

# Forested Wetlands

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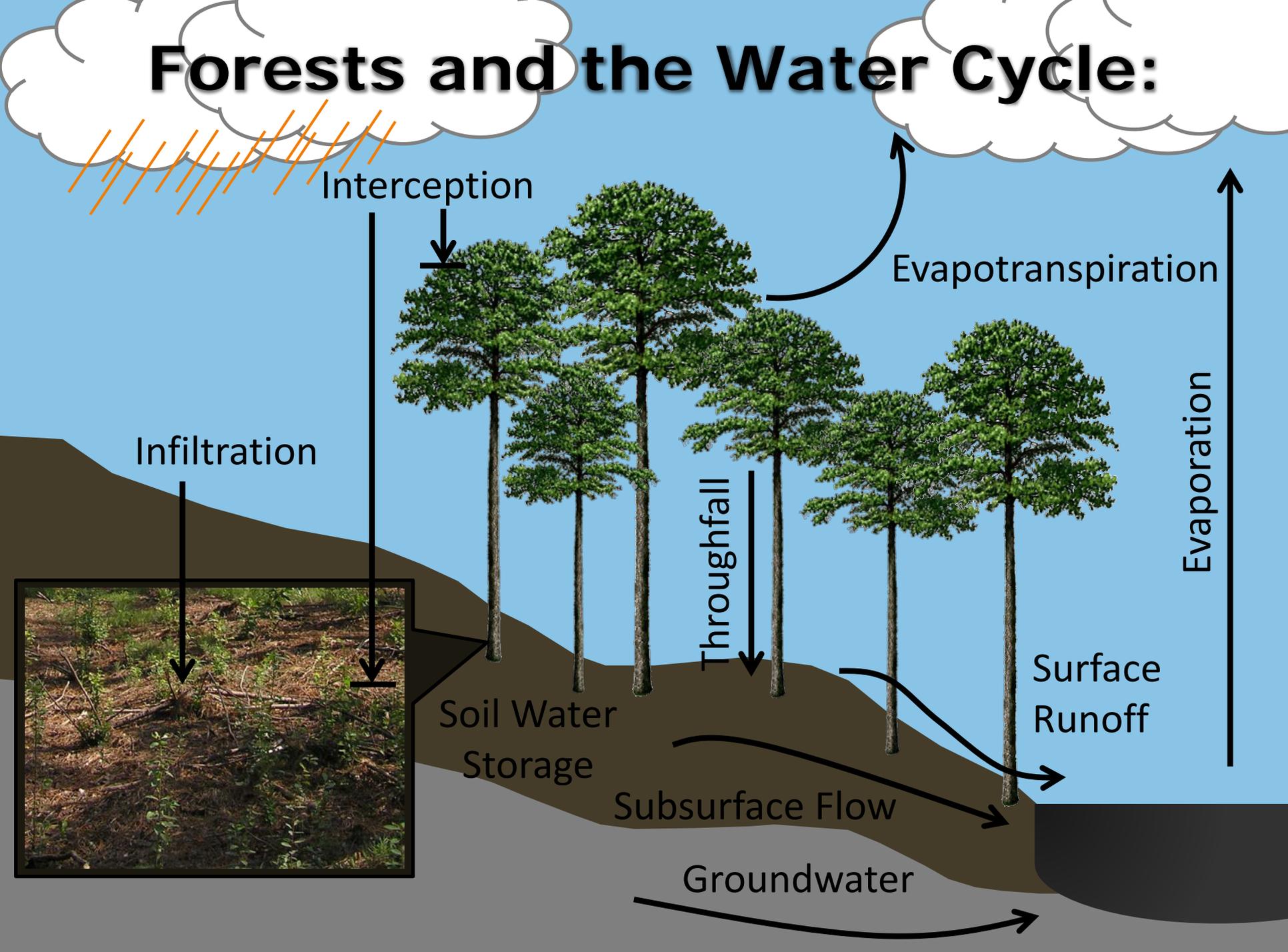


TEXAS A&M  
FOREST SERVICE

A photograph of a forest stream. The water is clear and reflects the surrounding green trees. Large, smooth rocks are scattered along the banks and in the foreground. The forest is dense with various types of trees, including tall pines and leafy deciduous trees. The lighting is bright, suggesting a sunny day.

