



*Dear Landowner:*

*In the past decade or so, many landowners have viewed wetlands as a burden, an obstacle, a problem standing between them and the use or development of their property. Resource agencies seeking to protect wetlands have been seen as adversaries.*

*The purpose of this Guide is to look at the other side of the coin. For many landowners, wetland protection has meant increased, not decreased, property values. Indeed, growing numbers of landowners now view wetlands as valuable assets to a broad range of land uses. Healthy riparian habitat keeps stream banks from eroding, aids in groundwater recharge, and improves fish and wildlife habitat. Water management and soil conservation practices nourish crops as well as wildlife, and help to keep topsoil from washing away.*

*In Texas, a wide variety of voluntary approaches are available to assist landowners in protecting wetlands according to their different needs, within the context of broader conservation goals. The array of options includes technical information and advice, financial contributions for projects or practices that provide long-term improvements in wetland values, and payment at fair market rates for permanent protection on wetland areas.*

*Until this Guide, there was no one place where you, the landowner, could turn for easy-to-read information on wetlands and how you can benefit from them. The Guide provides basic information about each assistance option, along with program contacts for those who desire additional information. We hope that we have simplified the first step that property owners can take for help or advice on protecting, enhancing or creating wetlands on their land.*

*Sincerely,*

*Andrew Sansom*

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## *Commonly asked questions about wetlands.*



*What are wetlands?*  
(see page 7)

*Why are wetlands important?*  
(see page 12)

*Can I get paid for conserving or managing wetlands?*  
(see page 25)

*Who can I contact to get more information on wetland programs?*  
(see page 56)

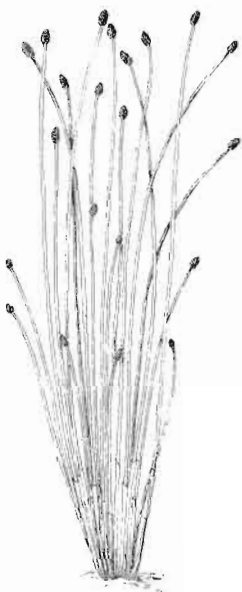
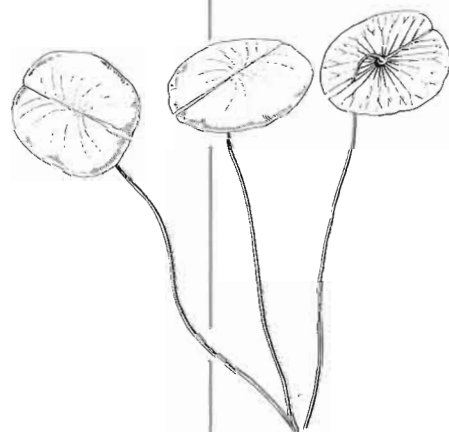
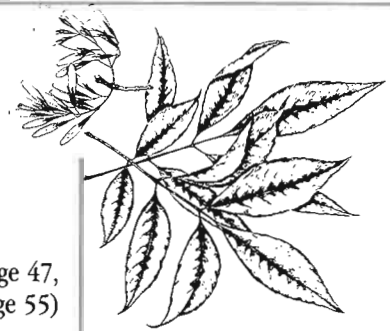


*Which laws regulate wetlands?*  
(federal, see page 47,  
state, see page 55)

*What options are available to landowners who want to manage wetlands?*  
(for a comparison, see page 40)

*Can I get paid to restore farmed wetlands?*  
(see page 24)

*The whole issue of wetlands seems complicated. What are the roles of different agencies?*  
(see page 17)



## CONTENTS

### Acknowledgments 5

### About the Wetlands Assistance Guide for Landowners 6

### Texas Wetlands – A Vanishing Resource 7

- What is a Wetland? 7
- Texas Wetland Types 8
- Wetlands Loss 11
- Why are Wetlands Important? 12



### A State Wetlands Conservation Plan for Texas 14

### Lone Star Land Steward Awards 15

### Roles of Federal and State Agencies in Wetlands 17

### The Decision Tree: Choosing the Best Option or Options for the Landowner 20

### General Landowner Options

- Conservation Easements 21
- Leases 21
- Management Agreements 21
- Mutual Covenants 21
- Restoration 21
- Limited Development Strategies 22
- Remainder Interests 22
- Transfer of Development Rights 22
- Sale Option 22
- Donation of Land 23

### Sources of Assistance

- Programs and Land Characteristics: A Quick Reference Guide 24

### Non-Regulatory Federal Programs

- Agriculture Conservation 25
- Challenge Cost Share 26
- Conservation Easement Debt Cancellation 28
- Conservation Reserve 27
- Forestry Incentives 28
- Great Plains Conservation 29
- Natural Resources
  - Conservation Service-Technical Assistance 29
- North American Wetlands Conservation Act of 1989 29
- North American Waterfowl Management Plan Joint Venture Projects 30
  - Gulf Coast 31
  - Lower Mississippi Valley 31
  - Playa Lakes 32
- Partners for Wildlife 32
- Prairie Wetlands Project 33
- Resource Conservation and Development 34
- Stewardship Incentive and Forest Stewardship 34
- Water Quality Incentives 35
- Wetlands Reserve 36

### Non-Regulatory State Programs

- MARSH Program 38
- Private Lands Enhancement 38
- Private Lands Initiative 39
- Wetland Habitat Alliance of Texas 39
- Summary Table: Federal Programs Providing Economic and Other Incentives for Wetlands Protection 40
- Summary Table: State Programs Providing Economic and Other Incentives for Wetlands Protection 45

### Federal Regulations 47

### State Regulations 55

### Appendices

- Appendix 1– Programs and Contacts 56
- Appendix 2– Federal and State Offices 58
- Appendix 3– Texas Land Trusts 60
- Appendix 4– Wetlands Education Assistance 61

*The eastern wild turkey (above) and the American alligator (left) are among the many animals that depend on Texas' inland and coastal wetlands for their survival.*

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## ACKNOWLEDGEMENTS

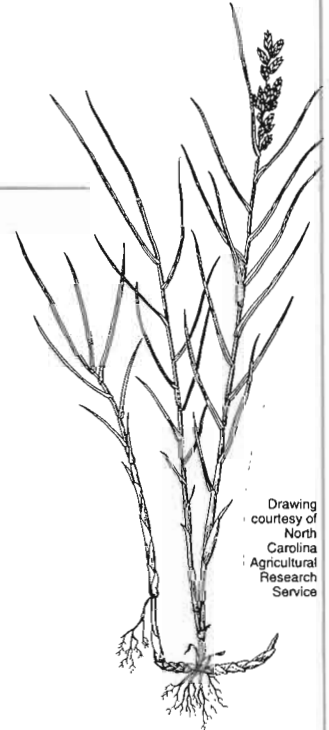
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**For copies of *A Wetlands Assistance Guide for Landowners*, or more information about the State Wetlands Conservation Plan, contact: Robert W. (Bob) Spain, Habitat Assessment Branch Chief, Resource Protection Division, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, TX 78744, Phone: (512) 389-4635, FAX: (512) 389-8059.**



Drawing  
courtesy of  
North  
Carolina  
Agricultural  
Research  
Service

**Saltgrass**  
*Distichlis spicata*  
 (found in brackish  
 marsh communities)

***A Wetlands Assistance  
 Guide for Landowners***  
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About the

# WETLANDS ASSISTANCE GUIDE FOR LANDOWNERS

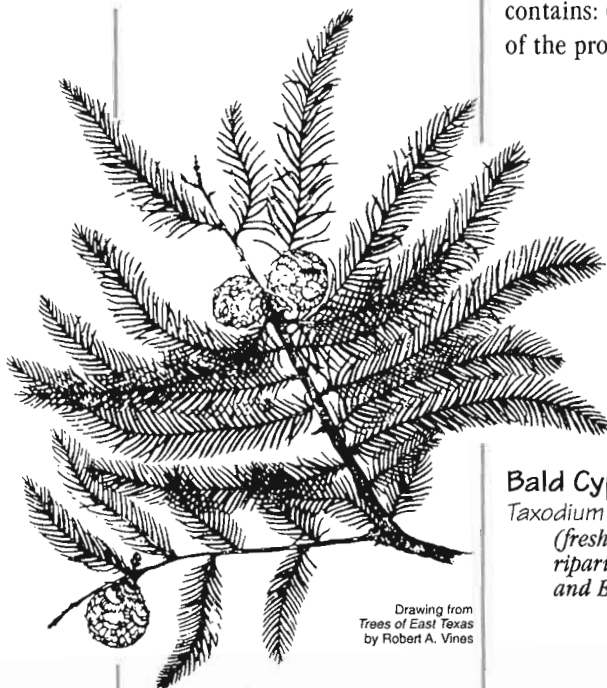


*Bald cypress trees in Caddo Lake.*

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The Wetlands Assistance Guide for Landowners is a comprehensive guide to federal, state, and private programs offering technical and/or financial assistance to private wetland owners within the State of Texas. The programs are designed to enhance, create, and conserve wetlands in Texas in exchange for technical, financial, and educational assistance to private landowners. Each program description contains: (1) a brief summary of the program, its goals,

funding, the process necessary to participate, and benefits to the landowner; and, (2) eligibility requirements. Through the information offered in this Guide, Texas landowners will be able to make an informed decision on how to manage their wetlands with the aid of financial incentives such as tax breaks or rental payments. Landowners can locate programs that offer them the best benefits. Local contacts involved with the implementation of particular programs are provided. Other sections of the Guide include a summary of what wetlands are and why they are important, agency roles and contacts, clarification of existing regulations affecting wetlands, and various tables for quick reference.



## Bald Cypress

*Taxodium distichum*

(freshwater swamps and  
riparian areas in Central  
and East Texas)

Drawing from  
Trees of East Texas  
by Robert A. Vines

# TEXAS

## WETLANDS

### *A Vanishing Resource*

*Wetlands are one of Texas' most valuable natural resources. Bottomland hardwoods, riparian corridors, coastal wetlands, and playa lakes are vital to maintaining our unequaled fish and wildlife resources.*

*Wetlands provide flood protection, improve water quality and provide the basis for other economic benefits totaling billions of dollars nationwide each year.*

*Estimates reveal that Texas has lost over half of its original wetlands. Much of this loss has been in response to meeting our needs for food, fiber, housing, and industrial development – all of which are vital to maintaining the economic health of Texas. If we are to assure that same economic vitality and quality of life for future Texans, we must work together now to conserve our remaining wetlands, which are an important natural and economic resource.*

### What is a Wetland?

To know what to protect, we must first know what a wetland is. Wetlands are among the most important ecosystems on earth. They not only provide numerous products for human use and consumption, including fossil fuels and food, but are invaluable as the "kidneys of the landscape" for their ability to purify polluted rivers, prevent and minimize flooding, protect shorelines, and replenish groundwater sources. Wetlands also provide valuable habitat to numerous species of waterfowl and wildlife.

But what is a wetland? Wetlands are defined by the State of Texas as areas "including swamp, marsh, bog, prairie pothole, or similar area, having a predominance of hydric soils that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, the growth and regeneration of hydrophytic vegetation." Simply stated, wetlands contain (1) water or



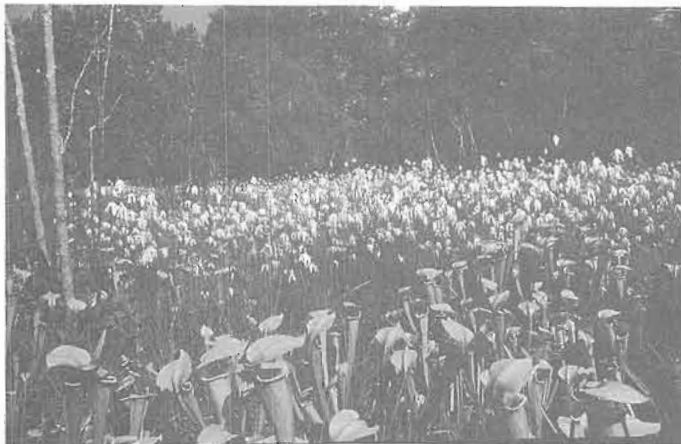
*Three parameters are used to define wetlands: hydrology, soils and vegetation.*

©Jack Bauer

saturated soils for at least part of the year, (2) plants that have adapted to life in wet environments (hydrophytic vegetation), and (3) special soils that develop under depleted oxygen conditions (hydric soils).

Wetlands can be swamps, bottomland hardwoods, marshes, bogs, springs, resacas, playa lakes and saline (alkaline) lakes. Wetlands are found along rivers, streams, lakes and ponds; in upland depressions where surface water collects; and at points of groundwater discharge such as springs or seeps. They are found in both saltwater and freshwater systems, on every

continent except Antarctica, and in every climate from the tropics to the tundra. As their name indicates, they are "wet land," since they are located in the transition zone between upland and open water. Both aquatic and upland plant and animal species may therefore depend on wetlands for their survival.



*Pitcher plants in an east Texas bog.*  
©TPWD

## Texas Wetland Types

What kinds of wetlands do we have in Texas? In this State, the different regional climates result in regional differences in wetland types.

**East Texas** is dominated by **bottomland hardwoods or forested wetlands**. These forests are characterized by broad-leaved (e.g. oak, elm, ash) and needle-leaved (e.g. cypress) deciduous plants that typically grow in creek and river floodplains. In a floodplain,

forests contain a great variety of trees, shrubs and vines that grow together in different vegetation assemblages depending on soil type, water depth, velocity, and flood duration. Bottomland hardwoods in Texas support over 180 species of trees, including bald cypress, green ash, possum-haw, overcup oak, buttonbush and pecan. Characteristic herbaceous species include sedges, arrowheads, smartweed, spider lilies and bladderwort. Common animals found in these forests include waterfowl, eastern wild turkey, swamp rabbit, furbearers, and gray and fox squirrels.

Another type of wetland, a **bog**, is sometimes found in association with bottomland hardwoods. Bogs are peat-accumulating wetlands that have no significant inflows or outflows and support mosses, such as sphagnum, that grow in acidic conditions.

Conversion of floodplain forests to other land uses places bottomland hardwood forests among the most severely altered ecosystems in the United States. Loss of these forests has been caused by many activities, including water control structures, agriculture, logging, mining,



*Conversion of floodplain forests to other land uses places bottomland hardwood forests among the most severely altered ecosystems in the United States.*  
©TPWD

even slight differences in elevation can affect the time that the ground is covered by water, which in turn affects the abundance and types of vegetation that can grow. As a result, bottomland hardwood

petroleum extraction, development and pollution.

The Gulf coast contains a diversity of **saline, brackish, intermediate and fresh marsh wetlands**, including wet prairies, forested wetlands, barrier islands, mud flats, estuarine bays, bayous and rivers. Saline and brackish marshes are most widely distributed south of the Galveston Bay, while intermediate marshes are the most extensive marsh type east of Galveston Bay. The existence and extent of specific plant species within these different wetland types depends on their specific tolerances to salt concentrations and variability in water depth. Some overlap of species can be found within the different wetland types on the Gulf coast.

Saline marsh is characterized by a monotypic stand of smooth cordgrass. Other plants present may include blackrush, saline marsh aster, saltwort, glasswort and sea-lavender. Brackish marsh communities, the most extensive communities in the Galveston Bay system, are transitional between saline and intermediate marshes. Dominant species include marshhay cordgrass, saltgrass, saltmarsh bulrush, marsh hemp and hairy pod cowpea.

Intermediate marshes reflect greater plant diversity than the saline or brackish marsh assemblages. Species found in this environment include seashore paspalum, marshhay cordgrass, Olney bulrush, Colorado River hemp, common reedgrass, coastal water-hyssop, bearded sprangletop, and cattail. Fresh marshes support the greatest diversity in plant species of all marsh types. Dominants include paillefine, giant cutgrass, American lotus, white water-lily, smartweed, marsh millet, arrowhead, seedbox, cattail, alligator weed, and many others.

Coastal wetlands in Texas provide one of the most impor-

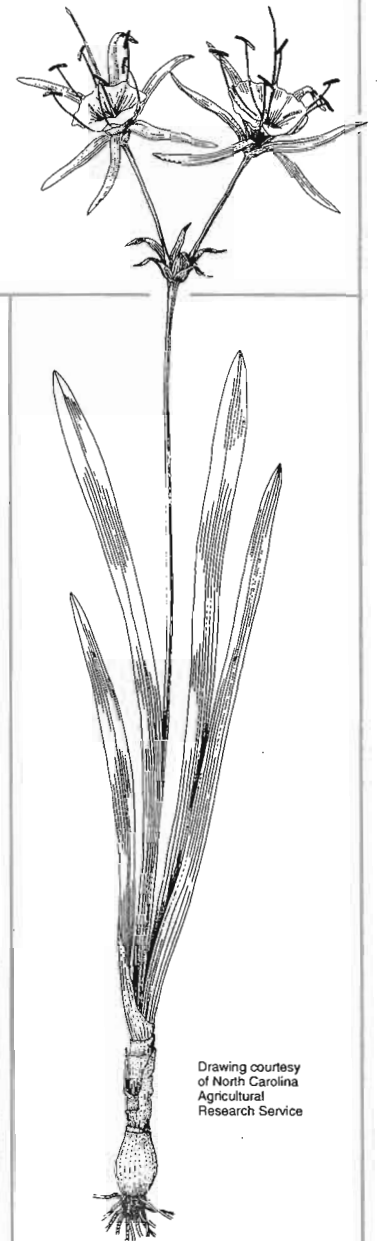


tant wintering and migration areas in North America for waterfowl using the Central and Mississippi flyways. The bald eagle, peregrine falcon, brown pelican and whooping crane all depend on the marshes and estuaries for food, as do otter, alligator and swamp rabbit.

Coastal development poses a severe threat to coastal wetlands, through conversion to other habitats, groundwater withdrawal, erosion, sedimentation, decreased water quality and impacts to wildlife and waterfowl.



**Coastal wetlands in Texas provide one of the most important wintering and migration areas in North America for waterfowl using the Central and Mississippi flyways.**



Drawing courtesy  
of North Carolina  
Agricultural  
Research Service

### Spiderlily

*Hymenocallis* spp.

(organic waters of  
marshes and muddy  
stream margins)

The brown pelican (far left) and the whooping crane (left) are two federally listed endangered species that benefit from wetlands enhancement programs.

©TPWD

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## Wetlands Loss

Historically, wetlands were not widely recognized as valuable or appreciated. In fact, wetlands were often regarded as "wastelands" and breeding grounds for insects, pests and disease, and were considered impediments to development and progress. Wetlands were not useful because they were too wet to farm, and too shallow for swimming. As a result of this reputation, wetlands were readily converted to other land uses.

According to a survey performed by the U.S. Fish and Wildlife Service, approximately 392 million acres of wetlands existed in 1780 in lands that now form the United States. Of that, 221 million acres were found in the lower 48 states. Since that time, humankind has caused a significant reduction in wetlands. Currently, the lower 48 states support only an estimated 104 million acres, or 47% of the original wetland acreage. A closer look at wetland losses provides some shocking results. For example, ten states have lost over 70% of their original wetlands: Arkansas, California, Connecticut, Illinois, Indiana, Iowa, Kentucky, Maryland, Missouri and Ohio. Almost

half of the states (22) have lost at least 50% of their original wetlands. Only Alaska, New Hampshire and Hawaii have lost less than 20%.

Texas, too has lost significant quantities of wetlands, having experienced an estimated fifty-two percent loss in the past 200 years. While wetland losses have resulted from a number of actions, the principal ones are: filling, draining, excavating, diverting, clearing, flooding, shading, adverse impacts from adjacent land uses, grazing, farming and others.

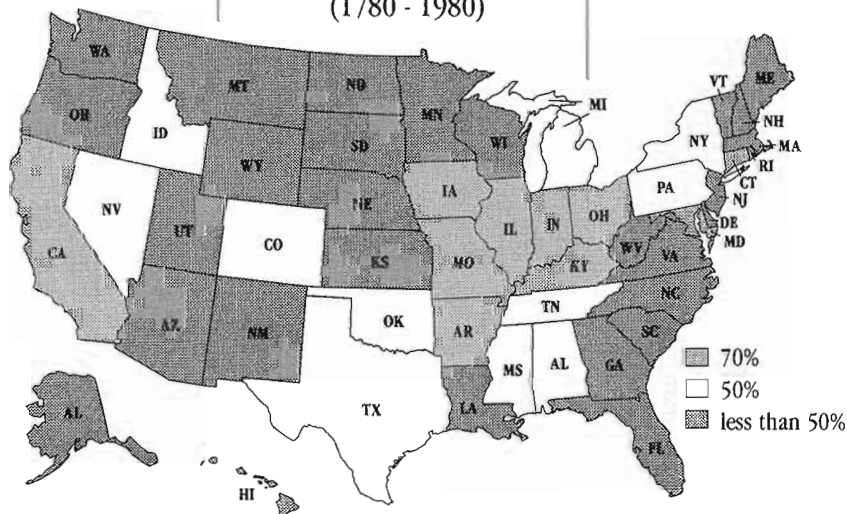


*Urbanization is a major cause of wetlands loss in the United States.*

©Jack Bauer

**The lower 48 states support only an estimated 104 million acres, or 47% of the original wetland acreage.**

**Wetlands Losses  
(1780 - 1980)**



Data from: Dahl, T.E. 1990. *Wetlands Losses in the United States: 1780's to 1980's*. U.S. Department of the Interior, Fish & Wildlife Service, Washington D.C.



