

# FOREST STEWARDSHIP BRIEFINGS

Timber ◇ Wildlife ◇ Water ◇ Soil ◇ Best Management Practices ◇ Forest Health ◇ Recreation ◇ Aesthetics

## EROSION CONTROL AFTER THE FIRE

by Chuck Coup, Staff Forester, TFS, Temple, TX

For more information:

- <http://txforestservicetamu.edu/main/article.aspx?id=14740>

The environmental impacts of a wildfire go far beyond burnt trees. The potential for severe soil erosion and accelerated water runoff also exists after a wildfire due to the lack of vegetation and ground cover to stabilize the soil.

When the protective cover provided by the trees, shrubs, grasses, and ground material that make up a healthy forest is destroyed by wildfire, it exposes the land to erosion. With no protection, the impact force of raindrops falling during a heavy storm can detach bare soil and ash particles and wash them down denuded slopes into stream channels; reducing water quality, and altering or degrading aquatic habitat. In addition, the lack of vegetation reduces the soil's ability to absorb rainwater, making it more likely to run off than soak into the soil. This can reduce groundwater recharge and further increase soil and ash loads delivered to nearby surface water bodies.

Losing nutrient-rich topsoil to erosion diminishes the land's ability to grow trees and hinders the re-establishment of natural vegetation in burned-over areas following a fire. Severe erosion can result in tremendous environmental and economic consequences by filling reservoirs and reducing their water storage capacity, deteriorating water quality and quantity, increasing treatment costs for drinking water, destroying aquatic ecosystems, and reducing biodiversity.

Fortunately, there are a number of practical measures landowners can take to mitigate soil erosion caused by wildfire and to

prevent sedimentation of surface waters.

**Preserve existing vegetation.** Whether burned or unburned, the roots of vegetation hold the soil together and promote water infiltration. It is especially important to protect green trees and other vegetation adjacent to stream channels and surface waters. However, trees or shrubs that pose an imminent hazard to health and safety should be removed.

**Minimize soil disturbance.** When conducting recovery efforts that involve soil disturbance, such as land clearing or road construction, attempt to minimize the footprint of the disturbance as much as possible. Be especially careful to minimize any disturbances in sensitive areas such as steep slopes, severely burned areas, erodible soils, and areas directly adjacent to wetlands, streams, or other water bodies.

**Reduce the impact of livestock.** After a wildfire, some areas may need to be deferred until plant growth has re-established and is adequate to support grazing.

**Utilize forestry Best Management Practices (BMPs) when salvaging trees.** BMPs are conservation practices that help protect soil and water resources during forestry operations. BMPs include practices such as leaving a buffer of trees next to a stream, keeping slash and other debris out of stream channels, minimizing the number of vehicular stream crossings used to access a property, or re-establishing vegetation on temporary roads to prevent erosion.

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## FROM RUN DOWN TO RENEWED

by Mike Cox, TPWD, Austin, TX

For more information:

- <http://www.tpwd.state.tx.us/newsmedia/releases/?req=20110526b>

A couple with East Texas roots – Arthur “Buddy” Temple and his wife Ellen – have been presented the 2011 Leopold Conservation Award for Texas for their transformation of an over-grazed, over-hunted South Texas ranch into a haven for wildlife and valuable research venue. The prestigious recognition is conferred each year by Sand County Foundation and Texas Parks and Wildlife as part of its Lone Star Land Steward Awards program.

Located 11 miles north of Freer in Duval County, the 11,300-acre ranch has been owned by the Temples for 19 years. Robert and Jenny Sanders are the ranch managers. Originally known as El Rancho La Gloria, the ranch was founded by Ed-

ward Nixon Gray and his wife Rosa Garza-Garcia Gray in 1868. It played an important role in the development of Duval Co.

Accomplishments on the ranch that earned the Temples this honor include:

- Management that increased suitable habitat and numbers of quail.
- Management that increased deer body weight and improved age structure.
- Turkey management that increased their habitat and populations.
- Outreach and education geared towards youth, college students, Wounded Warriors, and birders.
- Historical preservation by restoring ranch structures dating from the 1840s - 1860s.

## TREE TIPS - ASSESSING DROUGHT DAMAGE

from Texas Forest Service website

For more information:

- <http://texasforestservicetamu.edu/main/popup.aspx?id=14880>

Texas remains mired in one of the worst droughts in state history and it's creating disastrous effects on trees and forests across the state. After one of the driest years on record, many shade trees went into dormancy as early as August, dropping their leaves and branches in a desperate act of self-preservation. Meanwhile, pine trees with normally thick, green crowns ended up cloaked in red, dead needles while foliage on cedar trees turned completely brown.

Assessing trees damaged or killed by drought can be tricky, according to Dr. Ronald Billings, Texas Forest Service Forest Health Manager. He suggests grouping the trees into three different categories to help with the task.

Definitely dead - In most cases, a red pine is a dead pine; the same can be said for cedars with red needles. Once all or most of the foliage of a pine or cedar tree turns red or brown, the tree is incapable of recovering. Shade trees - like water oaks, for example - that have lost all their foliage and are beginning to drop limbs or lose large patches of bark are most likely already dead.