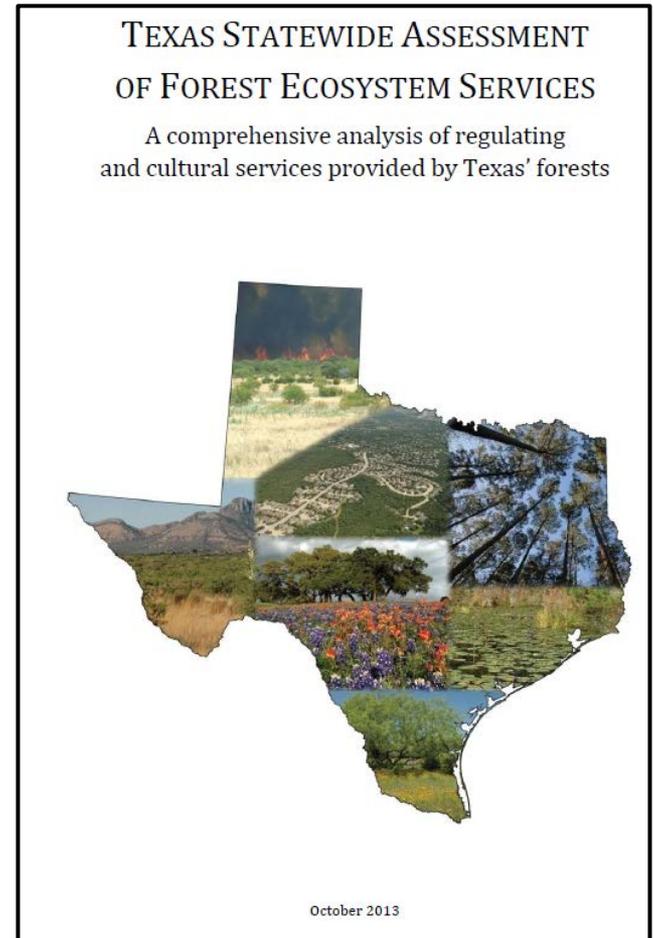
Forests provide the cleanest water  
of any land use!

# Forests and the Water Cycle:



# Forest Ecosystem Service Assessment

- Quantify and assess the values of the various non-market ecosystem services provided by Texas forests
- Create a geospatial application to display results
- Raise awareness of the overall value of TX forests
- **\$92.9 billion annually**



# Forest Watershed Services

Water Capture (Water Supply)      \$0.5 billion

– Marginal value of streamflow

Water Filtration (Water Quality)      \$4.2 billion

– Avoided water treatment costs

Water Regulation (Flood Control)      \$8.5 billion

– Stream regulation + Flood Control

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**Total      \$13.2 billion**



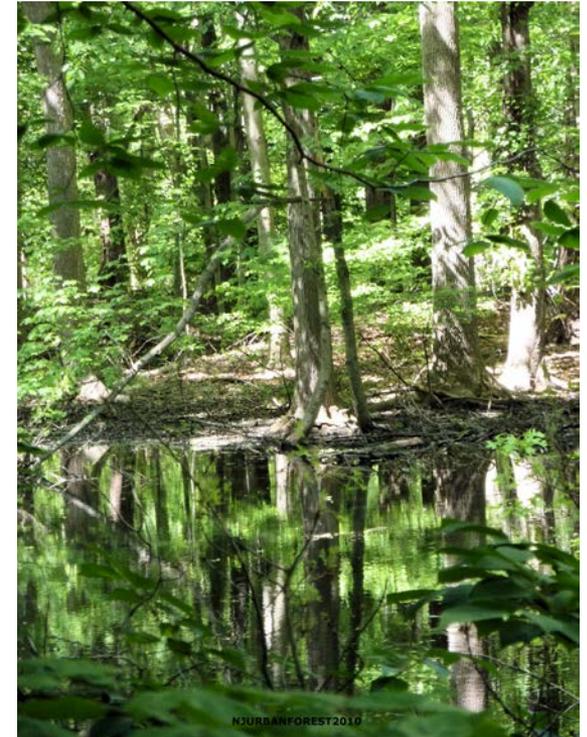
# What is a Forested Wetland?