*Wetlands vegetation is important to prevent erosion problems.*

©Texas Dept. of Agriculture

*Wetlands provide a variety of ecological functions both to the natural ecosystem and to humans that are now widely recognized as beneficial.*

## Why are Wetlands Important?

Wetlands provide a variety of ecological functions both to the natural ecosystem and to humans that are now widely recognized as beneficial. Functions that are useful to humankind are called "values." These values are typically regulated under legislation such as the Clean Water Act. Some values provided by wetlands include:

- flood control
- erosion control
- removal of sediment and toxicants
- removal or transformation of nutrients
- groundwater recharge or discharge
- fish and wildlife habitat
- natural area buffers
- outdoor recreation/education
- commercial uses (e.g., shellfishing or timber).

Not all wetlands provide all functions and values, and each wetland is a little different. Several of these values are particularly important in Texas.

### Flood Control

Rivers, streams and other wetlands form natural floodplain systems that play an invaluable role in offsetting

flood damage by regulating and maintaining the hydrology in rivers and streams during flood events. The dense wetland vegetation reduces the velocity of floodwaters that travel through the system, which allows water to percolate into and be stored in the underlying soils. Over time, the floodwaters are slowly released back into the river or stream, the atmosphere and the groundwater. By reducing the rate and amount of storm water entering the river or stream, wetlands lessen the destructiveness of the flood. In Wisconsin, a study demonstrated that a watershed composed of at least 30% wetlands could reduce floodwater levels by 60-80% compared to watersheds containing no wetlands.

### Erosion Control

Erosion of soils can be caused by increases in water velocities from upstream construction sites, unvegetated ground or agricultural fields. Wetland vegetation provides an important buffer to adjacent waterbodies by filtering and holding sediments that would otherwise enter lakes and streams and eventually fill them.

### Reduction of Water Pollution

Wetlands absorb and filter a variety of sediments, nutrients and other natural and manmade pollutants that would otherwise degrade rivers, streams and lakes. Water flowing from uplands into water bodies often passes through wetlands, which maintain and improve water quality by filtering out nutrients and sediments before they reach the river or stream. Wetlands lessen the effects of nonpoint source runoff into water bodies by reducing flow velocities and by acting as a sediment, nutrient and heavy metal trap. One study found that nitrogen and phosphorus retention in riparian forests were 89% and 80%, respectively, compared to 8% and 40% in cropland. Additionally, forested areas adjacent to rivers lower the water temperature in hot summer months, which reduces undesirable algal blooms that decrease water quality and can kill aquatic organisms. In estuaries, sediment can harm filter feeders such as oysters and also impedes sight-dependent feeders such as trout.

### Wildlife Habitat

Wetlands provide essential nesting, migratory and wintering areas for more than 50% of the country's migratory bird species. Texas is one of the most important waterfowl wintering areas in the Central Flyway, and provides habitat for 3-5 million birds each year. Wetlands provide habitat for one-third of the federally listed endangered and threatened plant and animal species. Additional benefits include supplying important nursery and spawning habitat for 60-90% of the commercial fish species.

### Recreation

Many recreational activities take place in and around wetlands. Popular recreational activities include hiking, nature observation and canoeing.

While the monetary value of these activities is difficult to assess, it is estimated that in 1980 in the United States, 55 million people spent nearly \$10 billion observing and photographing waterfowl and other wetland birds. Other

wetland-dependent recreational activities include waterfowl hunting and fishing. Wetlands provide a multi-billion dollar fishing, hunting, and outdoor recreation industry nationwide.



*Private landowners have protected thousands of wetlands for recreation, including hunting and fishing (above and left).*

©TPWD

# THE STATE WETLANDS CONSERVATION PLAN

This Landowners Guide is one component of a larger effort to develop a State Wetlands Conservation Plan (SWCP) for Texas. Texas Parks and Wildlife Department (TPWD) has been developing the framework for the State Wetlands Conservation Plan since April, 1994. The SWCP focuses on non-regulatory, voluntary approaches to protecting wetlands, particularly through developing new incentives to encourage wetlands conservation on private lands, and through coordinating and implementing existing private, state and

federal wetlands protection incentives. Information transfer to the landowner and wetlands conservation, including acquisition, mitigation and restoration, are also important components of the Plan.

A Statewide Scoping Meeting for the State Wetlands Conservation Plan was held in September, 1994. Meeting participants included representatives from landowners, state and federal agencies, conservation, agriculture, forestry, and business. The scoping meeting was an opportu-

nity for participants to provide input at an early stage in plan development on the three main components of the plan: economic and other incentives for protecting wetlands, information transfer to the landowner, and wetlands conservation.

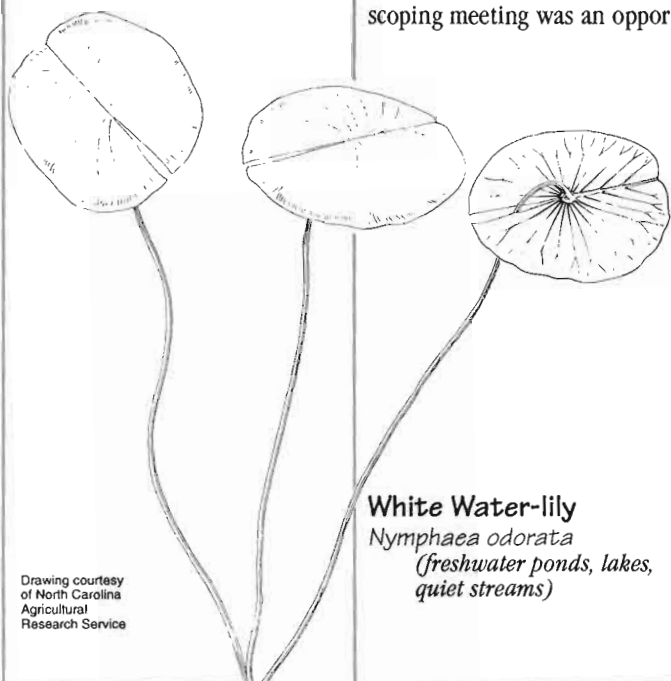
Participants' comments from the meeting demonstrated overwhelming support for landowner involvement throughout the Plan's development, and a desire for new private lands tax incentives that would encourage landowners to conserve wetlands.

As the lead agency in the development of the SWCP, TPWD values the input of a variety of agencies and groups in guiding the development of the State Wetlands Conservation Plan. The near-term efforts of TPWD will concentrate on assembling statewide and regional (East Texas, playa lakes and the coast) advisory groups consisting of agricultural,

forestry, conservation and landowner representatives, which will address many of the topics mentioned above. Public meetings will be held in each region to provide information on the State Wetlands Conservation Plan, and to encourage cooperative efforts between landowners, agencies and other interested groups to conserve wetlands.

In addition to the *Wetlands Assistance Guide for Landowners*, a Texas-specific educational wetlands video is being produced that will be available free of charge. A newsletter is also being developed to update those who are interested in the Plan's progress. If you would like additional information about the Plan, or would like to receive a copy of the video or be on the newsletter mailing list, feel free to contact:

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Austin, TX 78744  
(512) 389-4328



**White Water-lily**  
*Nymphaea odorata*  
(freshwater ponds, lakes,  
quiet streams)

Drawing courtesy  
of North Carolina  
Agricultural  
Research Service

*The SWCP focuses on non-regulatory, voluntary approaches to protecting wetlands, particularly through developing new incentives to encourage wetlands conservation on private lands.*

## LONE STAR LAND STEWARD AWARDS

The Texas Parks and Wildlife Department launched a new program in March 1995, to recognize private landowners for their critical role in conserving and enhancing wildlife habitat including wetlands. The Lone Star Land Steward Awards program will recognize and honor the achievements of up to 30 private landowners in Texas each year.

"The unique history of our state has resulted in a pattern of ownership in which 97 percent of Texas land is owned by private citizens," said Andrew Sansom, Executive Director of the Texas Parks and Wildlife Department. "Not one acre of unbroken prairie sod would exist today in Texas had not succeeding generations of private landowners protected that unique heritage. Landowners committed to sound wildlife management are producing the highest quality wildlife populations."

Stewardship and management are the key words, he said. "In recent decades, as more and more of our population has shifted to urban areas, some have challenged the concept of actively managing ecological resources, including both wildlife populations and

their habitat. But resource management is an essential conservation tool and private landowners are the key to conserving wildlife habitat.

"In order to succeed, our conservation agenda must be sensitive to private landowners, supportive and respectful of their rights and customs. The wildlife habitat of Texas is in their hands. That is why the department will publicly recognize private property owners with exemplary habitat conservation programs on their lands."

The Lone Star Land Steward Awards program will recognize excellent wildlife conservation efforts in all habitats within the 10 ecological areas of Texas - from timberlands to native prairies and from marshes to mountain ranges. "We want to identify those landowners who plan and implement conservation practices that enhance wildlife habitat on traditional farms and ranches, as well as those who manage and protect rare resources, such as native prairies or bat caves," said Bob Cook, TPWD Wildlife Division Director. Landowner participation in existing incentives programs (e.g.



*Private landowners play a critical role in conserving wildlife habitat in Texas.*

©Texas Dept. of Agriculture

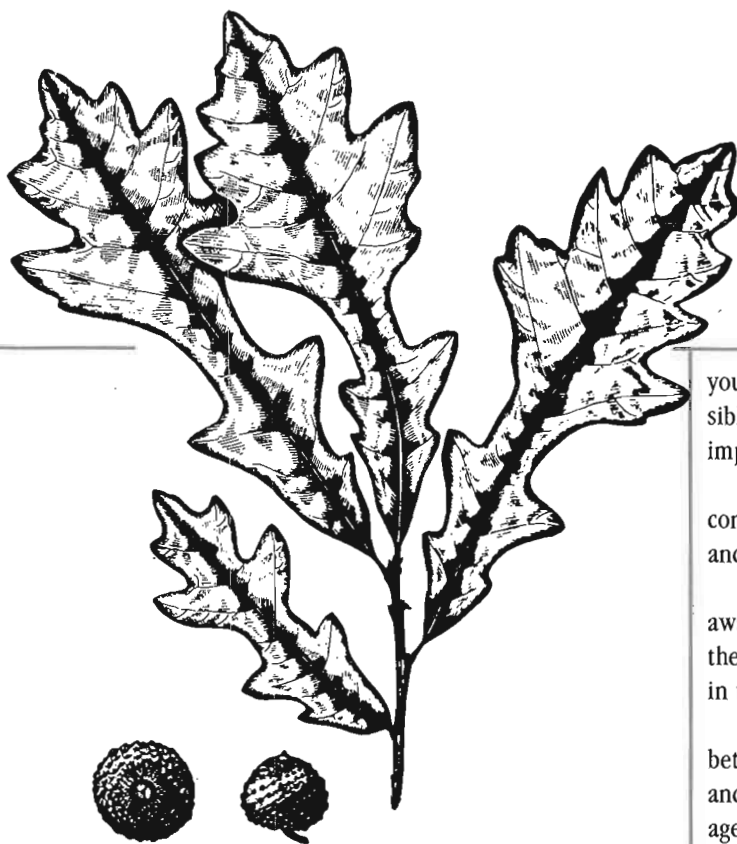
Private Lands Initiative, Wetland Reserve Program) is one positive way of demonstrating commitment to wildlife conservation. Most of the goals of the incentive programs are consistent with those set forth in the Lone Star Land Steward Awards program.

This new program complements the Texas Big Game Awards, which recognizes landowners, hunters and the production of quality big game animals, he said. "The program recognizes landowners for the habitat management activities and land stewardship required to produce trophy quality wildlife. The Lone Star Land Steward Awards and the Big Game Awards will work together

to recognize private landowners for their dedication to wildlife and habitat conservation, management and enhancement."

The objectives of the Lone Star Land Steward Awards program are:

- To recognize private landowners for excellence in habitat management and wildlife conservation on their lands.
- To publicize the best examples of sound natural resource management practices.
- To encourage the education and participation of



Drawing from  
*Trees of East Texas*  
by Robert A. Vines

### Overcup Oak

*Quercus lyrata*

(found on wet, poorly  
drained clay soils along  
rivers in East Texas)

youth in promoting responsible habitat management and improved ecosystem health.

- To promote long-term conservation of unique natural and cultural resources.
- To promote ecosystem awareness and acknowledge the best conservation practices in the state's 10 ecosystems.
- To improve relationships between private landowners and Texas' natural resource agencies.
- To illustrate the important role of Texas' private landowners in the future of our natural resources.

As many as three landowners from each of the 10 ecological areas of Texas will be honored at a special reception hosted by the Texas Parks and Wildlife Commission and the Private Lands Advisory Board each March. One landowner will be honored as the statewide Lone Star Land Steward.

"The Texas Private Lands Advisory Board identified the

need for an effort to recognize outstanding stewardship in Texas," said Kirby Brown, Director of TPWD's Private Lands Enhancement Program. The Board serves to advise the commission chairman on matters involving habitat conservation on private lands. "They see this as an important means for the department to promote conservation and education to landowners and the public. This awards program is a product of their efforts to highlight conservation on private lands."

Landowners may apply or be nominated by any individual or organization. Ranchers, farmers, foresters and other land managers and cooperatives may participate.

Applications for nominations are available at TPWD, Private Lands Enhancement Program, 4200 Smith School Road, Austin, Texas 78744, or call 1-800-792-1112 or (512) 389-4505.

## ROLES OF FEDERAL AND STATE AGENCIES IN WETLANDS

Many state agencies within Texas are involved in varying aspects of wetlands management and regulation. Most agencies listed either coordinate or provide technical assistance for the incentives programs described in the Section "Sources of Assistance." Appendix 2 lists agency addresses and phone numbers if you would like additional information.

**Texas Agricultural Extension Service (TAEX)**, a part of the Texas A&M University System, educates Texans in the areas of agriculture, environmental stewardship, youth and adult life skills, human capital and leadership, and community economic development. Two of the four strategic goals of the Extension Service relate to the environment: 1) educate citizens to improve their stewardship of the environment and Texas natural resources through its network of educators in county offices. In addition to other responsibilities, county agents provide technical assistance in habitat management to landowners; and 2) foster the development of responsible, productive and self-motivated youth and adults.

**Texas Forest Service (TFS)** is involved in wetlands primarily in an advisory capacity to private landowners. The TFS provides management assistance to owners of forest lands, many of which are in wetland areas. Present policies accept or encourage timber harvest in wetlands.

**Texas General Land Office (GLO)** is the state agency responsible for the management of state-owned public lands not specifically purchased by or deeded to other agencies. These lands include coastal wetlands inland to the line of mean high tide and up rivers to the limit of tidal influence. The GLO is a proprietary and not a regulatory state agency. Users of state-owned lands obtain leases or easements and pay a fee for mineral extraction, occupancy, or encumbrance of public lands. The GLO is also the state's lead agency for coordinating and developing a coastal management plan designed to preserve public beach access, protect coastal wetlands and other



*Cypress swamp in east Texas.*  
©TPWD

coastal natural resources, and respond to beach erosion along the Texas coast.

**Texas Natural Resources Conservation Commission (TNRCC)**. On September 1, 1993, the Texas Water Commission, the Texas Air Control Board and portions of several other agencies merged to form the TNRCC. TNRCC implements many sections of the Texas Water Code and the federal Clean Water Act and Safe Drinking Water Act. The TNRCC develops water quality

requirements designed to protect attainable uses and to maintain the quality of waters in the state. These standards are the basis for permits issued by the TNRCC authorizing discharges into or next to waters in the state. TNRCC also reviews applications for Clean Water Act Section 404 permits, which require a state water quality certification under Section 401 of the Clean Water Act. TNRCC administers wastewater and water rights permit and enforcement programs.

Drawing courtesy  
of North Carolina  
Agricultural  
Research Service



### Smartweed

*Polygonum spp.*  
(found in freshwater,  
fruits provide excellent  
waterfowl forage)

**Texas Parks and Wildlife Department (TPWD)** has primary responsibility for protecting the state's fish and wildlife resources. TPWD acquires, manages and protects wildlife and its habitat, and acquires and manages park lands and historic areas.

TPWD has numerous programs to protect or manage wetlands. The agency is coordinating development of a Texas Wetlands Conservation Plan. In addition, the state park system, which provides attractive and educational areas for public recreation, also features many aquatic and wetland habitats. Master plans are prepared for each park prior to development to ensure that important natural areas such as wetlands are protected.

TPWD has acquired lands in virtually every part of the state for the preservation, management, and study of wildlife species. Wildlife management areas typically include wetlands and open water for use by resident and migratory wildlife. Wildlife management areas specifically managed for waterfowl have been purchased with federal funding and by funds generated by the state waterfowl stamp required of all waterfowl hunters.

TPWD is also responsible for conducting research to help determine management practices for waters and wetlands necessary to promote and sustain fisheries. The importance of wetlands as a source of nutrients and as nursery areas for juvenile finfish and shellfish is well recognized.

**Texas Water Development Board (TWDB)** administers state and federal financing programs for water-related projects, and forecasts and plans for long-term water needs with associated data collecting and resource studies. The Board also prepares the State Water Plan, which considers the effect of upstream development on Texas bays and estuaries and arms of the Gulf of Mexico, as well as the effect on navigation.

### **United States Army Corps of Engineers (Corps)**

provides design and engineering services and construction support for a variety of military and civilian projects worldwide. One civil duty includes protecting the integrity of the navigable waters of the United States, wetlands resources, and the nation's water resources. These responsibilities are carried out through the issuance or denial of Clean Water Act Section 404 and other permits authorizing certain activities in wetlands and other waters of the United States. The Corps' duties also include maintaining navigation and shipping channels, providing emergency response to natural disasters, regulating discharges of dredged or fill material, operating and maintaining flood control reservoirs, and regulating activities in wetlands.

**United States Environmental Protection Agency (EPA)** is responsible for implementing federal laws designed to protect the nation's natural resources. This is done primarily through regulation, but EPA has also developed a wide variety of funding, planning, and education programs. EPA has

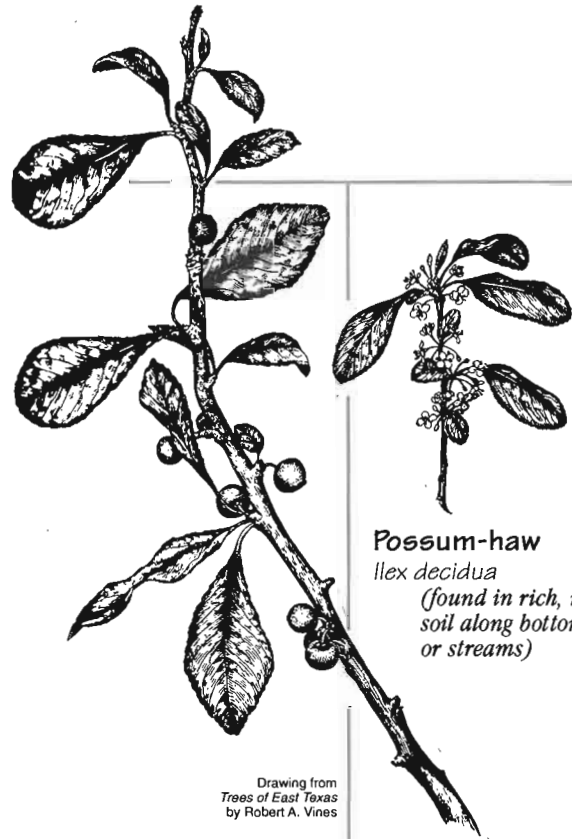
the authority to regulate wetlands under Section 404 of the Clean Water Act. The EPA offers a Wetlands Protection Hotline that responds to questions and provides materials on a variety of wetlands topics. The Hotline can be reached Monday through Friday from 9:00 am to 5:30 pm EST, at (800) 832-7828.