Likely to survive - This category includes shade trees with at least some green or yellow leaves still attached to the limbs. In fact, even those that have dropped all their leaves may still be alive. If you scrape the bark off a small branch or limb and find green, moist tissue underneath, the tree is still hanging on. You may need to wait until spring to see if the tree makes a recovery - unless the tree starts to drop large branches and patches of bark, which is a sign of death. If there is no green, moist tissue, the tree is likely dead.

Pines with a few yellow or red needles scattered throughout an otherwise green canopy have a good chance at survival.

Questionable - A pine that is topped with brown or red needles but still has green foliage in its lower branches is alive, but likely will eventually die. That's because bark beetles likely will invade the lower trunk at some point, killing the tree in stages. In the case of shade trees, those that have many dead or dying limbs or mostly bare branches may or may not survive. A few green, yellow, or red leaves may remain for awhile as the tree slowly dies, or it may recover when rains return.

## BMP IMPLEMENTATION REPORT

Texas Forest Service recently completed the eighth round of Best Management Practices (BMP) Implementation Monitoring. This was done to measure the degree of implementation of BMP guidelines by the forestry community; in other words, how well BMPs are being used in the field. Forestry BMPs are common-sense practices that help reduce soil erosion and protect water quality.

Sites on which forestry operations had occurred were randomly selected and evaluated for the presence, where applicable, and functionality of BMPs. Sites that are monitored are only done with landowner consent.

Overall BMP implementation on sites monitored was 94.1%. This is an all time high since the program began in 1992. National Forest sites had an overall implementation of 98.3%, while industrial sites

had a 97.7% implementation rating. Corporate lands (commercial landowners that do not have wood processing facilities) scored 96.7% overall, while family forest owners scored 88.0%.

Implementation of BMPs was statistically higher when:

- the landowner was familiar with BMPs
- the logging contractor had attended formal BMP training
- a forester was involved in the sale or activity
- BMPs were included in the timber sale contract
- The landowner had a forest management plan

The use of BMPs in Texas is voluntary. Continued use of forestry BMPs is important to protect water, soil, and the other natural resources of Texas.

*by Texas Forest Service  
Water Resources Program,  
Lufkin, TX*

*For more information:*

- <http://texasforestservice.tamu.edu/BMP>; look under *Publications* for the latest implementation report and earlier reports.

## BOBWHITE QUAIL CONTINUE TO DECLINE

The drought has taken a toll on all Texas wildlife resources, but among the hardest hit is the bobwhite quail. This iconic grassland game bird already faces mounting obstacles to recovery and state wildlife officials say the drought is exacerbating the problem.

The Breeding Bird Survey (BBS), an annual field census survey used to track quail productivity, shows a decline in Texas bobwhite quail breeding numbers at a rate of 3.9 percent per year from 1970 to 2009. Texas bobwhite harvest has declined by 80 percent during the past three decades. Although this decline is not as steep as seen in southeastern states, it is still cause for concern.

Carter Smith, TPWD Executive Director, said “We need hunters, landowners, government agencies and non-profit groups all making this a priority in order to advance the recovery of this species.”

While TPWD wildlife biologists are focusing their efforts on assisting landowners develop habitat-based management strategies that can benefit quail and other grassland wildlife, the department is also taking action in other areas, including possible changes in hunting regulations. Potential changes in season length and bag limit framework for the 2012-13 hunting season will be discussed.

Good news is that in one area of the state, the Gulf Prairies and Marshes region, quail numbers this year have actually risen due to proactive habitat management and adequate weather conditions.

History has shown bobwhites can bounce back when the weather cooperates and suitable habitat is available. Ideal quail production occurs in years that remain wet and cool during the spring and early summer months because it extends the window of opportunity for reproduction.

*by Steve Lightfoot, TPWD,  
Austin, TX*

*For more information:*

- <http://www.tpwd.state.tx.us/newsmedia/releases/?req=20111018a>
- [http://www.tpwd.state.tx.us/huntwild/wild/game\\_management/quail/](http://www.tpwd.state.tx.us/huntwild/wild/game_management/quail/)

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#### Editorial Board

- Rusty Wood, TPWD, Nacogdoches, Texas
- Joe Pase, TFS, Lufkin, Texas

## GET HELP AFTER THE FIRE

The 2011 wildfire season has been simply devastating for Texas and the people who call this state home. This was one of the worst fire seasons ever. The long recovery and reforestation process can seem arduous and overwhelming, but Texas Forest Service can help.

On the Texas Forest Service homepage (<http://txforestservicetamu.edu>), click on the GET HELP AFTER THE FIRE box. There, you will find fact sheets on a wide variety of topics of concern after a wildfire.

A few of the titles:

- Income Tax Deduction for Casualty Timber Loss
- Income Tax Deduction for Loss of Yard Trees
- Reforestation After a Wildfire
- Tree Planting
- Controlling Brush After a Fire
- Managing Wildlife After the Wildfire
- Agricultural Management Considerations

You can even request assistance with forest recovery from a TFS forester by filling out an online form.



P. O. Box 310  
Lufkin, TX 75902-0310

Phone: 936-639-8180

Email: [dwork@tfs.tamu.edu](mailto:dwork@tfs.tamu.edu)

TDD Line: 1-866-419-4872