*“Those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support and, under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”*

three criteria used by the U.S. Army Corps of Engineers in delineating wetlands are:

1. hydrophytic vegetation
2. hydric soils
3. wetland hydrology

**All three criteria must be met for a site to be determined a jurisdictional wetland.**

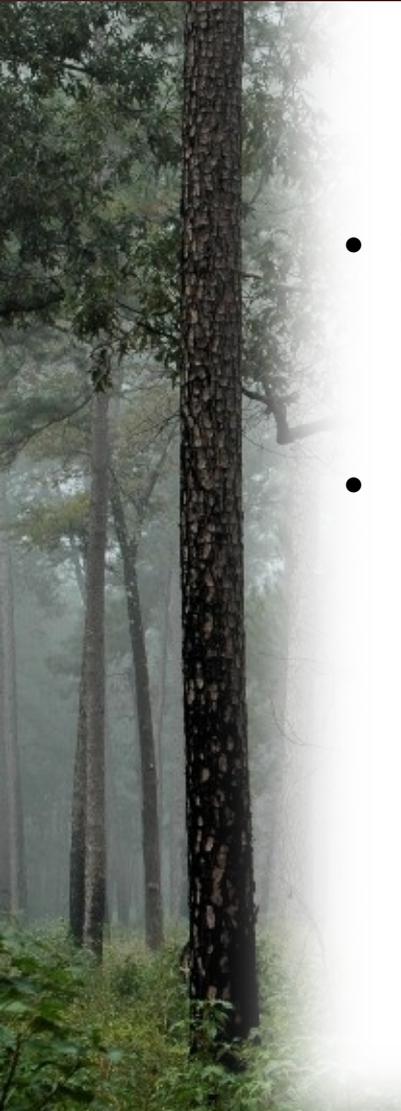
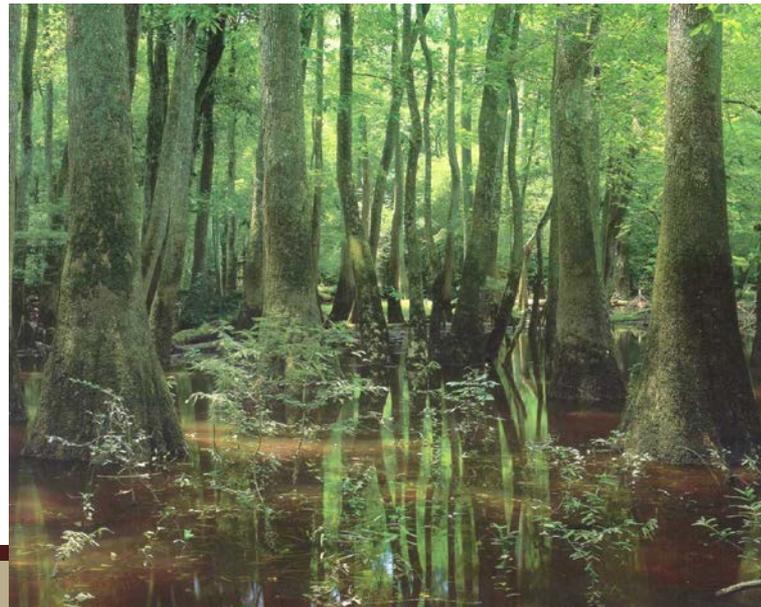


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# Benefits Provided by Forested Wetlands

Wetlands are among the most productive ecosystems in the world.