**United States Fish and Wildlife Service (USFWS)** is the principal federal agency responsible for conserving, protecting and enhancing certain fish and wildlife and their habitats, in particular migratory game and endangered species. Among other roles, the Fish and Wildlife Service administers the federal Endangered Species Act and establishes and maintains a system of over 500 National Wildlife Refuges nationwide. The USFWS also manages the taking of migratory waterfowl and conducts research and monitoring programs to inventory and record changes

in populations of fish and wildlife and in habitats.

**USDA Consolidated Farm Service Agency (CFSA)** (formerly Agricultural Stabilization and Conservation Service - ASCS) is a branch of the U.S. Department of Agriculture formed to administer commodity price and income support programs, farm operating loans, and the federal crop insurance program. The agency was formed from all or part of three other agencies - the ASCS, the Farmers Home Administration, and the Federal Crop Insurance Corporation.

**USDA Natural Resources Conservation Service (NRCS)** (formerly USDA Soil Conservation Service) provides technical assistance to landowners in development of resource management systems that conserve soil, air, water, plant and animal resources. This agency employs soil scientists, plant scientists and engineers that can provide assistance in identifying, restoring, enhancing and creating wetlands.



**Possum-haw**

*Ilex decidua*

(found in rich, moist soil along bottomlands or streams)

Drawing from  
Trees of East Texas  
by Robert A. Vines



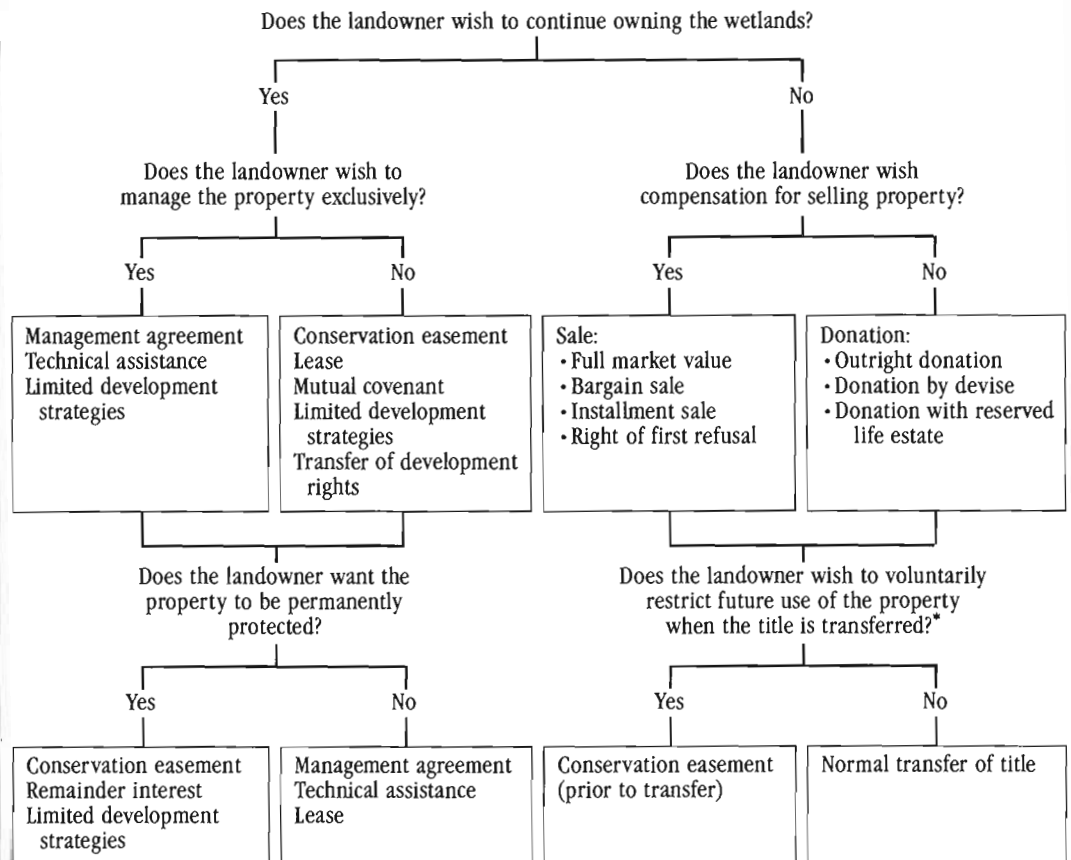
*Texas Hill Country stream.*  
©Jack Bauer

# THE DECISION TREE

## *Choosing the Best Option or Options for the Landowner*

The future of our wetlands is closely linked to land-use decisions made by the stewards of the wetlands resource. Approximately 97% of Texas' lands are privately owned. Therefore, the role of the private landowner in wetlands conservation is crucial. As understanding and appreciation for wetlands increases, there has been a growing number of voluntary programs to help landowners act as stewards of their land by conserving and restoring wetlands. To help landowners become more effective stewards, they should be provided with a broad array of voluntary conservation and management options from which to choose a stewardship strategy.

With a firm understanding of the landowner's objectives, property, and potential problems and opportunities, it is possible to proceed towards choosing the option or options best suited for the landowner. A simple, frequently used approach for choosing the best options for a landowner is found in the decision tree. The foremost questions to ask in choosing the best options are (1) does the landowner want to do something with the wetlands on his/her land, (2) does the landowner wish to retain ownership of the land, and (3) does the landowner wish to manage the property exclusively?



\*If landowners wish to guide future use of the property through transfer of the property, they should consider donating a conservation easement for the property to another organization before transferring the property in fee through a normal transfer (i.e., sale or donation). If landowners do not wish to restrict future use of the property, they can transfer the property through a normal transfer.

## GENERAL LANDOWNER OPTIONS

*The following options are available if the landowner wishes to retain ownership and guide future use of the property.*

### Conservation Easements

A perpetual legal agreement between a private property owner and a qualified conservation organization to voluntarily place restrictions on the type and amount of development that may take place on a piece of property and to protect significant natural features including wildlife or wildlife habitat.

#### Advantages

- Easements provide federal income, estate, and gift tax benefits if easement is donated or conveyed at less than fair market value;
- allows the property owner to retain ownership of the wetland while potentially receiving income, estate, and property tax reductions;
- easement restrictions are flexible within certain guidelines and can be adapted to fit the needs of the landowner; and
- easements may provide permanent protection for the wetland.

#### Disadvantages

- Usually involves giving up some rights relating to the use of property; and

- the landowner is responsible for maintenance and other costs of the land.

### Leases

Agreements for the rental of land by a landowner to a conservation organization or agency for a specified period of time.

#### Advantages

- The landowner receives periodic payments for the leased property;
- leases provide an alternative if landowners do not wish to transfer their land to a conservation agency or organization but want to see it used or protected by such a group for a period of years;
- certain restrictions can be incorporated into the lease to guide the activities of the conservation agency on the land, including provisions to terminate the lease if the conservation agency does not use the property as directed; and
- the impact of the lease on the value of the land may be taken into account when estate taxes are calculated.

#### Disadvantages

- Unless restrictions are made by the landowner, leases generally allow unrestricted and exclusive control of the

- land by the agency leasing the property; and
- Not perpetual.

### Management Agreements

An agreement between the landowner and a conservation agency whereby either the landowner or conservation agency agrees to manage his/her property in a certain manner consistent with the goals of the conservation agency and the landowner.

#### Advantages

- Direct payments and other types of cost-share assistance may be available to the landowner;
- management of a property involves creating a landowner management plan based on one's needs;
- the organization that helps develop the plan often provides management assistance and monitors compliance; and
- ordinarily it is easier to terminate a lease and does not involve exclusive possession of property.

#### Disadvantages

- Management agreements are not permanent.

### Mutual Covenants

Mutual covenants involve agreements between nearby or adjacent landowners to control the future use of their land through restrictions agreed upon by all participating landowners.

#### Advantages

- Mutual covenants are permanent and can be enforced by any of the landowners of the involved properties;
- there is significant incentive to comply with the restrictions knowing the landowner's neighbors are aware of what can and cannot be done on their property; and
- mutual covenants can reduce property taxes.

#### Disadvantages

- The loss in market value from mutual covenants cannot be claimed as a charitable deduction income tax returns.

### Restoration

Involves the active rehabilitation of a degraded wetland to recover its natural attributes, functions, and values.

#### Advantages

- Technical and financial assistance is available for restoration projects; and
- landowner can realize economic gains from the recreational and commodity benefits of (restored) wetlands.

### Disadvantages

- Can be expensive; and
- restoration success varies with the extent of hydrologic damage.

### Limited Development Strategies

Involves the sensitive development of the least environmentally significant portions of the property in order to finance conservation of the remaining property and meet landowner economic needs and goals.

### Advantages

- Limited development strategies may allow enough funds to be raised to protect the remaining significant environmental areas, especially where land values are high;
- a combination of limited development strategies combined with conservation techniques may achieve the landowner's financial needs; and
- tax advantages may be realized from recording an easement over the undeveloped part of the land.

### Disadvantages

- Limiting development of the land entails foregoing some of its potential profitability; and
- it may be difficult to determine which areas of the property are the least environmentally significant.

### Remainder Interests

Dedication of a remainder interest transfers full or partial interest in a property to an appropriate grantee, such as a nonprofit conservation organization, after the death of the landowner and of any subsequent title holders whom the landowner names.

### Advantages

- Landowners enjoy all rights to the property during their lifetime (except uses that degrade natural resource values) while providing for permanent protection in the future.
- Donation for conservation purposes qualifies landowner for a tax deduction, discounted in proportion to the anticipated length of time before the grantee takes over the interest.
- Whether sold or donated, dedication of remainder interest lessens the burden of estate taxes.

### Disadvantages

- May restrict uses that degrade natural resource values.

### Transfer of Development Rights (TDRs)

A method of relocating potential development from an area where the local government wishes to limit development to an area where it is willing to see increased

development; local government enacts TDR structure through local zoning or other land use ordinance or regulation; the landowner is allowed to sell development "credits" to a purchaser in an area where the local government is prepared to allow development at increased densities.

### Advantages

- The transfer protects wetlands and other ecologically significant features of the land without curtailing development in the area;
- TDRs allow land to remain in the private sector while avoiding undesirable development;
- TDRs do not require the expenditure of public funds for acquisition, but have the same effect; and
- TDRs may result in a reduced property tax assessment of the "donor" land after transfer of the development credit.

### Disadvantages

- Use is limited to states and counties with enabling legislation;
- complicated standards for the allocation, purchase, and sale of development rights must be established to provide a legally defensible system;
- planning and administrative costs are high; and
- it is difficult to accurately apportion development credits among landowners.

*The following options are available if the landowner wishes to transfer the title with compensation.*

### Sale Option

There are four sales options that can be applied to wetlands:

1. *Sale at fair market value* – the landowner receives full market value for the land.
2. *Bargain sale* – the landowner agrees to sell the land to a conservation organization at a price below full market value. The difference between the full market price and the selling price becomes a donation.
3. *Installment sale* – outright sale of a piece of property by a landowner where all or part of the consideration is deferred and paid in successive years. Installment payments may be used in all sale options.
4. *Right of first refusal* – binds a landowner to giving a conservation agency the option to match the purchase offer and acquire the land if the owner is approached by another buyer.

**Advantages**

- Sale at full market value allows the landowner to receive full value for land;
- bargain sale may make the landowner eligible for charitable tax deduction and reduces the capital gains tax;
- installment sale defers actual payment of tax on the capital gain until the purchase money with which to pay the tax is actually in hand; and
- right of first refusal gives a conservation organization extra time to acquire the funds necessary for purchasing the land.

**Disadvantages**

- Most conservation groups have a very limited budget and cannot afford the full market value for wetlands;
- if the land value has appreciated since it was bought, the landowner will be liable for income tax on the capital gain; and
- government agencies may have the funds but they apply selective criteria to their purchases.

*The following options are available if the landowner wishes to transfer the title without compensation.*

**Donation of land**

There are three types of land donations:

1. **Outright donation** – Grants full title and ownership to the conservation organization, community, or government agency receiving the donated property.
2. **Donation by deathtime transfer** – Donation of land through a will.
3. **Donation with reserved life estate** – Donation of land with retention of rights by the landowner to use all or part of the donated land during his/her lifetime and the lifetimes of designated family members.

**Advantages**

- Donation is an excellent way to provide total protection for wetlands and ensure the wetlands will be maintained and enhanced;
- landowners can receive income tax deductions and possible estate, gift, and property tax breaks;
- grants communities and conservation organizations vital wetland areas they might not have been able to purchase;

- outright donation is simple, eliminates most negotiations, and can be conducted quickly;
- donation by deathtime transfer allows the landowner to retain full use and control over his or her land while alive and to ensure the land's protection after the owner is deceased;
- donation by deathtime transfer reduces estate taxes and may benefit heirs with reduced inheritance taxes;
- donation with reserved life estate allows the landowner to continue to live on and use the property during his/her lifetime while also securing the land's future protection; and
- donation with reserved life estate allows designation for family members or other persons only, without any reservations by the landowner.

**Disadvantages**

- The landowner loses potential income from the sale of the land;

- maintenance and other associated costs taken on by the organization or agency receiving the property may be more costly than easements to the agency or group;
- there is no income tax deduction for a donation by deathtime transfer;
- the landowner is responsible for property taxes for as long as he or she remains in possession of the land;
- tax relief from a donation with reserved life estate generally applies to personal residence or farm – wetlands may not necessarily qualify; and
- there may not be a guarantee of perpetual preservation unless legally enforceable controls are imposed in the grant.



*Many wetlands assistance agreements allow cattle grazing on a short-duration basis.*

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## SOURCES OF ASSISTANCE

### Programs and Land Characteristics: A Quick Reference Guide

Many federal, state and private programs are available to fit the needs of landowners and their properties. Landowners may choose programs applicable to their financial needs, specific concerns, restoration and conservation goals, federal and state regulations, and more importantly, the existing management or creation of wetlands on their properties. The voluntary programs and contacts described in the following pages are designed to provide the essential tools for effective stewardship. The private landowner interested in any of these programs may contact the agency or local office in their area.

The following matrix lists the programs explained in this Guide and the characteristics that are applicable to each program. Also listed are the acronyms used in the matrix.

- ACP, Agricultural Conservation Program
- Challenge Cost Share Program
- Conservation Easement Debt Cancellation Program
- CRP, Conservation Reserve Program
- FIP, Forestry Incentives Program
- GPCP, Great Plains Conservation Program
- MARSH, Matching Aid to Restore States Habitat

- NAWCA, North American Wetlands Conservation Act
- NAWMP, North American Waterfowl Management Plan Joint Venture Project
- Natural Resources Conservation Service (NRCS) Technical Assistance
- PFW, Partners for Wildlife Program
- PLEP, Private Lands Enhancement Program

- PLI, Private Lands Initiative
- PWP, Prairie Wetlands Project
- RCD, Resource Conservation and Development
- SIP/FSP, Stewardship Incentives Program, Forestry Stewardship Program
- WHAT, Wetland Habitat Alliance of Texas
- WQIP, Water Quality Incentive Program
- WRP, Wetlands Reserve Program

| Program Name                                    | Eligible Lands |                          |                 |          | Assistance |           | Program Sponsor<br>F=Federal<br>S=State<br>P=Private |
|-------------------------------------------------|----------------|--------------------------|-----------------|----------|------------|-----------|------------------------------------------------------|
|                                                 | Wetlands       | Prior converted wetlands | Farmed wetlands | Woodland | Financial  | Technical |                                                      |
| ACP                                             |                | •                        | •               | •        | •          | •         | F                                                    |
| Challenge Cost Share Program                    | •              | •                        | •               | •        | •          | •         | F                                                    |
| Conservation Easement Debt Cancellation Program | •              |                          |                 | •        | •          |           | F                                                    |
| CRP                                             |                | •                        |                 |          | •          | •         | F                                                    |
| FIP                                             | •              | •                        | •               | •        | •          | •         | F, S                                                 |
| GPCP                                            | •              | •                        | •               |          | •          | •         | F                                                    |
| MARSH                                           | •              | •                        | •               | •        | •          | •         | P, S                                                 |
| NAWCA                                           | •              | •                        | •               | •        | •          | •         | F                                                    |
| NAWMP                                           | •              | •                        | •               | •        | •          | •         | F, S                                                 |
| NRCS Technical Assistance                       | •              | •                        | •               | •        |            | •         | F                                                    |
| PFW                                             | •              | •                        | •               | •        | •          | •         | F                                                    |
| PLEP                                            | •              | •                        | •               | •        |            | •         | S                                                    |
| PLI                                             | •              | •                        | •               | •        | •          | •         | S                                                    |
| PWP                                             | •              | •                        | •               |          | •          | •         | S, P, F                                              |
| RCD                                             | •              | •                        | •               |          | •          |           | F                                                    |
| SIP/FSP                                         | •              | •                        | •               | •        | •          | •         | F, S                                                 |
| WHAT                                            | •              | •                        | •               |          | •          | •         | P                                                    |
| WQIP                                            |                | •                        | •               |          | •          | •         | F                                                    |
| WRP                                             |                | •                        | •               |          | •          | •         | F                                                    |

## NON- REGULATORY FEDERAL PROGRAMS

### Agricultural Conservation Program (ACP)

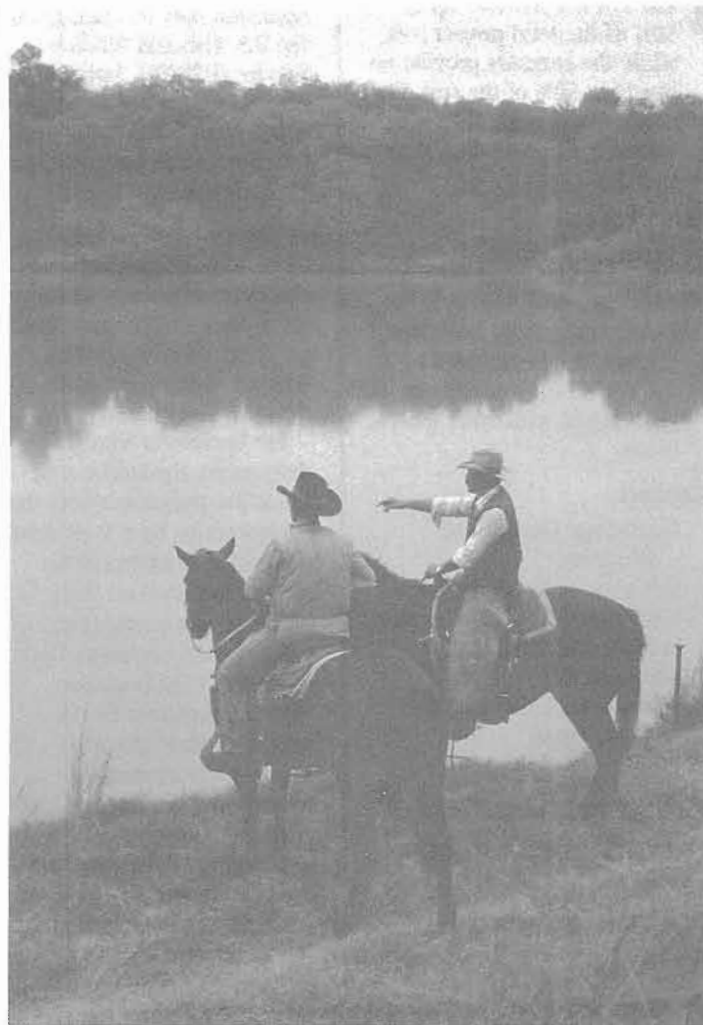
Consolidated Farm Service Agency (CFSA)

#### Program Description

The Agricultural Conservation Program (ACP) encourages reductions in soil loss and agricultural contributions to water pollution from both runoff and direct discharge. ACP provides cost-shared funds for activities that provide long-term and community-wide benefits. These activities, determined by each county's Consolidated Farm Service Agency (CFSA), may include establishing permanent vegetative cover, erosion control, wildlife enhancement, and restoring or creating shallow water areas for wildlife. Technical assistance and program guidance are provided by the U.S. Forest Service and Texas Forest Service, the Natural Resources Conservation Service (NRCS), and the Texas Agricultural Extension Service.

#### How the Program Works

Landowners indicate their interest in participating in the program during annual sign-up periods designated by the local Consolidated Farm Service Agency County Committee, which consists of elected county producers. Sign-up periods usually begin in September or October. After signing up,



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the landowner is referred to the NRCS, which will send a field specialist to visit the property to determine whether the landowner's ideas for the land can be implemented through the practices approved for cost-share. If the project is approved, the landowner pays the total cost of establishing the conservation activity and is then reimbursed for up to 75% of total costs. The maximum cost share payment to the landowner is \$3,500 per year.

ACP agreements may be either annual or longer term. Annual agreements cover one-time improvements. Longer-term agreements can be initiated for more involved conservation efforts. Conservation plans describing the planned activity and the time period required will be developed with the NRCS. The maximum annual cost-share payment remains \$3,500, but annual payments continue over the length of the contract. Landowners may enter into pooling agreements to jointly achieve mutual conservation goals.

