various kinds of agricultural and habitat damage, mostly by rooting, wallowing, and depredation. They also compete with wildlife and livestock for habitat, harbor endemic and exotic diseases, and transmit parasites to domestic livestock and humans.

Feral hogs also have the potential to contribute to water pollution. Due to their numbers, distribution, and behavior, feral hogs can increase the levels of sediment, nutrients (e.g., nitrogen, phosphorous), and bacteria in

streams and lakes. Through analysis of watershed data, feral hogs were identified as a significant potential contributor of pollutants to Plum Creek. In some situations, water quality may become so degraded that it cannot support recreation or aquatic life.

The Plum Creek Watershed Partnership, Texas A&M AgriLife Extension Service, landowners, and state and local entities are working together to address this growing issue. Working to provide information and assistance to watershed landowners could lead to a reduction of the effects of feral hog activity.

For more information and news on feral hog eradication activities, go to <http://plumcreek.tamu.edu/feral-hogs> and <http://www.feralhogtaskforce.com>.

## PLUM CREEK WATERSHED PROTECTION PLAN

Plum Creek has historically played a critical role in the growth and development of the area, from its appeal as a reliable water source for settlers and livestock to recreation opportunities in the watershed. Plum Creek rises in Hays County north of Kyle and runs south through Caldwell County, passing Lockhart and Luling, and eventually joins the San Marcos River at their confluence north of Gonzales County. Plum Creek is 52 miles long.

However, beginning in 2004, the stream was listed by the State of Texas as having *E. coli* bacteria levels that impaired contact recreation use of the stream, as well as having elevated nutrient concentrations (e.g., nitrogen, phosphorous). As a result, the Plum Creek Watershed Protection Plan (WPP) was developed by the Plum Creek Watershed Partnership (PCWP) using a stakeholder process driven by public participation to provide a foundation for restoring water quality in Plum Creek and its tributaries. This WPP was funded by a Clean Water Act (CWA) 319(h) grant from the Texas State Soil and Water Conservation Board (TSSWCB), and was a collaborative effort between PCWP, TSSWCB, Texas A&M AgriLife Extension, Environmental Protection Agency (EPA), Texas Commission on Environmental Quality (TCEQ), and Guadalupe-Blanco River Authority (GBRA).

Stakeholders are any individual or group that may be directly or indirectly affected by activities implemented to protect water quality, such as citizens, businesses, municipalities, county governments, river authorities, non-profit organizations, and state agencies. The WPP is a means by which stakeholders can become more familiar with the Plum Creek Watershed and actively make a difference in the quality and health of their streams through voluntary management practices.

Potential sources of pollutants in the Plum Creek watershed were identified. Human and animal waste could contribute both *E. coli* and nutrients. Some land use

practices, such as crop production and lawn and landscape fertilization, also affect nutrient levels. These are some of the factors addressed in the WPP.

By identifying key water quality issues in the Plum Creek watershed and determining the factors contributing to these issues, a strategy of management programs and public outreach efforts were implemented to restore and protect the vital water resource of this watershed.

As the recommended pollution control measures of the Plum Creek WPP are put into action, it is necessary to track water quality over time and make any needed adjustments to the strategy. Routine water quality testing programs at three existing monitoring stations in will be continued throughout the implementation phase. In addition, GBRA has received CWA 319(h) and State Nonpoint Source Grants from TSSWCB to conduct water quality monitoring projects that allow GBRA and the PCWP to more closely pinpoint the timing and sources of high pollutant levels. These monitoring projects help focus management activities and track the performance of ongoing restoration efforts. This Plan is intended to be a living document, adjusting to include new data and modified as conditions in the watershed change over time. It will evolve as needs and circumstances dictate and will be guided by the stakeholders themselves as they undertake active stewardship of the watershed.

Since implementation of the WPP began in 2008, the Plum Creek watershed has experienced some significant changes - drought, development, increase in small farms, rise in feral hog activity, etc. Thus, in 2014, the Partnership developed and published an update to the WPP, which can be found on the following website.

### For more information:

- <http://plumcreek.tamu.edu/wpp>

## CENTRAL TEXAS GREENPRINT FOR GROWTH

The Trust for Public Land, Envision Central Texas, and the Capital Area Council of Governments completed the "Central Texas Greenprint for Growth" to help area communities make informed land use decisions and guide where growth and development ideally should occur in relation to the protection of important natural, cultural, and recreational resources.

The project identified high priority areas for conservation in Hays, Caldwell, and Bastrop Counties that meet

### Did you know . . .

The Plum Creek watershed covers 397 square miles, or 254,080 acres.

ecosystem protection goals, provide open space and park needs, and support the overarching vision of sustainable growth for the area.

In both Hays and Caldwell Counties, protecting water quality and quantity were selected as the highest priority goal. Efforts in these areas will benefit watershed stewardship as the region undergoes significant development.

A copy of the plan may be downloaded from [http://cloud.tpl.org/pubs/convis\\_tx\\_centexreport.pdf](http://cloud.tpl.org/pubs/convis_tx_centexreport.pdf).

## Welcome Landowners!

Texas A&M Forest Service (TFS) is the state forestry agency and works closely with private landowners and others in a wide variety of disciplines associated with forests and related natural resources. The Water Resources Program deals with water issues as they relate to forests, woodlands, and forestry/land management practices.

Forestry Best Management Practices (BMPs) are common-sense practices that help reduce soil erosion and protect water quality. BMPs can include measures such as leaving trees and other vegetation next to a stream or other waterbody; installing a culvert to cross a stream; or installing water diversion structures on dirt roads to prevent erosion.

This newsletter is the first in a series of **four** to be published over the next few months for landowners owning woodland property in the Plum Creek watershed.

You can access past editions of *The Texas Water Source* on the TFS website. Go to <http://tfsweb.tamu.edu/BMP>, click on Newsletters: Texas Water Source, and choose the newsletter date of your choice. There you'll find articles on water-related issues, agencies, organizations, and programs, as well as information that can help you in the management of your property. Check out the TFS Water Resources Blog as well - <http://tfswater.blogspot.com>.

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