- improve water quality
  - by filtering sediment and other pollutants
  - by reducing the potential for erosion
  - by controlling flooding during periods of heavy rain
- Provide valuable products for human use
  - Lumber
  - recreation
  - aesthetics



# Water Resources Program

The *Water Resources program* promotes the value of wetlands and supports their protection during forest operations through recommended BMPs.

We offer a free publication of the Texas Forestry Best Management Practices Handbook on our website.

- Education
- Outreach
- Training
- Technical assistance



# Incentive Programs

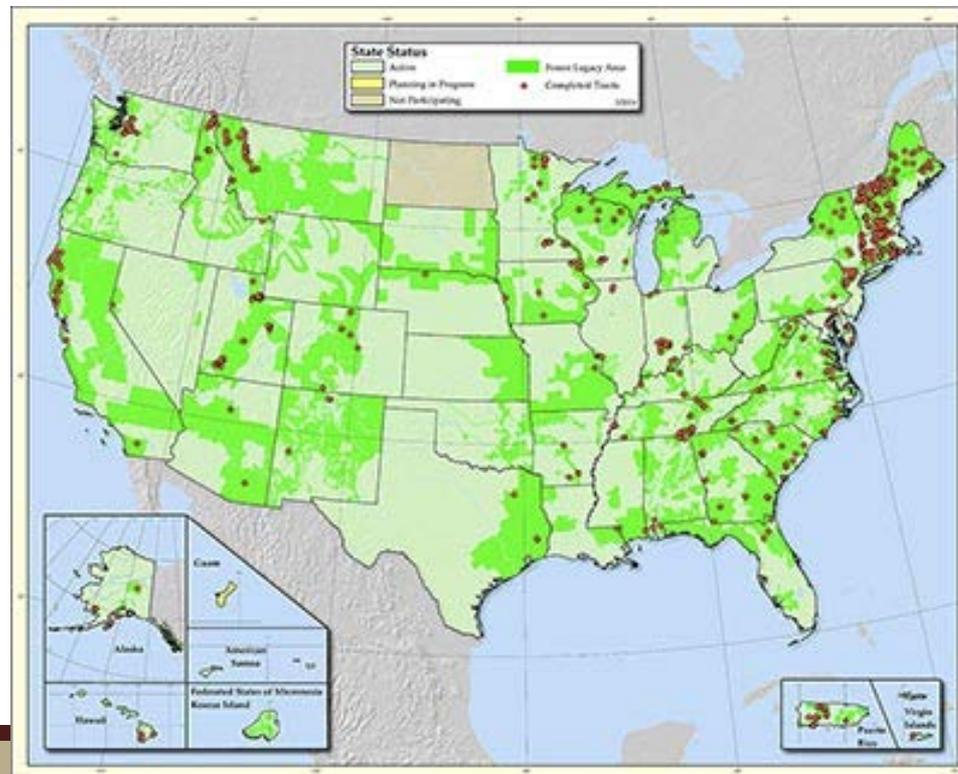
- Forest Legacy Program
  - conservation easement based program through USDA Forest Service
- Forest Stewardship Program
  - also through USDA Forest Service, TFS prepares forest stewardship plans to help landowners achieve their objectives
- Forest Taxation Program
  - provides assistance to landowners on income and property taxes associated with forestland



# FOREST LEGACY PROGRAM

The Forest Legacy Program (FLP) is a voluntary program which purchases **conservation easements** on forestland offered by private landowners.

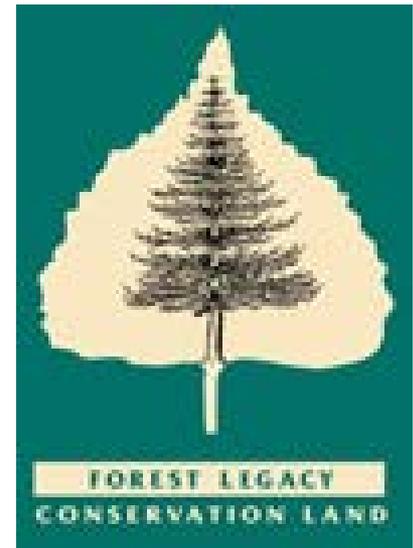
The main goal is to protect priority forests (including wetlands) from converting to a non-forested land use.