#### Regional Use

Nationwide

#### Eligibility

Conservation activities supported through this program must provide long term and community-wide

benefits. Activities should also be those that the landowner would not, or could not, undertake without financial and technical assistance. Conservation applications are approved by the Consolidated Farm Service Agency County Committee. The applicant must own between 10 and 1,000 acres to be eligible for participation in ACP.

#### Contact

##### **Agricultural Conservation Program**

Darrel Davis  
Consolidated Farm Service Agency  
P.O. Box 2900  
College Station, TX 77841  
409 • 260-9381

### **Challenge Cost Share Program**

U.S. Fish and Wildlife Service (USFWS)

#### **Program Description**

In 1988, the U.S. Fish and Wildlife Service (USFWS) launched the Challenge Cost Share Program to manage, restore and enhance fish and wildlife resources and natural habitats on public and private lands. The program is a partnership with nonfederal public and private institutions, organizations, and individuals. Challenge Cost Share allows the USFWS to provide matching funds for projects that support the management, restoration

and protection of natural resources on more than 500 National Wildlife Refuges, 70 fish hatcheries, research facilities, and private lands.

#### **How the Program Works**

The USFWS provides up to 50% of the total project cost, while the partners provide no less than 50% of the cost. The partner may contribute cash, material, equipment, land, or water.

#### **Regional Use**

Nationwide

#### **Eligibility**

Public and private lands are eligible. Funds provided by the USFWS for projects cannot be matched with other federal funds.

#### **Contact**

##### **Challenge Cost Share Program**

Bill Myer or Randy Porter  
U.S. Fish and Wildlife Service  
Refuges and Wildlife  
500 Gold SW  
Albuquerque, NM 87103  
505 • 766-2036

### **Conservation Easement Debt Cancellation Program**

Consolidated Farm Service Agency (CFSA)

#### **Program Description**

The Consolidated Farm Service Agency (CFSA) allows for reduction of Farmer's Home Administration (FmHA) borrower debt in exchange

for granting conservation easements for valuable habitat, including wetlands, on their property for a period of not less than 50 years. Wetlands placed in easements by farmers for FmHA debt reduction may be managed by the U.S. Fish and Wildlife Service (USFWS). FmHA has become part of the Consolidated Farm Services Agency; therefore, CFSA now manages FmHA loans.

#### **How the Program Works**

CFSA distinguishes between two types of borrowers for the agency's debt reduction program: those borrowers who are delinquent, and those who are current.

For borrowers who are delinquent, the FmHA debt reduction program allows the landowner to have their debt readjusted in exchange for placing wetlands on their property in a permanent conservation easement. Upon request of debt reduction from a delinquent FmHA borrower, the CFSA will appraise the property, identify the wetlands on the property, and consider reducing the debt based on the average per acre value of the farm or the total debt. If the adjustment creates a positive cash flow and will prevent the farmer from defaulting, CFSA will recognize the easement and reduce the farmer's loan debt by the value of the wetland acres. If the reduction will not

produce a positive cash flow, the CFSA cannot concur with the easement.

For farmers who are not delinquent, the CFSA can reduce a farmer's debt in exchange for placing an easement on his wetlands provided the reduction does not reduce the debt by more than 33 percent. The value of the reduction is based on the average per acre value of the farm as determined by an appraisal of the entire property. Agreements for debt reduction through wetland easements for non-financially distressed farmers can be made when the loan is granted or any time thereafter.

#### **Regional Use**

Nationwide

#### **Eligibility**

To be eligible for FmHA debt reduction easements, the farmer must have borrowed from the FmHA. Debt reduction easements will not apply to debts with other lending institutions.

#### **Contact**

##### **Conservation Easement Debt Cancellation Program**

Robert C. Hopper  
Chief of Farmer Programs  
Consolidated Farm Service Agency  
101 S. Main Street, Suite 102  
Temple, TX 76501  
817 • 774-1304  
Fax: 817 • 774-1477

## Conservation Reserve Program (CRP)

Consolidated Farm Service Agency

### Program Description

The Conservation Reserve Program (CRP) is a provision of the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 Farm Bill). Major goals of the CRP include reducing soil erosion and sedimentation, improving water quality, maintaining fish and wildlife habitat, and providing support income to the landowner. The CRP encourages farmers to enroll highly erodible cropland or land contributing to a serious water quality problem into the Reserve for 10 years. In return, farmers can receive 1) annual rental payments for the land; 2) cost-sharing; and, 3) technical assistance to plant vegetation for conservation. Congressional budget reductions to the CRP for

1995 may prevent any new signups during that year. The CRP is administered by the Consolidated Farm Service Agency (CFSA) in cooperation with the Natural Resources Conservation Service (NRCS), Texas Agricultural Extension Service, State Forestry Agencies, and local soil and water conservation districts.

### How the Program Works

Farmers can bid to enroll their highly erodible land or land in a special emphasis watershed in the CRP program during specified sign-up periods at their local CFSA office. The farmers' bids state the annual rental payment per acre the farmer would be willing to accept for converting their eligible cropland to permanent vegetative cover. Conservation plans describing the conservation and maintenance measures to be carried out by the landowner during the contract term must also be submitted and agreed upon by the landowner and the district conservationist.

The standard reserve contract is 10 years, but CFSA accepts easement contracts of 15 or 30 years for special conservation activities. Annual rental payments may not exceed \$50,000 per person per year. By law, payments cannot be higher than local rental rates for comparable land. Rental payments are not counted against payment limitations

Priority areas for CRP enrollment include:

- Highly erodible lands;
- Water-quality impaired areas;
- Special emphasis watersheds (none specified for Texas);
- Wellhead protection areas (determined by EPA); and,
- Filter strip areas.



*Landowners can receive financial assistance for water control structures such as this one to manage water levels in their wetlands.*

©TPWD

applicable to commodity price support and production adjustment programs.

In addition to rental payments, CRP provides cost-share incentives. CRP participants can receive up to 50 percent cost-share from CFSA for establishing vegetation. Once the land has been accepted into the Reserve program, the land cannot be farmed during the term of the contract.

### Regional Use

Nationwide

### Eligibility

CRP eligibility is limited to highly erodible land and land that is contributing to a serious water quality problem.

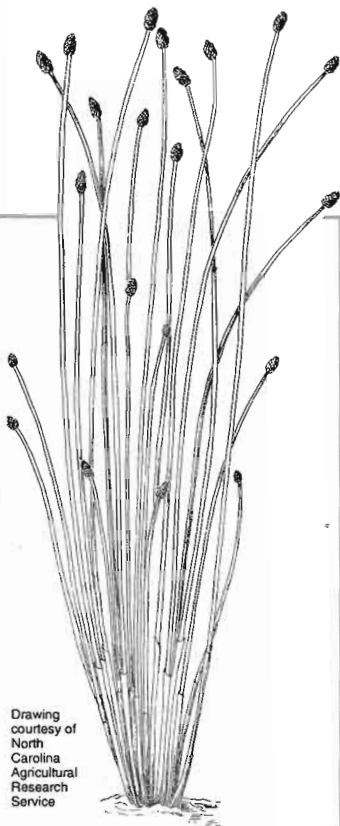
### Contact

#### Conservation Reserve Program

Sammy Orange  
Consolidated Farm Service Agency  
P.O. Box 2900  
College Station, TX 77841  
409 • 260-9235

Land eligible for CRP enrollment must have at least one of the following:

- have been planted as an agricultural commodity grown in rotation for two crop years between 1986-1990;
- have evidence of scour erosion (may be caused by out-of-bank water flow);
- contributing to or creating a water quality problem; and,
- a public wellhead area (determined by the EPA).



Drawing  
courtesy of  
North  
Carolina  
Agricultural  
Research  
Service

### Spikerush

*Eleocharis* spp.  
(freshwater marshes  
and streams)

## Forestry Incentives Program (FIP)

U.S. Forest Service (USFS),  
Natural Resources Conserva-  
tion Service (NRCS), Texas  
Forest Service (TFS)

### Program Description

The Forestry Incentives Program (FIP) is intended to increase the Nation's supply of timber products from private non-industrial forest lands and conserve and improve the environment. The program may apply to wetlands conservation and restoration of wooded swamps. FIP provides technical and cost-share assistance to landowners participating in any one of the four national forestry practices eligible under FIP. These practices include: tree planting, improving a stand of forest trees, site preparation for natural regeneration of trees, and special forestry practices. FIP is jointly administered by the Natural Resources Conservation Service (NRCS) and the U.S. Forest Service in cooperation with the Texas Forest Service (TFS).

### How the Program Works

Landowners apply for participation in the program at the county NRCS office. Upon request from NRCS, the TFS examines the property, develops the Forest Management Plan, and certifies the need for the practice. The TFS will also provide technical advice and help locate

approved vendors for accomplishing the work. The TFS must certify that the work has been completed in accordance with the approved plan before payment is made to the landowner by the county NRCS office. Cost-share assistance cannot exceed 65 percent of the actual, average, or estimated cost of performing the practice. The maximum cost-share that a participant can receive annually for forestry practices under FIP is \$10,000. All FIP practices require a minimum 10-year maintenance agreement from the landowner.

### Regional Use

Primarily in East Texas Pineywoods. FIP is offered only in designated counties where a suitable number of ownerships each capable of producing at least 50 cubic feet of timber per year exist.

### Eligibility

FIP is limited to landowners of 10 to 1,000 acres. Exceptions to the acreage limitation may be obtained for up to 5,000 acres. Ornamental, Christmas tree production, and orchard tree plantings are not eligible for FIP funding.

### Contact

**Forestry Incentives Program**  
Tom Boggus  
Texas Forest Service (TFS)  
College Station, TX 77843-2136  
409 • 845-2641

## Great Plains Conservation Program (GPCP)

Natural Resources  
Conservation Service  
(NRCS)

### Program Description

The Great Plains Conservation Program (GPCP) was authorized by Congress in 1956 to protect the drought-prone Great Plains against wind erosion. Assistance for water quality, wetland conservation, soil and water conservation and wildlife development is available through the program.

### How the Program Works

GPCP management agreements are at least 3 years and no more than 10 years in duration. Projects are cost-shared with Natural Resources Conservation Service, who will pay 50-80% of construction costs. Contracts can not be written for wetland assistance only but must be total planning assistance. In other words, a management agreement for the property's different ecosystems, which may include wetlands, will be developed.

### Regional Use

The Great Plains Conservation Program serves 519 counties in Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

Approximately the western two-thirds of Texas is included in the program range.

#### Eligibility

Available to landowners interested in enhancement of natural wetlands or creation of wetlands on non-wetland sites.

#### Contact

##### Great Plains Conservation Program

Gary Valentine  
Natural Resources  
Conservation Service  
101 S. Main Street  
Temple, TX 76501-7682  
817-774-1291  
Fax: 817-774-1273

## Natural Resources Conservation

### Service Technical Assistance (NRCS)

Natural Resources Conservation Service

#### Program Description

The Natural Resources Conservation Service is the technical arm of USDA.

Technical assistance and information is available for:

- wetlands determinations for wetland protection and management programs;
- developing conservation plans for protecting and managing wetlands;
- providing income-

producing alternatives for use and management of wetlands;

- developing standards and specifications and designing and installing conservation measures for wetland restoration, creation, and enhancement;
- providing information on plant materials for wetland planting; and,
- providing soil surveys and information for identifying, planning, and managing wetlands.

#### How the Program Works

Landowners request technical assistance through local soil and water conservation districts. Technical assistance and information is provided according to local priorities and available resources.

#### Regional Use

Services are available in all counties of the United States and its territories.

#### Eligibility

Landowners who sign agreements with local soil and water conservation districts can receive technical services for managing, using, enhancing, creating, and restoring wetlands.

#### Contact

**Natural Resources Conservation Service - Technical Assistance**  
Local NRCS Representative  
(see Appendix 2)



*Rice stubble provides excellent forage for migrating waterfowl and wildlife along the Texas coast.*

©Texas Dept. of Agriculture

## North American Wetlands Conservation Act of 1989 (NAWCA)

United States Fish and Wildlife Service (USFWS)

#### Program Description

The North American Wetlands Conservation Act (NAWCA), established in 1989, encourages partnerships among public agencies and other interests within the United States, Canada and Mexico to 1) protect, enhance, restore, and manage wetland ecosystems and other habitats for migratory birds, fish, and wildlife in North America; 2) maintain current or improved

distribution of migratory bird populations; and 3) sustain an abundance of waterfowl and other migratory birds consistent with the goals of the North American Waterfowl Management Plan and international treaty obligations.

The Act provides funding for wetlands conservation projects involving acquisition, restoration, and

enhancement. Funding is approved by the Migratory Bird Conservation Commission (MBCC) based on recommendations from the North American Wetlands Conservation Council (Council). The USFWS coordinates with the Council on the NAWCA and can provide assistance to landowners to develop proposals for submission to the Council and MBCC. Funding for the Act is appropriated by Congress and has ranged up to \$15 million a year.

#### **How the Program Works**

Proposals may be submitted by any group or individual by April 1 and August 1. Funding becomes available following MBCC approval, which occurs approximately five months following application submission. A proposal must describe how the proposed work fits into a larger project (if applicable); the need for the proposal; where the work is to be done; the affect of the proposal on animals, plants and wetland functions; how much the project will cost; and partner commitments and responsibilities. A grant application instruction booklet outlining the above information in more detail is available through your FWS Regional Office (see

Appendix 2) or the North American Wetlands Conservation Act representative.

NAWCA grants require a minimum one-to-one grant match from any non-federal source, such as a state, non-profit group, or the landowner, or a combination of these. Proposals with higher match ratios are preferred. Annual payments for leases or easements require a minimum 10 year agreement and demonstration projects require a minimum 5 year agreement.

#### **Regional Use**

Nationwide

#### **Eligibility**

Projects involving acquisition, restoration, enhancement, creation, management, and other activities that conserve wetland ecosystems and the fish and wildlife that depend on such habitats are eligible for the Act or matching partner funds. Areas of special concern and larger areas are usually given priority in grant consideration.

#### **Contact**

**North American Wetlands Conservation Act**  
Vernon Bevell  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744  
512 • 389-4578  
Fax: 512 • 389-4398

### **North American Waterfowl Management Plan Joint Venture Projects (NAWMP)**

United States Fish and Wildlife Service (USFWS)/Texas Parks and Wildlife Department/Non-Governmental Partnership

#### **Program Description**

The North American Waterfowl Management Plan (NAWMP) was signed in 1986 between the United States and Canada to protect, restore, and enhance wetlands important to waterfowl and other wetland-dependent bird species. Mexico has recently signed the NAWMP as well. The NAWMP's primary objective is to return waterfowl populations to levels observed in the 1970s, when fall flights exceeded 80 million ducks. The plan is implemented at the grassroots level by partnerships called Joint Ventures. Wetlands identified under NAWMP as "areas of major concern" for waterfowl habitat (e.g., migration, nesting and forage areas) are targets for these joint ventures.

#### **How the Program Works**

Joint Venture Management Boards, consisting of federal, state, and private agencies and private individuals, have been established to coordinate work within the Joint Venture areas. Because most

lands in Texas are privately owned, landowner involvement is crucial for the joint ventures to succeed. Private landowners of wetlands significant to waterfowl may receive technical and financial assistance through a variety of cooperative programs within their geographic area. Participation is not exclusive to individual landowners, however. Corporations such as Phillips Petroleum, Exxon, DuPont, and Central Power and Light in Corpus Christi have all become involved in wetland conservation projects on their land and/or participate in various joint venture projects.

The Plan also supports research on wetlands restoration, wetlands status surveys, and wetlands inventories.

#### **Regional Use**

There are currently thirteen joint ventures underway in the United States. Principal areas targeted by the plan are the Atlantic Coast from Maine to South Carolina; the Lower Mississippi River region; the Upper Mississippi River-Great Lakes region; the Gulf Coast; the Playa Lakes region of Texas, New Mexico, Oklahoma, Kansas, and Colorado; California's Central Valley; the Pacific Coast; the Rainwater Basin; the Prairie Pothole region of Minnesota, North Dakota, South

Dakota, and Iowa; the lower Great Lakes-St. Lawrence River basin, the Intermountain West, the Black Duck region of the Northern Great Plains, and Alaska (Arctic goose).

#### Eligibility

Any landowner (federal, state, group, or individual) with property of significance to waterfowl and other wetland-dependent species who wishes to restore or enhance the land may apply through the specific Joint Venture Management Board. Both financial and technical assistance may be available.

In Texas, three joint ventures exist: The Gulf Coast Joint Venture (GCJV), the Playa Lakes Joint Venture (PLJV), and the Lower Mississippi River Valley Joint Venture (LMVJV). The Prairie Wetlands Project (PWP) has been created as part of the GCJV. These programs are summarized below.

#### Contact

**North American Waterfowl Management Plan**  
Vernon Beville  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744  
512•389-4578  
Fax: 512•389-4398

#### **Gulf Coast Joint Venture (GCJV)**

The Gulf Coast Joint Venture (GCJV) focuses on perpetuating healthy wintering grounds for migrating waterfowl and other birds and wildlife species along the Gulf Coast from Alabama to Texas. Over 4.5 million acres along the Gulf Coast are important waterfowl habitat. The GCJV targets specific sites along the coast including Laguna Madre, Texas Mid-Coast, and the Chenier Plain extending into Louisiana. Established in 1988, the GCJV is a partnership of landowners, federal and state agencies, and conservation organizations dedicated to protect, enhance and restore wetlands on the Gulf Coast. Between 1989 and 1992, the GCJV has protected 89,368 acres, restored 15,125 acres, and enhanced 96,682 acres in Texas. GCJV project funding for Texas landowners is primarily offered through the Prairie Wetlands Project.

#### Contact

**Gulf Coast Joint Venture**  
David S. Lobpries  
Texas Parks and Wildlife Department  
6414 Deer Trail Drive  
Wharton, TX 77488  
409•532-5517

#### **Lower Mississippi Valley Joint Venture (LMVJV)**

The LMVJV encompasses 22 million acres in portions



of 10 Delta states, including East Texas. One of its primary goals is to integrate waterfowl management and wetlands conservation into the broader realm of soil and water conservation. Projects under the LMVJV should address one of these four topics: 1) private lands enhancement, 2) public lands enhancement, 3) water resources development, and 4) wetland protection and restoration.

Although the LMVJV has targeted enhancement of wetlands on private lands, a program has not been specifically developed to accept individual project proposals from private landowners, in contrast to other Texas joint ventures. This situation results from a lack of partnership funding sources that are available with the other Texas joint ventures. Currently, the only viable funding opportunities are through proposals to the North American Wetlands Conservation Act (NAWCA)

*A landowner in the Panhandle manages his property as both productive farmland and waterfowl habitat through the Playa Lakes Joint Venture.*

©TPWD

Council. Requests to the NAWCA Council are referred to the LMVJV Management Board for review and priority rating. Recommendations are then returned to the NAWCA Council for further action.

Because TPWD recognizes the need for private wetland projects in the LMVJV area, the Department is initiating activities to develop a NAWCA grant request for funding private wetland developments in East Texas. Currently, no timetable exists for planning or conducting this proposed initiative. However, landowners with interest in these future prospects should contact the TPWD LMVJV Coordinator. This would help identify two points: 1) the degree of private landowner interest

in funding assistance for wetland enhancement, and, 2) a listing of individual candidate projects (i.e., a catalog of project requests from individual landowners interested in participation) that could be implemented when funding becomes available.

#### Contact

##### **Lower Mississippi Valley Joint Venture**

Carl D. Frentress  
Texas Parks and Wildlife  
Department  
Route 3, Box 3273  
Athens, TX 75751  
903 • 675-4177

##### **Playa Lakes Joint Venture (PLJV)**

The Playa Lakes Joint Venture (PLJV) promotes partnerships between agencies and private landowners to conserve playa lakes in Colorado, Kansas, New Mexico, Oklahoma, and Texas. The PLJV seeks landowner participation to enhance or protect playa lakes and other wetland habitat. The PLJV hopes to ensure adequate and well distributed habitats to maintain healthy populations of waterfowl and other wildlife. Since 1990, over 3,000 acres of playa lakes have been protected, restored or enhanced in Texas through PLJV partnerships. Technical assistance and cooperative

funding is available for approved projects.

State and federal wildlife biologists will work with individual landowners to create management plans for specific properties. These plans may include:

- projects in or near playas to provide cover and food;
- participating in state and federal programs to provide adequate nesting cover and brooding habitat; and
- maintaining playa water levels, pumping water to them if necessary.

In return, the Joint Venture offers landowners incentives, such as:

- water and pumping payments,
- leases,
- cost share for fencing, grass buffer establishment, and
- compensation from other applicable state and federal land management programs.

The Texas Parks and Wildlife Department (TPWD) coordinates review of project proposals through the Texas Steering Committee of the PLJV. The Department also provides funding for habitat projects on private lands under an agreement signed by both the landowner and the Department.

Up to 50% cost-shared assistance is available from the U.S. Fish and Wildlife Service (USFWS). Cost-shared assistance of up to 100% is available through TPWD. PLJV incentives may work in

conjunction with other federal and state programs, including the Partners for Wildlife Program.

#### Contact

##### **Playa Lakes Joint Venture**

James D. Ray  
Texas Parks and Wildlife  
Department  
3409 S. Georgia, #25  
Amarillo, TX 79109  
806 • 353-0486

##### **Partners for Wildlife Program (PFW)**

U.S. Fish and Wildlife Service

#### Program Description

The Partners for Wildlife Program (PFW), also known as the Private Lands Assistance and Restoration Program, offers technical and cost-share assistance to landowners who wish to restore wildlife habitat, including degraded or converted wetlands and those upland habitats that meet specific eligibility criteria. The objectives of PFW programs are to restore, enhance, and manage wetlands for fish and wildlife habitat; promote profitable land use for agriculture, industry, and private landowners; and promote a wise and lasting land-use ethic.

The program focuses on re-establishment of original natural communities. Special consideration is given to projects that: (a) contribute to the survival of endangered, threatened, or candidate

species, or migratory birds of management concern; (b) contribute to meeting the goals of the North American Waterfowl Management Plan; (c) are located very close to existing habitat so that fragmentation of habitats would be reduced and recolonization by a full component of native plants and animals could easily occur; (d) contribute to the restoration of globally or nationally imperiled natural communities; (e) will result in a self-sustaining system that is not dependent on artificial structures (although projects using levees, dikes, and diversion terraces with water-level control devices, for example, are frequently funded); (f) will use native self-propagating species; or (g) provide education/outreach opportunities.

#### How the Program Works

The U.S. Fish and Wildlife Service may provide assistance to landowners ranging from giving informal advice on design and location of a potential restoration project, to designing and funding restoration projects under a formal cooperative agreement with the landowner. Restoration efforts may include, but are not limited to, plugging drainage ditches, installation of water control structures, fencing riparian areas to exclude livestock, and restoring native vegetation.

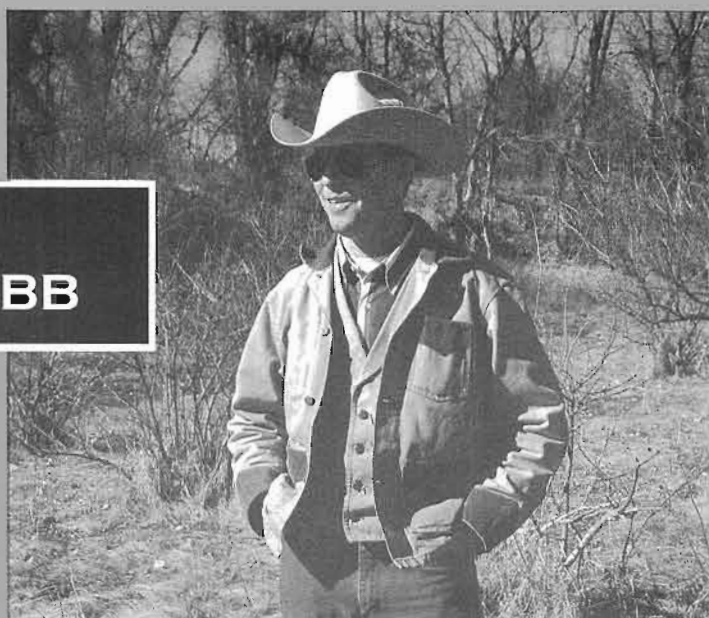
## Profile

### L. H. WEBB

Three white-tailed deer bounded out from the creek bottom and ran down the draw. A covey of bobwhite quail flushed from beneath a nearby tree, a belted kingfisher perched on an overhanging limb as he hunted for food, and evidence of Rio Grande turkey and porcupine was everywhere. Wetland vegetation including willow, buttonbush, cottonwood, hackberry, sedges and black locust flourished. Groundwater formed small pools in the creek bottom, which are replaced by a swift flowing stream during spring rains.

It is easy to imagine that this creek bottom is part of a park, but in fact, it is on L.H. Webb's 9,000 acre cattle ranch in the Rolling Plains near Amarillo. This riparian area has benefited from a 4-strand barbed-wire fence built around 4.5 acres of creek bottom, which enhances the landowner's ability to manage the site. Since the fence was built in the summer of 1993, native vegetation beneficial to wildlife has been reestablished. The cost of the barbed-wire fence was shared by Mr. Webb and the Texas Parks and Wildlife Department through the Private Lands Initiative, a state program that provides technical and financial assistance to landowners for wildlife enhancement projects.

Mr. Webb had previously considered controlled grazing on the bottom, when he was



(Top) L. H. Webb, (above) fencing project under the Private Lands Initiative.  
© Julie Anderson

contacted by TPWD biologists Jim Ray and Gene Miller. Mr. Webb was interested but reluctant to invite government involvement on his land. After assurances from Jim and Gene that the program was voluntary, Mr. Webb agreed to participate, and has been pleased with the results.

The Private Lands Initiative project involved installing one-half mile of fence around 4.5 acres of creek bottom. Four wood duck boxes, provided by TPWD, will be installed in the fenced riparian area. Under the agreement, Mr. Webb can graze cattle for short durations. Short duration grazing can be beneficial to plants by stimulating the growth of native vegetation. Hoof

action loosens the soil and works seeds into it, and sunlight penetrates where feeding cattle have removed some of the thick vegetation. Fencing key wildlife areas like this prevents overgrazing and protects native vegetation that stabilizes stream banks and provides wildlife cover. Often, water quality and erosion problems are improved.

Mr. Webb has seen the benefits of controlled grazing on his property. Eastern gamagrass, a native grass that provides food, cover and nesting for wildlife, has returned to the areas where grazing has been controlled. "You don't see it when the area is continuously grazed because it's like ice-cream to cows - it's the

first thing they go for. It only comes in when cows are fenced out and rest periods are provided," observes Mr. Webb.

While fencing provides benefits to the land and the wildlife that live on it, the Private Lands Initiative project provides perhaps the biggest benefit to the cattle. Controlled grazing allows some of the more preferable grasses, such as eastern gamagrass, to re-establish. When this area is grazed, cattle feed on a higher quality forage, and more of it. This translates into direct benefits to the landowner by producing a healthier stock. "Cattle are the best tool a landowner has to maintain land in good condition," asserts Mr. Webb. "Controlled grazing through the use of fencing provides a win-win situation for the landowner, cattle, and the wildlife."

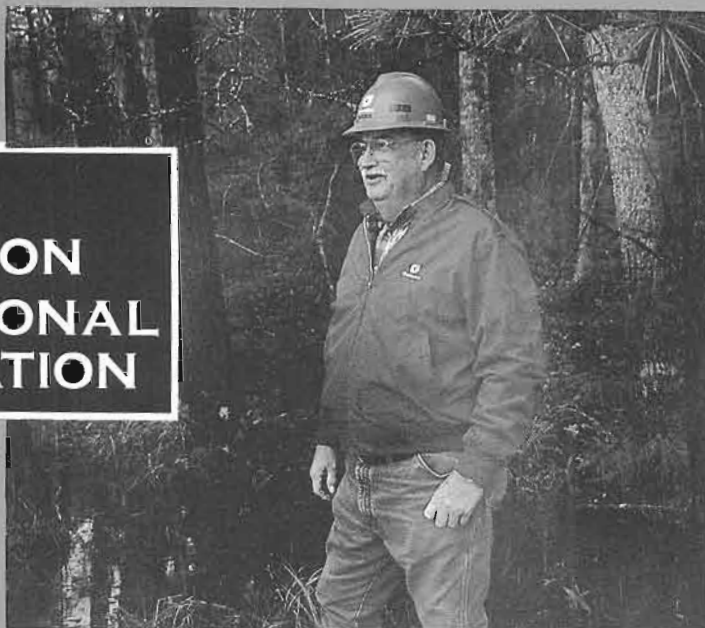
Fencing areas for wildlife on sites that are near each other provides a travel corridor for plains wildlife and could result in local population increases. Jim Ray of TPWD states that, "As more landowners understand the value of fencing riparian areas and playas to manage livestock grazing, Panhandle water, wetlands and wildlife will benefit. If enough people managed riparian areas and playas for wildlife, the effect would be significant."

## Profile

# CHAMPION INTERNATIONAL CORPORATION

As migratory waterfowl make their annual flight to winter on the Texas coast, they now have a few more places to rest on the way, thanks to the conservation efforts of Champion International Corporation. Champion, the second largest commercial timber landowner in Texas, owns 1,041,000 acres of forest land in 27 East Texas counties concentrated in Trinity, Polk, San Jacinto, Liberty and Newton Counties. Not all of these acres are in forest production, however. Over 50,000 acres of bottomland hardwood wetlands are scattered throughout the property as well. These wetlands, found in creek and river floodplains, are rich in wildlife and are one of the most diverse ecosystems in Texas. Because Champion relies principally on pine for its timber source, many bottomlands on Champion's property have not been logged for nearly 30 years. This translates into good wildlife habitat and public benefits. Approximately 95% of Champion's land is leased to the public for the hunting of deer, squirrels, hogs, doves, waterfowl and other wildlife. To improve their lands for wildlife, and in turn for hunting, Champion has been working in partnership for several years with state agencies and groups to enhance and set aside some of their wetland resources.

In 1991, Eric Frasier, Executive Director of the



(Top) Ed Welch, a district land manager for Champion, (above) one of Champion's wetlands enhancement sites.

© Julie Anderson

Wetlands Habitat Alliance of Texas (WHAT), approached Champion about the possibility of enhancing some of their bottomland and depressional wetland areas. Champion, recognizing the wildlife potential for these sites that were too wet for forest production, seized the opportunity to improve the habitat and contribute positively to the environment. Together, Champion and WHAT identified over 200 acres of wetlands for six project sites. Each site contains a constructed levee, about four feet high and 250 feet long on sites of up to 100 acres. Flashboard risers adjust the water depth from six to 18 inches - an ideal level for

dabbling ducks. The levees trap rainwater during the winter and spring, and the wetlands are drained in the summer to allow grasses and plants to grow for next year's forage. "We're not creating habitat, but enhancing habitat for part of the year - we're making it more dependable for wildlife," says Ed Welch, a district land manager for Champion.

All projects were completed without cost to Champion. Technical assistance is provided by the Natural Resources Conservation Service (formerly Soil Conservation Service) and the U.S. Fish and Wildlife Service, while WHAT provides the funding for the project and obtains any necessary

permits. Each year, Champion develops approximately two or three new projects as suitable sites are identified and prioritized.

Wetland enhancement sites range from predominantly herbaceous to wooded, with wetland vegetation consisting of water and willow oak, smartweed, pond weed, bladderwort, rye grass, panic grass, spike-rush, and water pennywort. Each site is providing important stop-over habitat for wintering waterfowl on their way to the coast. A variety of species can be spotted during the winter months, including wood ducks, scaup, mallards, geese, heron, and ibis. Other wildlife, including fish and fur-bearing mammals, are also attracted to the wetlands. WHAT's Eric Frasier is pleased with the wetlands enhancement on Champion's property. "Champion has been the leader for wetlands work within the forest products industry in Texas. Champion, together with the NRCS, the Galveston District Corps of Engineers, and WHAT have helped to supply a richer wetland heritage for present and future generations of Texans."

Some of Champion's lands have also been given the designation of Special Places in the Forest - a company program that recognizes unique sites situated within their working forests that have importance other than for commercial forest production. Sites on Champion's land may receive this designation if they have exceptional ecological, historical, recreational or scenic significance. These sites, ranging from 24 to 300 acres, are set apart from normal forest management operations to protect their unique attributes. Champion provides guided tours to some of the sites and a few are open to the public.

## Profile

# BARRY AUSTIN

### Chatfield, Texas

**B**ottomland hardwood forests, like those found along Mr. Barry Austin's property on the Trinity River, are some of the most productive ecosystems in the world. The rich, alluvial soils deposited on the riverbanks after floods grow tall trees and good crops, and the dense vegetation provides a home for a variety of wildlife, including excellent deer and waterfowl populations. Mr. Austin manages the property for the Pettigrew family, who has owned the 2,800 acre ranch in northern Navarro County since the 1950's. He knows well the water level fluctuations that create such productive lands. By managing the land in ways that complement Mother Nature's forces, he has reaped the benefits of the land, both aesthetically and monetarily.

Mr. Austin's property is an excellent example of land management for multiple uses. His commercial fly-fishing operation runs year-round on a part of his property that was formerly a gravel mine. Crawfish raised on eight acres of wetlands are sold locally, pecans from his trees and those of his neighbors are harvested each fall, and hay from fields along river bottoms is baled for his cattle ranching operation. Mr. Austin's primary income source. He advises landowners to take advantage of the wildlife resources on their property, because improving wildlife habitat can be profitable.



(Top) Barry Austin, (above) one of the wetlands restored with Partners funding.  
© Julie Anderson

Mr. Austin's wetlands demonstrate how wildlife and habitat can be improved through wetlands incentives programs. In 1990, Mr. Austin began three Partners for Wildlife projects covering a total of 300 acres, with the assistance of Mike McCollum at the U.S. Fish and Wildlife Service (USFWS). The projects, on two restored wetlands and one natural site, involved building small levees equipped with plugs that maintain water through the winter. The three sites are connected by pipes, allowing water from the Trinity River to be pumped to the sites in years when rainfall has not been sufficient to fill the wetlands. In the five years since the projects were begun, the pipes have not been needed. The USFWS funded 65% of the cost for the pump, pipes, and levee work, with

technical assistance provided by the Natural Resources Conservation Service.

The wetlands vegetation, including pecans, cattails, smartweed, and bulrush, attracts a variety of waterfowl and other birds, including coots, cormorants, eagle, and snipe. Mr. Austin has planted bald cypress trees along the banks of the wetlands. The Texas Parks and Wildlife Department and the USFWS donated 120 wood duck boxes, which Mr. Austin maintains. Although the Austin family uses the wetlands for waterfowl hunting, half of the Partners wetlands are left as resting areas for the birds.

The Partners for Wildlife wetlands have provided many benefits to the Austins. For example, the Partners projects provide additional wetland habitat

for crawfish, resulting in increased sales for the family business.

Many of Mr. Austin's neighbors also have Partners projects on their lands, which adds up to significant waterfowl habitat. The wetland areas, each providing a different habitat type, complement each other by attracting different wildlife species. The large network of wetlands found on adjacent properties creates an ideal environment that encourages usage by waterfowl all year long. Typically, waterfowl would use the wetlands found in northern parts of Texas only as stopover areas on their way to the coast.

Interest in the Partners program has been steadily growing. In 1990, Mr. Austin was the first Texan to use the Partners program. Since then, approximately 130 Partners projects have been started in Texas. Most landowners learned of the program through neighbors who were pleased with the results. Mike McCollum of the USFWS explains the success: "People recognize that river bottoms may not always be ideal for cropping, and may be too wet for cattle. They would like to get some benefits, either aesthetic or financial, from their lands."

Mr. McCollum emphasizes that participation in the Partners program does not remove any property rights of the landowner — participation depends strictly on landowner interest in the program. "Cultivating a relationship with landowners is essential to the success of the program. They can choose not to participate if they do not like the Partners policies."

Mr. Austin has been very pleased with his wetlands. "The project was so easy — Mike took care of the whole process. We sat down and talked about what I wanted, and everyone involved, both my family and the agencies, was so happy with it. We were planning to restore some wetlands anyway, and I was just grateful to get the help."

## Profile

# W. HEFNER APPLING

Mr. W. Hefner Appling and his neighbors have been rice farmers for years. But Mr. Appling's land in Lavaca County contains a winter crop that his neighbors' lands do not - **waterfowl**. Hundreds of waterfowl, including mallards, pintails, blue geese, and speckle-bellies make their winter homes on created wetlands and seasonally flooded croplands on Mr. Appling's 1,300 acre property. And all that is required is a food source - readily available rice stubble and natural wetland plants - and water.

Mr. Appling can guarantee that water will be available through the winter months as a result of his involvement with the Prairie Wetlands Project, a Gulf Coast Joint Venture program sponsored by the Texas Parks and Wildlife Department, the Natural Resources Conservation Service, Ducks Unlimited, and the U.S. Fish and Wildlife Service. Mr. Appling, who has a strong interest in conservation and waterfowl, became interested in the Prairie Wetlands Project after reading about it in a magazine article. Mr. Appling and David Curtis, Project Manager for the Prairie Wetlands Project, arranged a 75% cost-share agreement to fund development of levees and drains on rice fields and areas to be managed primarily for natural vegetation.



(Top) W. Hefner Appling, (above) seasonal wetland created with Prairie Wetlands Project funding.  
© Julie Anderson

Soon after the fall rice harvest, the levees trap rainwater, which is held on the field until springtime. Waterfowl and other wildlife feed on rice stubble and the native vegetation that grows under the wet conditions, which may include smartweed, duck potato, pondweed and several other grasses and forbs. The water that floods the fields in the winter can be recycled and used to flood rice fields in the spring.

Winter flooding benefits both the farmer and wildlife. Flooding allows the rice stubble to decompose, while at the same time provides habitat for birds that have migrated to the coast for the winter. Mr. Appling observes, "As long as they have food and water, they'll stay. There's plenty of food in the water, and this year plenty of rainwater too. The rice stubble

sustains them, plus plenty of natural vegetation... Neighbors didn't think we'd get ducks here, but this is the first year and already there are lots of ducks."

David Curtis observes, "Mr. Appling has an excellent waterbird situation on his Lavaca County farm. The great diversity of wetland habitats included in his four project sites are a great attraction for a variety of waterfowl, shorebirds, wading birds and other wetland wildlife. Supplemental irrigation water is also available for Mr. Appling to pump, if he chooses, during dry fall and winter periods when wintering habitat is really scarce. I also expect a significant number of mottled ducks, whistling ducks and other waterbirds that summer on the coastal prairies to raise broods on this wetland complex."

Mr. Appling emphasized that participating in a wetlands creation project through the Prairie Wetlands Project has not removed any of his land use options. If he chooses, Mr. Appling does not need to continue winter flooding after the Prairie Wetlands Project agreement expires. Landowners whose lands have been converted to wetlands, often through wetlands incentives programs, can revert their land back to its prior condition and use it within five years without requiring a Section 404 permit or review by the Army Corps of Engineers (Clean Water Act Nationwide Permit 27). This allows landowners to create wetlands through incentives programs while avoiding potential regulatory conflicts regarding their future land use decisions.

These projects can, in fact, be money-making ventures for a landowner. By leasing the land for hunting, landowners can collect additional income on rice land that is lying fallow during the winter anyway. "If you show them how they can make money out of a wetlands project," says Mr. Appling, "I'm sure they'd be all for it... in this area, hunting is big business."

Would he do it again? Mr. Appling is already planning a similar project on property he owns in Matagorda County.

David Curtis is pleased about that. "Mr. Appling is an enthusiastic cooperator and long-term conservationist. Working with people like him, who want to give something back to the land, provides me the greatest joy and satisfaction in my job," he says.

The landowner contacts USFWS and an onsite visit is arranged to discuss landowner's needs and ideas for the property. If cost-shared assistance is requested, the landowner and Service staff work together to prepare a Habitat Restoration Proposal for the project, which is submitted to the USFWS. Generally, cooperative agreements that are longer in duration are preferable to those of shorter duration. Cooperative agreements may not be less than 10 years. Cost-shared assistance is available up to 100%; however, funding is more probable with some cost-shared assistance. Demonstration projects may be less than 10 years in duration. Project terms less than 10 years may be cost-shared up to 50% and may not exceed \$5,000. Demonstration projects greater than 10 years may have a greater cost share and higher total costs.

#### **Regional Use** Nationwide

#### **Eligibility**

Subject to priority and preference factors stated above, any wetland is eligible for restoration with technical and financial assistance by the Service. Upland habitats are eligible for financial assistance only if their restoration will contribute to certain program goals. Once the agreement period has expired, the landowner is not

obligated to follow the Cooperative Agreement guidelines. Agricultural practices that do not conflict with conservation purposes are allowed on restoration sites.