# Forest Legacy Program- Purpose

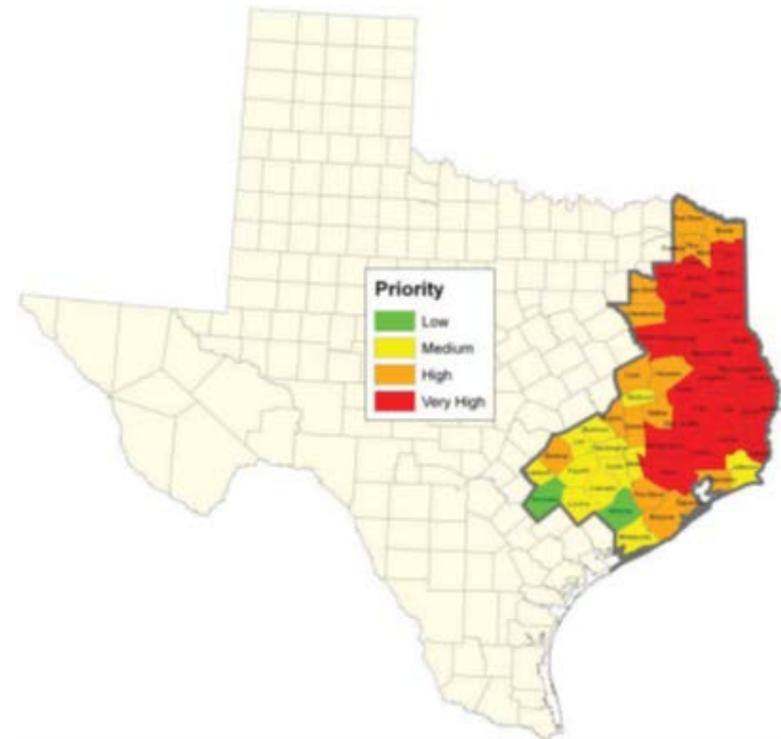
FLP encourages and supports acquisition of conservation easements which:

- restrict development
  - require sustainable forestry practices
  - protect other values.
- 
- supports State efforts to protect environmentally sensitive forest lands
  - Designed to encourage the protection of privately owned forest lands



# Forest Legacy Program- Eligibility

- To qualify, landowners are required to prepare a multiple resource management plan as part of the conservation easement acquisition.
- Funding is competitive, so a landowner may wish to partner with a forest conservation nonprofit or community partners to help create a strong application.



# Forest Legacy Program- Acquisition

- Funding:
  - up to 75% by the USDA Forest Service as part of the Farm Bill
  - 25% or more funded by non-federal sources.
    - The landowner will participate with Texas A&M Forest Service and the Texas Forest Legacy Committee to identify the source of the 25% non-federal funds.
- In addition to gains associated with the sale or donation of property rights, many landowners also benefit from reduced taxes associated with limits placed on land use
- one-time cash payment for the sale of the development rights of the property