#### **Contact**

##### **Partners for Wildlife Program**

Mike McCollum  
U.S. Fish and Wildlife Service  
711 Stadium Dr., Suite 252  
Arlington, TX 76011  
817-885-7830  
Fax: 817-885-7835

#### **Prairie Wetlands Project (PWP)**

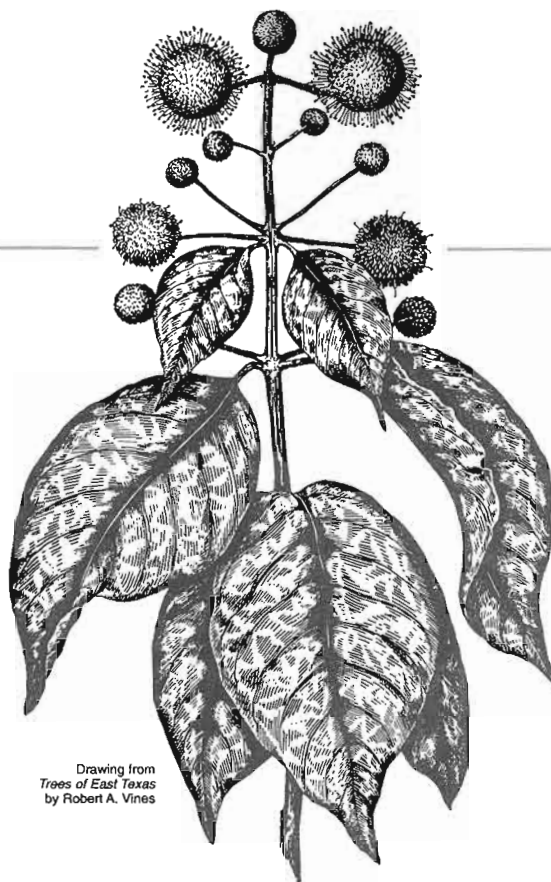
U.S. Fish and Wildlife Service (USFWS), Texas Parks and Wildlife Department (TPWD), Natural Resources Conservation Service (NRCS), Ducks Unlimited (DU)

#### **Program Description**

The Prairie Wetlands Project (PWP) of Texas, designed to accomplish the goals and objectives of the Gulf Coast Joint Venture (GCJV), is a partnership effort to restore, create, or enhance wetlands beneficial for waterfowl and other wildlife use. PWP projects include management of water on cropped lands, restoration of converted wetlands, enhancement of natural wetlands, or creation of wetlands on non-wetland sites.

#### **How the Program Works**

Landowners interested in creating and maintaining habitat for waterfowl or other



Drawing from  
Trees of East Texas  
by Robert A. Vines

**Common Button-bush**  
*Cephalanthus occidentalis*  
(bottomland and riparian  
areas, marshes)

wildlife on their property for a prescribed period are offered financial and technical assistance through the Prairie Wetlands Project office. The landowner may also contact the U.S. Fish and Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS), Texas Parks and Wildlife Department (TPWD), and Ducks Unlimited (DU), who will coordinate with the PWP office. Cost-shared assistance of up to 75% is available (100% where supplemental water is provided by the landowner), but average costs to PWP must not exceed \$200 per acre. In return, the

landowner and PWP agree on management practices in the Wetland Development Agreement (WDA). The WDA is a management plan designed to satisfy the landowner as well as provide sufficient habitat for waterfowl and other migratory birds.

Technical assistance for creating, restoring and maintaining habitat is provided through both on-site and county workshops. The Prairie Wetlands Project allows for normal rotations in agriculture.



Drawing courtesy  
of North Carolina  
Agricultural  
Research Service

**Bladderwort**  
*Utricularia* spp.  
(found in freshwater  
bottomlands, marshes,  
bogs and seeps)

### Regional Use

28 Gulf coastal counties.

### Eligibility

Private landowners and farm operators (landowners must co-sign agreements) within the 28 county project area are eligible. A landowner is limited to one cost-shared wetland agreement per calendar year.

### Contact

**Prairie Wetlands Project**  
Prairie Wetlands Project Office  
312 S. Main Street, Room 310  
Victoria, TX 77901  
512-576-0282  
Fax: 512-575-9537  
or  
Ed Ritter  
Ducks Unlimited, Inc.  
2205 Ave. I, #114  
Rosenberg, TX 77471  
713-239-8470  
Fax: 713-341-6317

## Resource Conservation and Development (RCD)

Natural Resources Conservation Service (NRCS)

### Program Description

Resource Conservation and Development (RCD) is a program for landowner associations and interest groups that allocates grants to RCD areas to accelerate resource protection projects and programs in multi-county areas as a base for economic development and environmental protection.

Prairie Wetlands Project sites must:

- Provide protection, restoration, enhancement or creation of wetland habitat;
- Be a minimum of 5 acres;
- Have surface water potential for at least 4 months between September 1 to April 30;
- Hunting in project areas is permitted;
- Project duration normally 10 years or longer;
- Average cost to the PWP must not exceed \$200 per habitat acre;
- Cost-shared assistance up to 75% is available (100% where supplemental water is provided); and
- Prairie Wetlands Project Committee will review and approve cost-share funding on individual proposals.

### How the Program Works

Grant allocations are made to RCDs based on the project's ability to create, restore or enhance a wetland for community benefit. Grants will fund up to 25% of construction and vegetative costs.

### Regional Use

Nationwide

### Eligibility

RCD is open to landowner associations and interest groups.

### Contact

#### Resource Conservation and Development

Gary Valentine  
Natural Resources  
Conservation Service  
101 S. Main Street  
Temple, TX 76501-7682  
817-774-1291  
Fax: 817-774-1273

## Stewardship Incentive Program (SIP), Forest Stewardship Program (FSP)

Consolidated Farm Service Agency (CFSA), Texas Forest Service (TFS)

The Forest Stewardship Program (FSP) and the Stewardship Incentive Program (SIP) are companion programs created by the Food, Agriculture, Conservation and Trade Act of 1990 (1990 Farm Bill). The programs provide assistance to landowners for the enhancement of multiple resources associated with nonindustrial private forest lands including water, wildlife and recreation.

### Program Description

Both programs involve the development of a Forest Stewardship Plan designed to accommodate the needs of both the landowner and the natural resources on the property. The FSP provides technical assistance to help landowners enhance and protect the timber, fish and

wildlife habitat, water quality, wetlands, and recreational and aesthetic values of their property. SIP provides cost-share assistance to private landowners for implementing the stewardship plans developed under the FSP. Upon approval of the plan, cost-shared assistance is provided through SIP. The guidelines for SIP define eight major categories for funding: Management Plan Development, Reforestation and Afforestation, Forest and Agroforest Improvement, Windbreak and Hedgerow Establishment, Riparian and Wetlands Protection and Improvement, Fisheries Habitat Enhancement, Wildlife Enhancement, and Forest Recreation Enhancement.

FSP and SIP are administered by the Texas Forest Service in cooperation with the U.S. Forest Service. The Consolidated Farm Service Agency (CFSA) provides administrative assistance.

#### **How the Program Works**

Forest Service staff or certified consultants work with private landowners to develop a multi-use Forest Stewardship Plan that details the project's activities to protect and enhance forest resources. Existing management plans can be modified to meet Forest Stewardship Plan

guidelines. Once a forest management plan has been developed and approved, up to 75 percent cost-share is provided through SIP to fund the plan's projects. Payments may not exceed \$10,000 per landowner per fiscal year. To receive financial assistance, landowners must agree to manage the land according to the plan for at least ten years. Significant accomplishments are recognized by designating the landowner "Forest Steward," which gives public recognition to the landowner.

#### **Regional Use**

Nationwide. Available statewide in Texas for wetlands.

#### **Eligibility**

Eligible landowners must have an approved Forest Stewardship Plan. Landowners owning between 10 and 1,000 acres of forest land who do not derive most of their income from timber manufacturing on the property are eligible. Authorizations may be obtained for exceptions of up to 5,000 acres. Forest land is defined as rural land with at least 16 percent canopy cover or other land capable of supporting at least 10 cubic feet of wood per acre per year under natural conditions. Christmas tree, orchard, or ornamental plantations are ineligible.

#### **Contact**

##### **Stewardship Incentive Program Forest Stewardship Program**

Tom Boggus  
Texas Forest Service  
College Station, TX 77843-2136  
409 • 845-2641  
Fax: 409 • 845-5764

#### **Water Quality Incentives Program (WQIP)**

Consolidated Farm Service Agency (CFSA)

#### **Program Description**

The Water Quality Incentives Program (WQIP) is a voluntary incentive program designed to protect water sources on farmlands through 3-5 year agreements with the Consolidated Farm Service Agency (CFSA). These agreements require the development and implementation of a water quality management program that provides water quality benefits, wetlands protection and wildlife benefits.

#### **How the Program Works**

The Consolidated Farm Service Agency provides technical and cost-shared assistance of up to \$3,500 per contract, and information, education and training for development and implementation of WQIP programs. Water quality best management practices are selected for use depending on the property's particular water quality

needs. Participants agree to implement the program and accurately report on wastes and chemical uses on the enrolled acreage. Crop production can continue on the enrolled acreage.

Current funding for WQIP comes from the Agricultural Conservation Program (ACP). The WQIP programs established with the ACP funds are called Water Quality Demonstration/Special Projects.

#### **Regional Use**

Nationwide

#### **Eligibility**

Landowners experiencing water quality problems on their property are eligible for the WQIP. Funding priority is given to projects within non-point source water quality problem areas identified by the U.S. Environmental Protection Agency. Contact your Consolidated Farm Service Agency representative to determine if your property lies within these target areas.

#### **Contact**

##### **Water Quality Incentives Program**

Darrel Davis  
Consolidated Farm Service Agency  
P.O. Box 2900  
College Station, TX 77841  
409 • 260-9381



*Programs such as the Prairie Wetlands Project provide seasonal wetlands on rice fields, which supply thousands of acres of wintering habitat for migratory waterfowl.*

©Texas Dept. of Agriculture

## **Wetlands Reserve Program (WRP)**

Natural Resources Conservation Service (NRCS)

### **Program Description**

The Wetlands Reserve Program (WRP) was authorized by the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 Farm Bill).

The WRP is a voluntary program exclusively applicable to wetlands offering landowners a chance to receive payments for restoring or protecting wetlands on their property. The WRP provides a unique opportunity for farmers to retire marginal agricultural lands and reap the many benefits of having wetlands on their property. Under WRP, the Natural Resources Conservation Service (NRCS) staff work with participating landowners to secure conservation easements and provide cost-sharing assistance for wetlands restoration.

### **How the Program Works**

While the law allows for the purchase of either permanent or 30 year easements, priority will be given to permanent easements. Landowners will be responsible for taxes on easement lands. However, taxes will likely be minimal as the land will not be used for crop production. The landowner maintains ownership of the

land and maintains the easement. Public access is not allowed unless desired by the landowner.

Farmers interested in participating in the WRP should apply to the program through their county Natural Resources Conservation Service office during specified sign-up periods. The NRCS and the U.S. Fish and Wildlife Service will determine eligibility of the acres offered, by ranking them according to: 1) duration of the easement offer, 2) hydrology restoration potential, 3) habitat value for migratory birds and other wildlife, 4) wetland functions and values, 5) location significance, 6) wetland management requirements, 7) physical site condition, and 8) overall cost. Applications with the most environmental benefits and least costs will be selected.

A Wetlands Reserve Plan of Operations (WRPO) will be developed for the area. The landowner is given detailed information on what the restoration will be and how much funding will be provided, then makes a decision to enter the program or end further consideration.

There is no prohibition against using the land after being placed under easement, provided the economic use of the land does not diminish or degrade the

wetland values of the land. Cropping or other alterations that harm the wetland will not be allowed. Acceptable uses of the land will be spelled out in detail in the approved WRPO. Uses may include hunting, fishing, timber harvest, and haying or grazing, depending upon the situation.

WRP is the only available program that offers cash compensation to the landowner. Total easement payments may not exceed the average fair market value of the same type of agricultural land in the county. The landowner can receive up to \$550 per acre depending on the appraisal. Landowners participating in WRP will receive the entire easement payment after the restoration is completed, which normally requires up to three years. Technical assistance and up to 100 percent cost-share assistance is available to the landowner for project design and implementation.

#### Regional Use

Nationwide

#### Eligibility

Lands eligible for WRP include restorable wetland areas that have been used intensively for cropping and forage production. For a

forage production area to be eligible, the natural wetland vegetation must have been removed, mainly through management practices. Adjacent land deemed necessary to protect the restored wetland also will be included. WRP lands must contain a substantial amount of restorable wetland. Limited areas of natural wetland, plus non-wetland areas needed to buffer the wetland from disturbance or to establish reasonable field boundaries, may be included.

Wetlands enrolled in the Conservation Reserve Program (CRP) may be eligible to transfer over into the WRP program. CRP land enrolled prior to November 28, 1990 or CRP land likely to return to production after the CRP contract expires are examples of CRP land eligible to transfer into the WRP. CRP contracts are expiring in Texas in 1995. This would be a good opportunity for landowners to transfer programs.

#### Contact

##### Wetlands Reserve Program

Gary Valentine  
Natural Resources  
Conservation Service  
101 S. Main Street  
Temple, TX 76501-7682  
817-774-1291  
Fax: 817-774-1273

Land considered for enrollment in WRP must be:

- Prior-converted wetlands or existing wetlands that were cropped at least once between 1986 and 1990, and remain in a condition to be cropped;
- greater than or equal to 2 acres and no more than 1,000 acres;
- buffer areas of non-cropped wetland and upland that protect restored wetlands;
- capable of being restored and able to sustain long-term wetland functions and values;
- riparian areas that link WRP, or similarly protected, wetlands; and
- eligible lands (wetlands, converted wetlands) currently enrolled in the Conservation Reserve Program.



Drawing courtesy  
of North Carolina  
Agricultural  
Research Service

#### Seashore Paspalum

*Paspalum vaginatum*  
(found in coastal marshes,  
intermediate salinity)

## NON- REGULATORY STATE PROGRAMS

### MARSH Program

Matching Aid to Restore States Habitat – Ducks Unlimited, Inc. (DU)

#### Program Description

The Matching Aid to Restore States Habitat (MARSH) Program began in 1985 to provide matching funds to the Texas Parks and Wildlife Department (TPWD) and private cooperators for projects significantly benefiting waterfowl. Normally, all projects must be on lands under the control of a public agency, or private individuals who have been approved by the Ducks Unlimited Conservation Programs Committee. The cooperator's control must be through ownership, lease, easement, or management agreement. MARSH is administered through five Regional Ducks Unlimited (DU) offices.

#### How the Program Works

Projects that will receive first consideration are those that lead to the protection or restoration of North American Waterfowl Management Plan (NAWMP) sites, and those that protect and enhance other important waterfowl habitat. Preference is also given to projects that benefit non-game, threatened or endangered species, and are in unique habitats or ecosystems having high public visibility or interpretive value.



*Migrating waterfowl in the Central Flyway use Panhandle playa lakes as stopover areas on their way south.*

©TPWD

MARSH project proposals are developed by TPWD or other cooperators, and are submitted to the Regional Flyway MARSH coordinator for evaluation. These proposals should include all pertinent information regarding location, legal description, ownership, management objectives, description of work, projected costs, and any supplementary support information applicable to the project. After receiving all of the necessary information, the MARSH coordinator will assess those sites with the most potential and prepare project evaluations. Final selection for funding depends on the

biological and public relations values, membership interest, and fund-raising potential. An approved project can receive up to 50% cost-share expenses. Projects exceeding the one-to-one threshold require special approval.

#### Regional Use

Nationwide

#### Eligibility

DU will consider proposals from any public agency or private conservation group that is 1) able to execute long-term habitat agreements, 2) capable of delivering and managing the projects proposed, and 3) willing to assume all liability associated with the project.

#### Contact

##### MARSH Program

Donald W. Thompson  
Ducks Unlimited Southern  
Regional Office  
101 Business Park Drive,  
Suite D  
Jackson, MS 39211  
601-956-1936

### Private Lands Enhancement Program (PLEP)

Texas Parks and Wildlife  
Department (TPWD)

#### Program Description

The Texas Parks and Wildlife Department provides technical assistance to persons desiring to include wildlife management considerations in present and future land use practices. This service is strictly advisory and is provided without charge to cooperating landowners. The goal of the Private Lands Enhancement Program is to provide expertise to land managers in the conservation and development of wildlife habitat and the various wildlife populations that utilize that habitat.

#### How the Program Works

Upon the landowners' written request, a TPWD biologist schedules a personal meeting and a property inspection with the landowner. The landowner defines the various needs

and uses of the property and establishes objectives for wildlife consideration. The biologist then recommends actions to achieve the landowner's objectives. A written management plan may be developed upon request. Components of the plan may include objectives, past history, and an explanation of proper harvest and surveying techniques. Wildlife biologists will continue to assist landowners through periodic visits to help interpret survey information and formulate harvest recommendations.

**Regional Use**  
Statewide

**Eligibility**  
Landowners interested in conserving and managing wildlife habitats on their property are eligible.

**Contact**  
**Private Lands Enhancement Program**  
Kirby Brown  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744  
512 • 389-4395  
Fax: 512 • 389-4398

**Private Lands Initiative (PLI)**  
Texas Parks and Wildlife Department (TPWD)

**Program Description**  
The Texas Private Lands Initiative (PLI) is a volun-

tary program in which landowners work with Texas Parks and Wildlife Department (TPWD) and the National Fish and Wildlife Foundation (NFWF) to enhance wildlife habitat through partnerships. The PLI applies to a variety of landscapes in Texas, including wetlands such as bottomland hardwoods, playa lakes, and riparian areas. TPWD has identified 16 types of projects to enhance habitat on private lands. In wetland areas, these projects may include moist-soil management, fencing, planting and pumping agreements. These projects offer landowners a unique opportunity to use their wetlands as demonstration sites for future projects.

**How the Program Works**  
Projects under the PLI are cost-shared by the landowner and NFWF, while the TPWD offers technical assistance and program coordination. Funding is dependent on availability of grants.

**Regional Use**  
Statewide

**Eligibility**  
Wetland projects must be a minimum 10 year (negotiable) commitment and the landowner is obligated to maintain the improvements. An example of improvements include planting a diverse mixture of legumes and grass surrounded by a 4-strand barbed wire fence in playa lakes. Assistance is available

on other improvements as well. No cost-sharing is available to reverse damage in playa basins caused by livestock grazing, such as soil erosion and runoff.

**Contact**  
**Private Lands Initiative**  
Kirby Brown  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744  
512 • 389-4395  
Fax: 512 • 389-4398

**Wetland Habitat Alliance of Texas (WHAT)**

**Program Description**  
Wetland Habitat Alliance of Texas (WHAT) is an organization dedicated to preserving Texas wetlands by raising public awareness and appreciation of wetlands and funding projects to protect, enhance, and restore natural wetlands. WHAT also provides youth and adult education and serves as a liaison to the government, conservation organizations, hunters, and the general public.

**How the Program Works**  
WHAT solicits funds for projects such as management of water on cropped wetlands, restoration of converted wetlands, enhancement of natural wetlands, and creation of wetlands on non-wetland sites. Interested landowners can receive up to

100% financial assistance in return for a minimum 10 year agreement.

The cooperator maintains ownership of the land upon completion of the project. The cooperator and WHAT agree to any proposed development on the land before an agreement is sealed. The Natural Resources Conservation Service (NRCS) will verify the operable conditions; WHAT will pay costs and provide technical assistance to cooperators within the specifications of the agreement. WHAT is interested in working with landowners to find an agreement acceptable to all parties involved.

**Regional Use**  
Statewide

**Eligibility**  
Any landowner interested in accomplishing the same goals as WHAT is eligible to participate.

**Contact**  
**Wetland Habitat Alliance of Texas**  
Eric Frasier  
WHAT  
118 E. Hospital, Suite 208  
Nacogdoches, TX 75961  
409 • 569-9428  
Fax: 409 • 569-6349

**Summary Table:**  
***Federal Programs Providing Economic and Other Incentives for Wetlands Protection***

| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Eligibility                                                                                                                                                                                                                                                                                   | Contacts/Availability                | Financial Assistance                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------|
| <p><b>Agricultural Conservation Program (ACP)</b><br/>           ACP encourages reductions in soil loss and agricultural contributions to water pollution from both runoff and direct discharge. ACP provides cost-shared funds for activities that provide long-term and community-wide benefits, which may include establishing permanent vegetative cover, erosion control, wildlife enhancement, and restoring or creating shallow water areas for wildlife.</p> | <p><b>Time period:</b> Annual or longer-term.</p> <p><b>Land:</b> Activities should be those that the landowner would not, or could not, undertake without financial and technical assistance. The applicant must own between 10 and 1,000 acres to be eligible for participation in ACP.</p> | <p>CFS</p> <p>Nationwide</p>         | <p>Cost-shared up to 75%, landowner reimbursement not to exceed \$3,500 annually.</p> |
| <p><b>Challenge Cost Share Program</b><br/>           Program promotes the management, restoration and enhancement of fish and wildlife resources and natural habitats on public and private lands in partnership with nonfederal entities.</p>                                                                                                                                                                                                                      | <p><b>Land:</b> Projects may occur on National Wildlife Refuges, fish hatcheries, research facilities and private lands. Funds provided by the USFWS for projects cannot be matched with other federal funds and are matched 50/50.</p>                                                       | <p>USFWS</p> <p>Nationwide</p>       | <p>Matched 50/50.</p>                                                                 |
| <p><b>Conservation Easement Debt Cancellation Program</b><br/>           The Conservation Easement Debt Cancellation Program allows landowners to reduce their FmHA debt in exchange for a permanent conservation easement on valuable lands, including wetlands.</p>                                                                                                                                                                                                | <p><b>Time period:</b> 50 year easement minimum.</p> <p><b>Other:</b> Landowner must have borrowed from the FmHA. Debt reduction easements will not apply to debts with other lending institutions.</p>                                                                                       | <p>CFSA, USFWS</p> <p>Nationwide</p> | <p>Debt reduction on CFSA loans.</p>                                                  |

| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                    | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Contacts/Availability                                         | Financial Assistance                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Conservation Reserve Program</b></p> <p>CRP encourages landowners to enroll highly erodible cropland or land contributing to a serious water quality problem in the Reserve for 10 years. Landowners receive annual rental payments, technical assistance and cost-sharing. Purpose is to reduce soil erosion and sedimentation, improve water quality, maintain fish and wildlife habitat, and provide support income to the landowner.</p> | <p><b>Time period:</b> at least 10 years.</p> <p><b>Land (must have one or more):</b> planted as an agricultural commodity for 2 crop-years between 1986-1990; evidence of scour erosion; contributing to or creating a water quality problem; public wellhead area; participating in easement practices.</p>                                                                                                                                                                | <p>CFSA</p> <p>Nationwide</p>                                 | <p>Receive annual rental payment for land while in Reserve, not to exceed \$50,000 annually; 50% cost-share for establishing vegetation.</p> |
| <p><b>Forestry Incentives Program (FIP)</b></p> <p>FIP provides technical and cost-shared assistance to landowners participating in any one of the four national forestry practices eligible under FIP: tree planting, improving a stand of forest trees, site preparation for natural regeneration of trees, special forestry practices. FIP may apply to wetlands conservation and restoration of wooded swamps</p>                              | <p><b>Time period:</b> 10 year maintenance agreement.</p> <p><b>Land:</b> FIP is limited to landowners of 10 to 1,000 acres. Exceptions to the acreage limitation may be obtained for up to 5,000 acres. FIP is offered only in designated counties where a suitable number of ownerships capable of producing at least 50 cubic feet of timber per year each exist. Ornamental, Christmas tree production, and orchard tree plantings are not eligible for FIP funding.</p> | <p>TFS, USFS, NRCS</p> <p>Primarily East Texas Pineywoods</p> | <p>Cost-shared up to 65%. Maximum annual agency cost-share is \$10,000.</p>                                                                  |
| <p><b>Great Plains Conservation Program (GPCP)</b></p> <p>The program was initiated to protect the drought-prone Great Plains against wind erosion. Technical and cost sharing assistance is available for water quality, soil and water conservation, wetland conservation, and wildlife development.</p>                                                                                                                                         | <p><b>Time period:</b> 3-10 years.</p> <p><b>Land:</b> Contracts cannot be written for wetland assistance only, but will include the property's different ecosystems; must be total planning assistance.</p>                                                                                                                                                                                                                                                                 | <p>NRCS</p> <p>Approximately western two-thirds of Texas</p>  | <p>Construction is cost-shared 50-80%.</p>                                                                                                   |

| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Contacts/Availability                                                                                                                             | Financial Assistance                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <p><b>Natural Resources Conservation Service Technical Assistance</b></p> <p>Technical assistance is available for wetlands determination and management and wetland conservation options.</p>                                                                                                                                                                                                                                                                                     | <p>Land users who sign agreements with local soil and water conservation districts can receive services for managing, using, enhancing, creating, and restoring wetlands. Technical assistance and information is provided according to local priorities and available resources.</p>                                                                                                                                                                                     | <p>NRCS</p> <p>Nationwide</p>                                                                                                                     | <p>This program provides technical assistance only.</p>                      |
| <p><b>North American Wetlands Conservation Act of 1989 (NAWCA)</b></p> <p>Encourages partnerships among public agencies and other interests within the United States, Canada and Mexico to protect, enhance, restore, and manage wetland ecosystems and other habitats for migratory species, especially birds, and their habitats. The Act provides funding for wetlands conservation projects involving acquisition, restoration, and enhancement.</p>                           | <p><b>Time Period:</b> minimum 10 year agreement or a 5 year agreement for demonstration projects.</p> <p><b>Other:</b> Projects involving acquisition, restoration, enhancement, creation, management, and other activities that conserve wetland ecosystems and the fish and wildlife that depend on such habitats are eligible for the Act or matching partner funds. Areas of special concern and larger areas are usually given priority in grant consideration.</p> | <p>USFWS</p> <p>Nationwide</p>                                                                                                                    | <p>Federal funding must be matched one-to-one with a non-federal source.</p> |
| <p><b>North American Waterfowl Management Plan (NAWMP)</b></p> <p>NAWMP's purpose is to protect, restore, and enhance wetlands important to waterfowl and other wetland-dependent bird species in North America. The plan is implemented at the grassroots level by partnerships called joint ventures. Landowners of wetlands significant to waterfowl may receive technical and financial assistance through a variety of cooperative programs within their geographic area.</p> | <p>Any landowner (federal, state, group, or individual) with property of significance to waterfowl and other wetland-dependent species who wishes to restore or enhance land may apply.</p>                                                                                                                                                                                                                                                                               | <p>USFWS, TPWD, Ducks Unlimited, NRCS, WHAT</p> <p>3 regions in Texas: the Gulf Coast, Playa Lakes, and Lower Mississippi Valley (East Texas)</p> | <p>Funding variable with Joint Venture.</p>                                  |

| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Eligibility                                                                                                                                                                                                                                                                                                                                                                | Contacts/Availability                                                   | Financial Assistance                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Partners for Wildlife Program (PFW)</b></p> <p>The objectives of PFW programs are to restore, enhance, and manage wetlands for fish and wildlife habitat; promote profitable land use for agriculture, industry, and private landowners; and promote a wise and lasting land-use ethic. The program focuses on re-establishment of original natural communities. Program offers technical and cost-shared assistance to landowners who wish to restore wildlife habitat, including degraded or converted wetlands and those upland habitats that meet specific eligibility criteria.</p> | <p><b>Time period:</b> 10 or more years; demonstration projects may be less than 10 years.</p> <p><b>Land:</b> Any wetland is eligible for restoration. Special consideration is given to projects meeting specified criteria (refer to program description). Agricultural practices that do not conflict with conservation purposes are allowed on restoration sites.</p> | <p>USFWS</p> <p>Nationwide</p>                                          | <p>Cost-shared up to 100% of total cost. Demonstration projects 50% cost-shared, not to exceed \$5,000 if less than 10 years.</p> |
| <p><b>Prairie Wetlands Project (PWP)</b></p> <p>The Prairie Wetlands Project, designed to accomplish the goals and objectives of the Gulf Coast Joint Venture, is a partnership effort to restore, create, or enhance wetlands beneficial for waterfowl and other wildlife use in 28 Gulf Coast counties. In exchange for financial and technical incentives, landowners develop a management plan, which may include management of water on cropped lands, restoration of converted wetlands, enhancement of natural wetlands, or creation of wetlands on non-wetland sites.</p>              | <p><b>Time period:</b> 10 year minimum agreement.</p> <p><b>Land:</b> Must be 5 acres minimum, have surface water potential for at least 4 months from September to May.</p>                                                                                                                                                                                               | <p>USFWS, TPWD, Ducks Unlimited, NRCS</p> <p>28 Gulf Coast counties</p> | <p>Cost-shared up to 75%, or 100% where supplemental water is provided. Average cost to PWP must not exceed \$200/acre.</p>       |



Drawing from  
*Trees of East Texas*  
by Robert A. Vines

**Green Ash**

*Fraxinus pennsylvanica*  
(found along flats and  
lower ridges of bottom-  
lands in East Texas)

| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Eligibility                                                                                                                                                                                                                                                                                                                                                           | Contacts/Availability                                                                    | Financial Assistance                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Resource Conservation and Development (RCD)</b><br>Program allocates grants to RCD areas to accelerate resource projects and programs in multi-county areas as a base for economic development and environmental protection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RCD is open to landowner associations and interest groups. Grant allocations are made to RCDs based on the project's ability to create, restore or enhance a wetland for community benefit.                                                                                                                                                                           | NRCS<br><br>Nationwide                                                                   | Grants will fund up to 25% of construction and vegetative costs.                                        |
| <b>Stewardship Incentive Program (SIP) and Forest Stewardship Program (FSP)</b><br>FSP provides technical assistance for the enhancement of multiple resources associated with nonindustrial private forest lands including water, wildlife and recreation. SIP provides cost-share assistance to private landowners for implementing Forest Stewardship Plans developed under the FSP. Forest Service staff work with private landowners to develop a multi-use Forest Stewardship Plan specifically for their forested properties. Forest Stewardship Plans are intended to enhance forest products, wildlife, soil and water quality, recreation, aesthetics, and environmental quality. Participants will receive "Forest Steward" recognition by the Forest Service. | <b>Time period:</b> minimum of 10 years.<br><br><b>Land:</b> must own between 10 and 1,000 qualifying acres.<br><br><b>Eligible practices:</b> Christmas tree, orchard, or ornamental plantations ineligible.                                                                                                                                                         | Texas Forest Service, USFS<br><br>Nationwide. Available statewide in Texas for wetlands. | Cost-shared assistance up to 75% of total cost. Payments to landowner may not exceed \$10,000 per year. |
| <b>Water Quality Incentives Program (WQIP)</b><br>Voluntary incentive program designed to protect water sources on farmlands through 3-5 year agreements. These agreements require the development and implementation of a water quality management program that provides water quality benefits, wetlands protection and wildlife benefits. Crop production can continue on enrolled acreage.                                                                                                                                                                                                                                                                                                                                                                            | <b>Time period:</b> 3-5 year contracts.<br><br><b>Land:</b> Landowners experiencing water quality problems on their property are eligible for the WQIP. Funding priority is given to projects within non-point source water quality problem areas. Participants agree to implement the program and accurately report on wastes and chemical uses on enrolled acreage. | CFSA<br><br>Nationwide                                                                   | Cost-shared assistance up to \$3,500.                                                                   |

| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Contacts/Availability             | Financial Assistance                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wetlands Reserve Program (WRP)</b><br>WRP establishes conservation easements for which private landowners receive payments and cost-shared assistance for restoring and protecting wetlands on their property. WRP provides an excellent financial incentive to retire marginal cropland while retaining some agricultural and recreational uses.                                                                                                                                                                                                                                                                      | <b>Time period:</b> 30 years minimum, permanent easements are preferred.<br><br><b>Land:</b> between 2-1,000 acres. Eligible lands include cropped wetlands and prior-converted cropland, adjacent functionally related uplands, and riparian areas that link wetlands.                                                                                                                                                                                                                                                       | NRCS<br><br>Nationwide            | Participants receive easement payment based on the "agricultural value" of the land after restoration is complete; up to 100% cost-shared assistance for restoration. |
| <b>Summary Table:</b><br><i>State Programs Providing Economic and Other Incentives for Wetlands Protection</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |                                                                                                                                                                       |
| Program Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Contacts/Availability             | Financial Assistance                                                                                                                                                  |
| <b>MARSH Matching Aid to Restore States Habitat Program</b><br>MARSH provides matching funds to public agencies and private cooperators for projects significantly benefiting waterfowl. Projects that will receive first consideration are those that lead to the protection or restoration of North American Waterfowl Management Plan (NAWMP) sites, and those that protect and enhance other important waterfowl habitat. Preference is also given to projects that benefit non-game, threatened or endangered species, and are in unique habitats or ecosystems having high public visibility or interpretive value. | <b>Time period:</b> long-term habitat agreements.<br><br><b>Land:</b> Ducks Unlimited will consider proposals from any public agency or private conservation group that is 1) able to execute long-term habitat agreements, 2) capable of delivering and managing the projects proposed, and 3) willing to assume all liability associated with the project.<br><br><i>Some programs, like the Texas Private Lands Initiative, provide financial assistance for fencing to manage grazing.</i><br>©Texas Dept. of Agriculture | Ducks Unlimited<br><br>Nationwide | Cost-shared assistance up to 50%. Costs exceeding this amount require special approval.                                                                               |



| Program Summary                                                                                                                                                                                                                                                                                                                                                                                             | Eligibility                                                                                                                                                  | Contacts/Availability        | Financial Assistance                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Private Lands Enhancement Program (PLEP)</b></p> <p>The goal of the Private Lands Enhancement Program is to provide technical assistance to land managers in the conservation and development of various wildlife populations that utilize habitat found on landowner's property. This service is strictly advisory and is provided without charge to cooperating landowners.</p>                     | <p><b>Time period:</b> None required.</p> <p><b>Land:</b> Landowners interested in conserving and managing wildlife habitats on their property.</p>          | <p>TPWD</p> <p>Statewide</p> | <p>This program provides technical assistance only.</p>                                                                        |
| <p><b>Private Lands Initiative (PLI)</b></p> <p>The Texas Private Lands Initiative (PLI) is a voluntary program in which landowners enhance wildlife habitat through partnerships on their lands, including wetlands. TPWD has identified 16 types of projects to enhance habitat on private lands. In wetland areas, these projects may include moist soil management, pumping agreements and fencing.</p> | <p><b>Time period:</b> 10 year minimum (negotiable).</p> <p><b>Land:</b> Landowner maintains improvements.</p>                                               | <p>TPWD</p> <p>Statewide</p> | <p>Cost-shared by the landowner and National Fish and Wildlife Foundation. Funding is dependent on availability of grants.</p> |
| <p><b>Wetland Habitat Alliance of Texas (WHAT)</b></p> <p>WHAT solicits funds for projects such as management of water on cropped wetlands, restoration of converted wetlands, enhancement of natural wetlands, and creation of wetlands on non-wetland sites. The cooperator maintains ownership of the land upon completion of the project.</p>                                                           | <p><b>Time Period:</b> 10 year minimum.</p> <p><b>Land:</b> Any landowner interested in accomplishing the same goals as WHAT is eligible to participate.</p> | <p>WHAT</p> <p>Statewide</p> | <p>Up to 100% financial assistance.</p>                                                                                        |

## FEDERAL REGULATIONS

### Clean Water Act: Section 404 [33 U.S.C. § 1344 (1986 & Supp. 1991)]

The U.S. Congress enacted the Clean Water Act (the Act) to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the Clean Water Act regulates the placement of dredged and fill material into waters of the United States, including wetlands. The Act authorizes the issuance of permits for such discharges as long as the proposed activity complies with environmental requirements specified in Section 404(b)(1) of the Act. Section 404 is the primary federal program regulating activities in wetlands. The Section 404 program is administered by both the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA), while the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) and several state agencies play important advisory roles.

The Corps has primary responsibility for the permit program and is authorized, after notice and opportunity

for a public hearing, to issue Section 404 permits. In evaluating individual Section 404 permit applications, the Corps determines compliance with Section 404(b)(1) guidelines and carries out a public-interest review. This review involves balancing such public-interest factors as conservation, economics, aesthetics, wetlands protection, cultural values, navigation, fish and wildlife values, water supply, and water quality. The Corps also considers comments received from the EPA, USFWS, NMFS, and state resource agencies.

EPA is responsible for reviewing and commenting on permit applications being evaluated by the Corps. In addition, EPA's responsibilities include the following:

- Environmental guidelines: EPA and the Corps are responsible for establishing the environmental criteria used in permitting (referred to as the Section 404(b)(1) guidelines).
- Veto power: EPA can veto a Corps permit decision (Section 404(c)) if the proposed activity would have certain unacceptable adverse impacts on the



*Riparian corridors are valuable to wildlife as places of refuge, travel lanes, and feeding and nesting.*  
©TPWD

resource, including unacceptable effects on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreation areas.

- Exemptions: EPA determines the applicability of exemptions specified in Section 404(f) to the permitting requirements.
- Enforcement: EPA takes enforcement actions against people conducting unauthorized discharges of dredged or fill material into wetlands and other waters of the United States (Section 309). EPA shares this enforcement authority with the Corps.

***Section 404 of the Clean Water Act regulates the placement of dredged and fill material into waters of the United States, including wetlands.***



Drawing from  
Trees of East Texas  
by Robert A. Vines

### Net-leaf Sugar Hackberry

*Celtis reticulata*  
(found in riparian,  
western Texas habitats)

The environmental guidelines used to evaluate Section 404 permits generally prohibit discharges of dredged or fill material into U.S. waters unless the following conditions apply:

- There is no available, practicable alternative with fewer adverse effects on the aquatic ecosystem.
- Dischargers will neither violate other applicable regulations or laws (e.g., state water quality standards, toxic effluent standards, Endangered Species Act), nor significantly degrade the waters into which they discharge.
- All appropriate and practicable steps have

been taken to avoid, minimize and otherwise mitigate impacts on the aquatic ecosystem.

- The activity is water-dependent.

A February 6, 1990, Memorandum of Agreement between EPA and the Corps clarified that mitigation should occur in the following sequence: (1) avoidance of impacts through evaluation of practicable alternatives; (2) minimization of impacts; and (3) compensation for unavoidable impacts through restoration or creation.

### Geographic Scope of Section 404

The geographic scope of regulatory authority under Section 404 has been the subject of extensive litigation. In 1975, the courts confirmed

that Congress had intended that the Section 404 program be broadly applied to all "waters of the United States," not just traditionally navigable waters. This phrase includes waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including:

- all waters which are subject to the ebb and flow of the tide;
- the territorial sea;
- interstate waters and wetlands;
- all other waters (such as intrastate lakes, rivers, streams and wetlands), if their use, degradation or destruction could affect interstate or foreign commerce;
- tributaries to waters or wetlands identified above; and
- wetlands adjacent to waters identified above.

In determining waters that are within the scope of the Clean Water Act, Congress intended to assert federal jurisdiction to the broadest extent permissible under the commerce clause of the Constitution. One factor that establishes a commerce connection is the use or potential use of waters for navigation. Other factors

include (but are not limited to) use of wetland (or other water) as habitat by migratory birds, including waterfowl, use by federal listed endangered species or for recreation by interstate visitors.

As defined in Section 404 program regulations, wetlands are "those areas that are inundated or saturated with surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." In applying this definition in the field, government agency scientists use indicators of vegetation that has adapted to life in wet environments (hydrophytic vegetation), hydric (anaerobic) soils and hydrology to identify wetlands and to establish their boundaries. In order for a wetland to be considered "jurisdictional" and therefore subject to Section 404 permit review, an area must have all three criteria (vegetation, soils, hydrology) present under normal circumstances to be considered a wetland. The "normal circumstances" criterion prevents the individual from eliminating the permit review requirements

under Section 404 by destroying aquatic vegetation and therefore not meeting all three criteria. Thus, farmed wetlands that display hydric soils and wetland hydrology may still be considered wetlands even though aquatic vegetation has been replaced by crops.

#### Activities Regulated By Section 404

Section 404 regulates only the discharge of dredged or fill material into "waters of the United States." Discharges of dredged and fill material are commonly associated with activities such as port development, channel construction and maintenance, fills to create development sites, transportation improvements, and water resource projects (such as dams, jetties and levees). Excavation activities (e.g. mechanized land clearing, ditching, channelization, runoff from disposal areas and others) also result in at least some discharge of dredged materials, and are thus regulated.

Some activities which can adversely affect or destroy wetlands do not involve the discharging of dredged or fill materials into U.S. waters, and are therefore not regulated

under Section 404. These activities include maintenance draining (not new drainage), clearing, flooding, burning, and soil removal, to name a few.

Under the Clean Water Act, certain activities are exempt from permitting requirements (§404(f)(1)). These activities include:

- normal farming, silviculture, and ranching practices;
- maintenance, including emergency reconstruction of recently damaged parts of currently serviceable structures such as dikes, dams, levees, groins, rip rap, breakwaters, causeways, bridge abutments or approaches, and transportation structures;
- construction or maintenance of farm or stock ponds or irrigation ditches or the maintenance (but not construction) of drainage ditches;
- construction of temporary sedimentation basins on a construction site, which does not include placement of fill material into waters of the United States; and
- construction or maintenance of farm or forest roads or temporary roads for moving mining equipment if best management practices are followed.