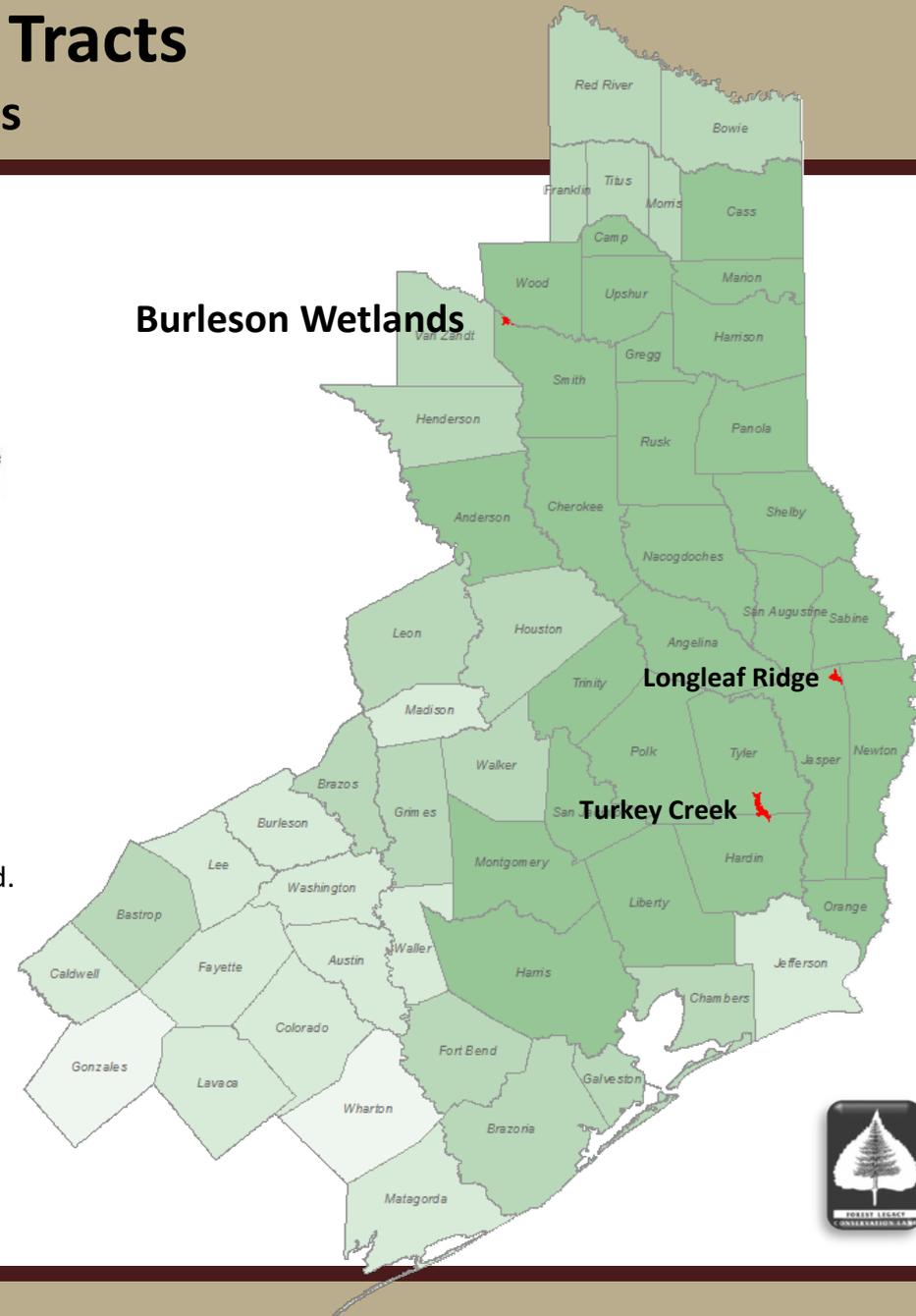


# Forest Legacy Tracts

## - Burleson Wetlands



### Burleson Wetlands



*Project name:* Burleson Wetlands  
*Year closed:* 2009  
*Landowner:* Burleson Wetlands Partners, Ltd.  
*Tract size:* 2,908 acres  
*Project cost:* \$990,000  
*FLP funds:* \$493,000



# FOREST STEWARDSHIP PROGRAM

The purpose of the Forest Stewardship Program is to encourage the long-term stewardship of private land by educating landowners on ways to actively manage their forest resources.

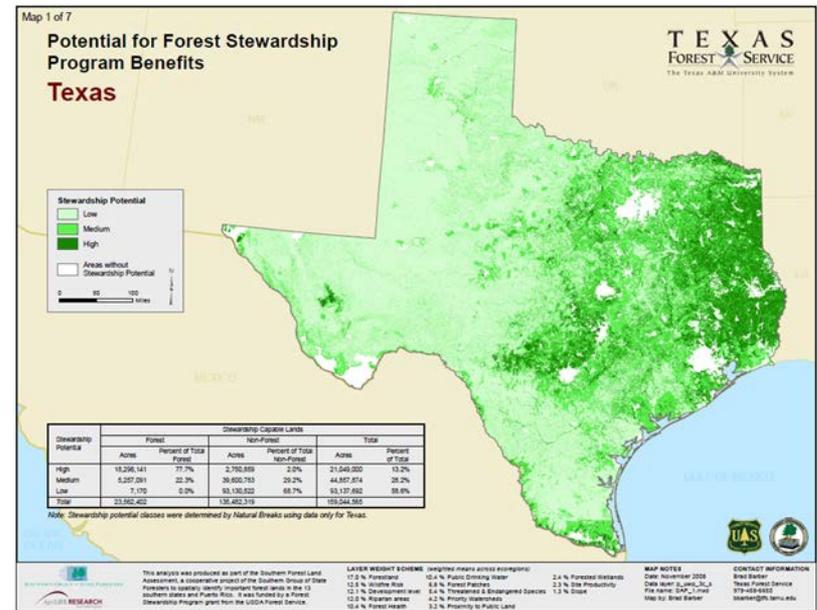
Foresters help landowners develop a 10-year course of action, outlining step-by-step measures to keep the land productive now and in the future based on the landowner's unique goals and objectives.



# Forest Stewardship Program

provides technical assistance to NIPF owners to encourage and enable active long-term forest management in order to contribute to:

- clean water
- clean air
- wildlife habitat
- recreational resources
- timber supplies



As of 2013 approved plans covered approximately 24 million acres of nonindustrial private forest land

# Forest Stewardship Program- Landowner Participation

The Forest Stewardship Program is beneficial to landowners all over Texas - from the Pineywoods of East Texas to the West Texas Panhandle - because programs are tailored to the individual needs of each landowner.

- The private landowner in East Texas has perhaps the most to gain from this program - and the most to lose if good land and timber management practices are not followed.



# Forest Stewardship Program- Resources



- **FSP Strategic Plan** lays out valuable, in-depth information in a concise ten page document
- The **Forest Stewardship Plan Resource Elements Guidance** is a resource for plan preparers who are working to fully meet multi-resource management objectives of their landowner clients, but can be used as a glimpse into what goes on when creating a plan.
- ***Caring for your Forest with a Forest Stewardship Plan***

# FOREST TAXATION PROGRAM

Provides NIPF landowners with a consolidated source of information on the complex tax issues associated with forest maintenance and management



# Forest Taxation Program- Purpose

NIPF landowners rarely have tax expertise at their disposal. As a consequence

- Providing tailored tax information is one way in which the Forest Service is working to increase forest productivity on non-industrial forest lands, which make up nearly 60% of the nation's forests.

Non-industrial private forest landowners are the program's ultimate beneficiaries, as they receive the best tax information available, and can subsequently make more informed choices about how to manage their forest lands.

For example:

- Senate bill 977
  - 1999: SMZs left during forestry operations can receive a tax break



# Forest Taxation Program- Administration

The cooperative Forest Taxation Program relies upon multiple partners to accomplish its goals.



This ensures that the landowner is utilizing the best possible tax information when making management decisions.

# UTILIZING FOREST WETLANDS FOR TIMBER PRODUCTION

Timber production is recognized as a land use that is compatible with wetland protection.



# Timber Production in Wetlands



Although wetlands are federally regulated, “normal forestry operations” are exempt from permits. Factors that constitute established practices include (but are not limited to):

- Written Management Plan
- Is part of an “established” silvicultural operation
- Follows 15 mandatory road BMPs
- Fire, insect, or disease control to protect timber

Forestry operations that are directed at changing the land use status to “non-forested” will require a permit.

# Potential Impacts of Forestry on Wetlands



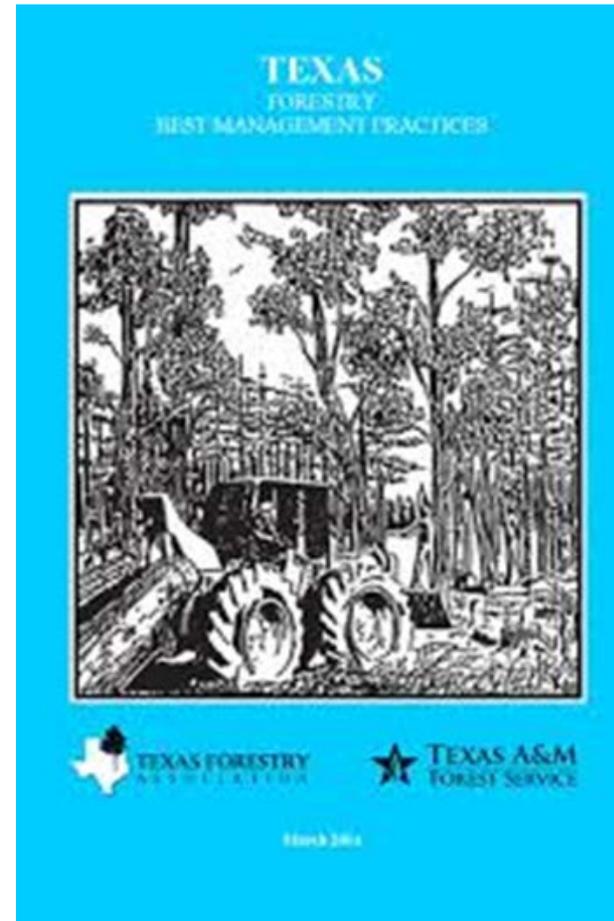
Forest wetlands are environmentally sensitive areas. Special attention to the proper use of BMPs is essential if water quality is to be protected.

- Forest road construction has the potential to disrupt normal drainage patterns and produce sediment
- Tree tops or other logging debris left in streams can obstruct water flow, increase erosion of stream banks, and decrease dissolved oxygen in the water
- Normal wetland drainage patterns can be altered by severe rutting.
- Excessive soil compaction caused by careless logging can reduce water infiltration, reduce soil moisture available to tree roots, and decrease site quality

# BMPs for Wetlands

Best Management Practices (BMPs) are designed to protect water quality during forestry operations. BMPs can prevent, or at least greatly reduce, nonpoint source pollution of water bodies from forestry activities.

The use of BMPs is voluntary in Texas and the manual should be used as the guideline



# BMPs for Roads

- Roads:
  - Kept to the minimum feasible number
  - Minimum width
  - Minimum total length
  - Kept away from streams
- Stream crossings
  - Minimize crossings
  - Culverts adequately sized
  - Restore and stabilize permanent crossings
  - Remove and stabilize temporary crossings
  - No flow restrictions (culverts, rock, etc...)

***MINIMIZE, RESTORE, STABILIZE***



# Streamside Management Zones in Wetlands

One major function of an SMZ is to protect a body of water from possible pollution from adjacent forestry activities which could result from the movement of soil and water from a nearby upland source.

Different specifications are listed for different wetland systems including:

- Bottomland systems
- Perennial streams
- Intermittent streams
- Ephemeral water courses
- Backwater basins
- Forest swamps
- Flatwoods



# Summary

- Wetlands are among the most productive ecosystems in the world
- There are many incentive programs available to NIPF owners:
  - Forest Legacy Program
  - Forest Stewardship Program
  - Forest Taxation Program
- Timber production is compatible with forested wetlands



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