Section 404(f)(1) is not intended to exempt activities with more than minor impacts on aquatic resources. The exemptions do not apply if the discharge is part of, or incidental to, an activity whose purpose is to convert an area of the waters of the United States into a use to which it was not previously subject, where the flow or circulation of waters of the United States may be impaired or the reach of such waters reduced. In other words, activities normally considered exempt (e.g., normal farming) will not be exempt if they are conducted with the intention of converting wetlands into uplands. For example, a farmer would be required to obtain a permit for a discharge to convert a wetland area to produce upland crops. The Natural Resources Conservation Service is responsible for making all wetland delineations on agricultural lands.

#### Introduction to the Permit Process

Discharges can be authorized by either individual or general permits under Section 404. If an individual permit is required, an application form describing the proposed activity is submitted to the Corps. Once a complete application is received,



Drawing  
courtesy of  
North  
Carolina  
Agricultural  
Research  
Service

#### Barn-yard grass

*Echinochloa* spp.

(found in freshwater  
marshes, provides excep-  
tional waterfowl forage)

the permitting agency issues a public notice containing the information needed to evaluate the likely impact of the proposed activity. Notice is sent to all interested parties, including appropriate government agencies at the federal, state, and local level, and others as requested. Any person may request that a public hearing be held to consider the application.

The Corps is authorized to issue general permits on a nationwide, state, or regional basis for categories of activities that have minimal individual and cumulative impacts. General permits are issued for five-year periods. They allow certain activities to occur without individual federal permit approval as long as the discharger complies with standard conditions issued by the Corps. General permits eliminate individual review and thus allow certain activities to occur with little, if any, delay or paperwork. Once issued, a general permit may be modified or revoked if the permitted activities are found to have had adverse environmental impacts. On a case-by-case basis, the permitting agency may invoke discretionary authority and

require a discharger that would otherwise be covered by a general permit to apply for an individual permit.

The most significant general permits are called nationwide permits, because they apply throughout the country. Forty nationwide permits exist. In some cases, the landowner is not required to inform the Corps before proceeding with the activity. However, it is a good idea to write the Corps and request a verification that the activity qualifies for a nationwide permit to avoid potential legal challenges in the future. Some activities included under nationwide permits include installing aids to navigation, minor discharges and dredging, wetland and riparian restoration and creation activities, temporary construction, boat ramps, and farm buildings.

#### **Making the Permit Decision**

The Corps' evaluation of a Section 404 permit application is a two part test involving (1) a determination of whether the project complies with the Section 404(b)(1) Guidelines, and (2) a public interest review. This public interest review is a balancing test in which the public and private benefits of a project are compared against its

adverse impacts to the environment. It includes such considerations as conservation, economics, aesthetics, wetlands protection, cultural values, navigation, fish and wildlife values, water supply, water quality, energy needs and flood damage prevention. The Corps also considers all comments received in the permit process, whether in response to a public notice or a public hearing. A permit must be denied if the project fails to comply with the Guidelines or is found to be contrary to the public interest.

The Section 404(b)(1) Guidelines (Guidelines), published by EPA in conjunction with the Corps, contain substantive environmental criteria used in evaluating discharges of dredged or fill material. Under the Guidelines, no discharge can be permitted if there is a practicable alternative with less adverse impact on the aquatic environment (unless the identified alternative poses other significant environmental problems).

No discharge can be permitted under the Guidelines if it would violate other applicable laws, such as State water quality standards, toxic effluent standards, or the Endangered Species Act. The Guidelines also prohibit any discharge that

would cause or contribute to significant degradation of waters of the United States. In addition, discharges can be permitted under the Guidelines only if all appropriate and practicable steps are taken to minimize (i.e., mitigate) the adverse impacts of the discharge on the aquatic ecosystem, including compensating for unavoidable impacts.

In addition to the evaluation conducted by the Corps under the Guidelines and their public interest review, the permit application must comply with several other regulations:

- Section 401 of the Clean Water Act requires that the state in which an activity occurs must certify that the activity complies with the state's water quality requirements and other applicable laws.
- Similarly, in coastal states with federally approved Coastal Zone Management Programs, an applicant for a Section 404 permit must certify that the proposed activity complies with the policies of the state Coastal Management Program. For the permit to be

issued, the state must concur with the applicant's certification.

- The National Environmental Policy Act (NEPA) requires that the Corps conduct an Environmental Assessment to determine whether an Environmental Impacts Statement (EIS) is required. An EIS is required for "major federal activities significantly affecting the environment." Consequently, EIS's are rarely required in typical permit applications.

Compliance with these Acts does not require any additional effort by the landowner; the Corps ensures that these authorizations are obtained as part of the application process.

Landowners considering manipulation of wetlands on their property are advised to be aware of and understand the regulatory programs or laws protecting wetland resources. Contact your nearest Corps office prior to undertaking wetlands activities on your property.

Contacts for permit information, determination of permit requirements, and permit application forms are found in Appendix 2.

#### Enforcement of Section 404

A 1989 Memorandum of Agreement (MOA) between the Department of the Army and Environmental Protection Agency established policies and procedures between the two entities for federal implementation and enforcement of Section 404 of the Clean Water Act. The primary purpose of this MOA is to maintain the integrity of the 404 program through enforcement of permit requirements while reducing overlap of responsibilities between the two agencies.

The Corps, as the permitting agency, has primary responsibility for investigating the majority of enforcement cases involving unpermitted discharges as well as for all Corps-issued permit violations.

The EPA can also enforce against non-compliance with permit conditions. EPA generally focuses its resources towards discovering and enforcing against unpermitted (unauthorized) discharges when the activity involves one or more of the following:

- repeat violator(s);
- flagrant violation(s);
- a Corps determination that an administrative penalty is warranted;
- an EPA request to the Corps that a particular case or



*Section 404 of the Clean Water Act regulates certain development activities in wetlands.*

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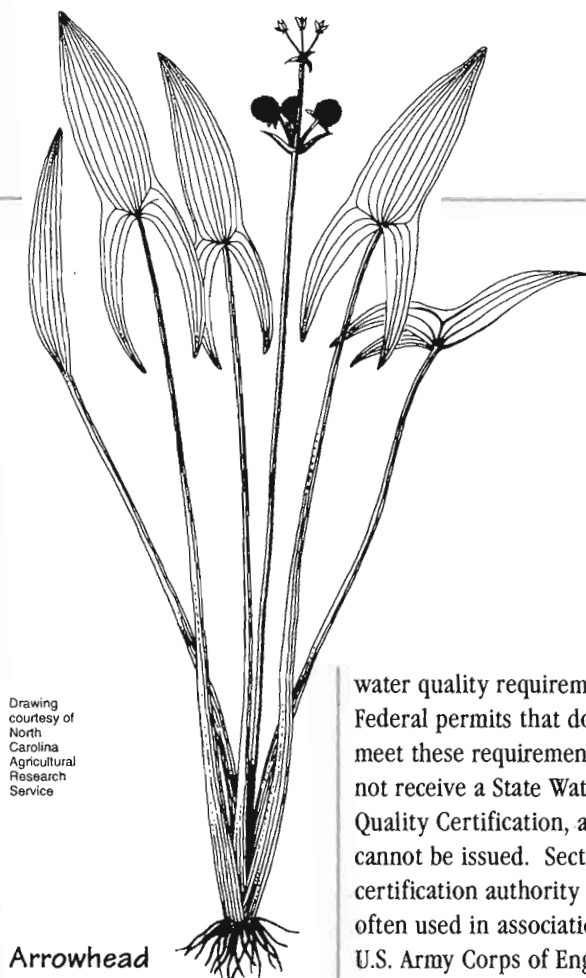
category of cases be referred to the EPA.

Anyone in violation of the Section 404 program, either by conducting an unauthorized activity or by violating permit conditions, is subject to civil or criminal action or both.

Penalties can be imposed by the agencies administratively, that is, without use of judicial procedures. When judicial action is pursued, the violator may be required to restore the site and may be subject to payment of fines, imprisonment or both. The agencies and the courts may require restoration of the site and/or mitigation at the expense of the violator, often in addition to other penalties.

#### Clean Water Act: Section 401 Water Quality Certification [33 U.S.C. § 1341 (1986)]

Section 401 of the Clean Water Act, the State Water Quality Certification program, requires that states certify compliance of federal permits or licenses with state water quality requirements and other applicable state laws. Under Section 401, states have authority to review any federal permit or license that may result in a discharge to wetlands and other waters under state jurisdiction, to ensure that the actions would be consistent with the state's



Drawing  
courtesy of  
North  
Carolina  
Agricultural  
Research  
Service

**Arrowhead**  
*Sagittaria spp.*  
(found in freshwater  
marshes and streams)

**Nationwide Permit 27** allows lands that have been converted to wetlands, often through wetlands incentives programs, to be reverted to prior condition and used within 5 years without requirement of an individual Section 404 permit

water quality requirements. Federal permits that do not meet these requirements will not receive a State Water Quality Certification, and thus cannot be issued. Section 401 certification authority is most often used in association with U.S. Army Corps of Engineers permits under Section 404 of the Clean Water Act. Other programs include Sections 9 and 10 of the Rivers and Harbors Act, and permits or licenses issued under the National Pollutant Discharge Elimination System (NPDES) of Section 402 of the Clean Water Act.

This certification process is routinely delegated in whole or in part to the state agency with the authority to regulate the quality of state waters. In Texas, the Texas Natural Resources Conservation Commission (TNRCC) provides a

Section 401 certification to the Corps indicating that the proposed activity will comply with the applicable sections of the Clean Water Act pursuant to the Section 404 permitting program, and that such activity will not adversely affect the quality of state waters. A Section 404 permit for activities in wetlands cannot be issued by the Corps until this certification from TNRCC has been obtained or waived as provided by federal law. Further, no Section 404 permit shall be granted if the Section 401 certification has been denied by TNRCC. Texas oil and gas activities covered by Section 404 are certified by the Railroad Commission of Texas.

The U.S. Environmental Protection Agency (EPA) encourages states to define protection of water quality broadly to include protection of aquatic life, wildlife, aquatic habitat, vegetation, and hydrology required to maintain the aquatic system. Currently, Texas addresses only aquatic life. Certification is based on whether a proposed activity would meet requirements for conventional and nonconventional pollutants, water quality standards, new source performance standards, and requirements for toxic pol-

lutants (and any more stringent, relevant state law or regulation). Certification can address physical, chemical, and biological impacts, depending on how a state designs and applies its water quality standards and other appropriate requirements of state law. Currently, Texas does not address biological criteria.

## Clean Water Act Nationwide Permit 27

Nationwide Permit 27 of the Clean Water Act (see Introduction to the Permit Process, Section 404, above for an explanation of nationwide permits) allows lands that have been converted to non-tidal wetlands, through landowner agreements between the USFWS or the NRCS, to be reverted to prior condition and used within 5 years without requirement of an individual Section 404 permit or review by the Army Corps of Engineers. "Prior condition" is the condition as of the initial effective date of the agreement as it is documented by either the USFWS representative and/or the NRCS representative.

## **Section 10, Rivers and Harbors Act of 1899**

### **United States Army Corps of Engineers**

Section 10 of the Rivers and Harbors Act of 1899 requires a permit for dredging or the placement of fill or structures in navigable waters of the United States. "Navigable waters" have been defined by the U.S. Army Corps of Engineers (Corps) as "those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce." This includes the ability to float a water body and/or use by migratory birds. Section 10 is similar to Section 404 of the Clean Water Act; however, Section 404 covers all waters of the United States without regard to their navigability and is therefore much broader in scope than Section 10. Because of the broader geographic reach of Section 404, Section 10 is often not applicable to wetlands. The Corps typically combines Section 10 and Section 404 review where their coverage overlaps in an individual

permit request. A proposed project may require one permit or the other, or may require both. For example, projects that may require a Section 10 permit but not a Section 404 permit are those that occur in navigable U.S. waters but do not require placement of fill into those waters, and include: channel clean-out, vegetative clearing, and marina expansion that requires no fill or dredging. Filling in a waterway or a wetland on a non-navigable river or stream requires only a Section 404 permit. Contact the nearest Corps office to insure compliance with Section 10 and/or Section 404 when a project may concern a waterway or a wetland.

## **Endangered Species Act**

### **U.S. Fish and Wildlife Service**

The Endangered Species Act requires federal agencies to conserve endangered and threatened species. It prohibits any person from "taking" endangered or threatened animal or plant species. "Taking" is interpreted broadly to include killing, harassing, or harming a protected species. The definition of "harm" includes modifying or degrad-

ing a species' habitat such that the change would significantly impair breeding, feeding, or shelter and would result in injury to the species.

Under Section 7 of this Act, all federal agencies must ensure that their actions are not likely to jeopardize the continued existence of any endangered or threatened species or adversely modify or destroy any of their habitat. These requirements apply to all activities carried out, funded, or regulated by a federal agency, including activities in wetlands.

A state can propose or support the listing of wetlands-dependent species, thereby bringing the Act's protection to bear on its wetlands. Listing, however, is based on the status of the species and is not simply an attempt to protect wetlands. States can identify potential species, conduct the research necessary to determine status, and, if needed, petition the federal government to include these species. States may also seek to engage landowners in conservation agreements that may preclude the need for listing.

The federal government is also supposed to designate "critical habitat" for a species at the time it is listed. As noted, federal agencies are not authorized to modify adversely or destroy critical habitat.

For listed species, the U.S. Fish and Wildlife Service is required to prepare "recovery plans" that outline a strategy to conserve and recover the species. Recovery plans should outline habitat protection and other steps necessary for the conservation of the species. States and other stakeholders often play a role in the development of recovery plans.

Under Section 10, permits can be issued that allow the "taking" of endangered or threatened species that occurs incidentally to otherwise lawful activities. Long term habitat conservation plans (HCPs) must be developed as part of the permit application process. States may wish to initiate or participate in the preparation of HCPs and to advocate for wetlands protection as part of the plans. However, HCPs may be of limited use for wetlands protection because they require the presence of a federally listed endangered or threatened species. In addition, they are intended for activities not subject to federal permits, and many wetlands activities require federal permits.

Drawing from  
*Trees of East Texas*  
by Robert A. Vines



**Pecan**  
*Carya illinoensis*  
(found in higher ridges  
of riverbottoms)

### **Food, Agriculture, Conservation and Trade Act of 1990 (Swampbuster Provisions)**

**United States Department  
of Agriculture (USDA)**

*States may seek to engage landowners in conservation agreements that may preclude the need for listing under the Endangered Species Act.*

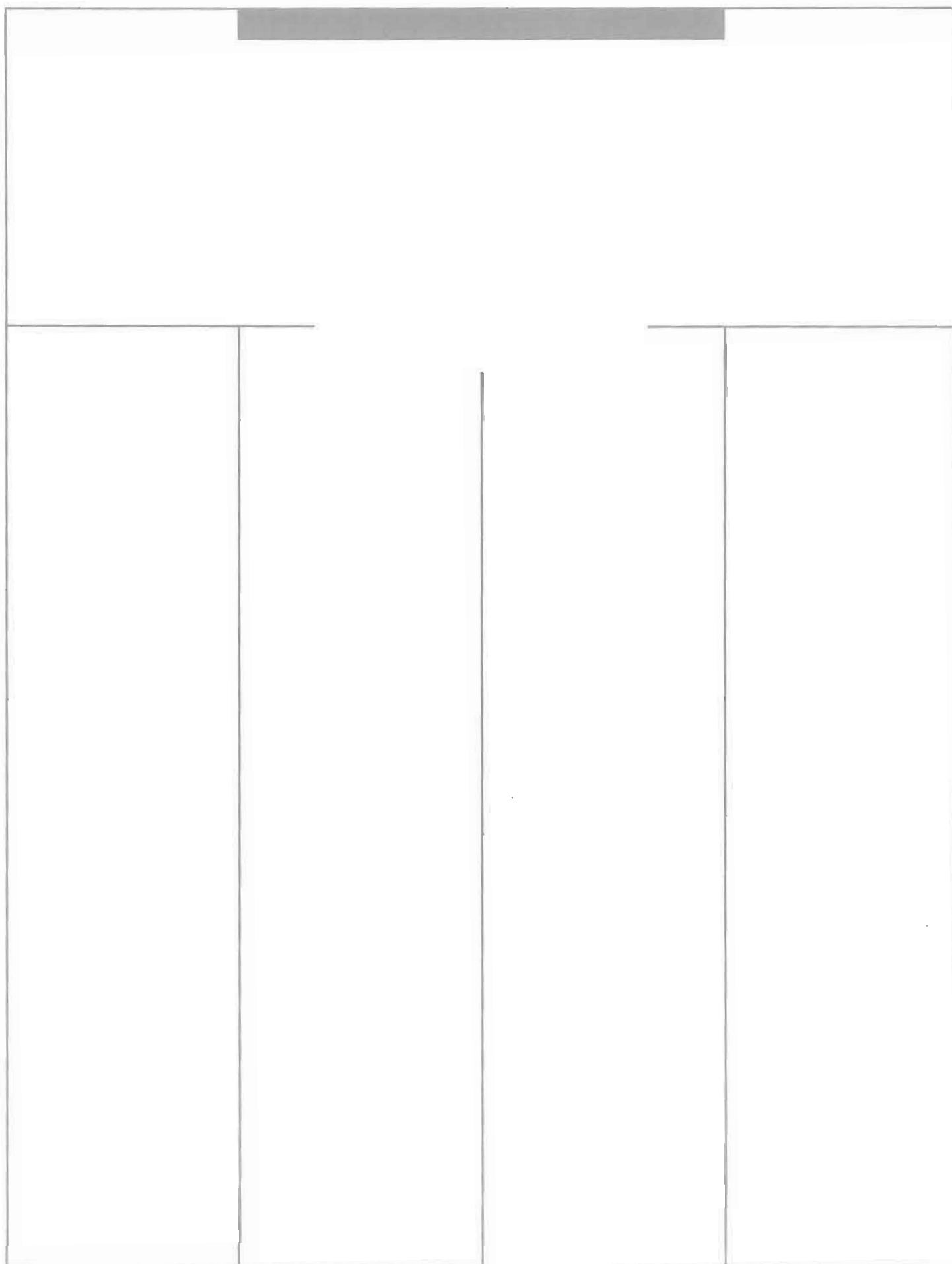
The Swampbuster Provisions are part of the amended 1990 Food, Agriculture, Conservation and Trade Act (1990 Farm Bill). Swampbuster withholds USDA benefits to farmers who convert wetlands into croplands after December 23, 1985.

Swampbuster reduces the incentives to convert wetlands to croplands by denying eligibility for almost all farm program benefits on *all* acres operated by a grower who either converts a wetland or plants on a converted wetland. Benefits that may be withheld include:

- farm storage facility loans under the Commodity Credit Corporation (CCC) Charter Act;
- disaster payments under the Agricultural Act of 1949;
- crop insurance under the Federal Crop Insurance Act;
- FmHA loans payment for storage of an agricultural commodity under the CCC Charter Act.
- Program benefits may be lost in the following programs: Agricultural Conservation Program (ACP), Emergency Conservation Program (ECP), Small Watershed Program (SWP), Conservation Reserve Program (CRP), Environmental Easement Program (EEP), disaster assistance for tree planting, and Water Quality Protection Programs (WQP).

When applying for federal farm program benefits, landowners

indicate whether they plan to manipulate any "wet" areas. If so, the USDA must determine if these "wet" areas are wetlands. Conversion of wetlands may result in Swampbuster violations. For violations, USDA must conduct a site visit before reducing program benefits. A violator can regain eligibility for future farm program benefits by restoring the converted wetland to its original condition. Landowners *may*, however, prepare a mitigation plan that allows them to produce an agricultural commodity on converted wetlands that were either frequently cropped, or converted between 1985 and 1990, in exchange for restoring prior converted cropland on their property. Mitigation plans must be approved prior to conversion of the wetlands. Landowners should contact the Consolidated Farm Service Agency before working on any potential wetland areas on their land to avoid forfeiting USDA benefits, and to learn more about preparing mitigation plans.



## APPENDIX I

### *Programs and Contacts*

#### Organizations and Program Abbreviations

|       |                                                       |
|-------|-------------------------------------------------------|
| ACP   | Agricultural Conservation Program                     |
| CFSA  | Consolidated Farm Service Agency (formerly ASCS)      |
| Corps | United States Army Corps of Engineers                 |
| CRP   | Conservation Reserve Program                          |
| EPA   | U.S. Environmental Protection Agency                  |
| FIP   | Forestry Incentive Program                            |
| FSP   | Forest Stewardship Program                            |
| GCJV  | Gulf Coast Joint Venture                              |
| GLO   | General Land Office                                   |
| GPCP  | Great Plains Conservation Program                     |
| LMVJV | Lower Mississippi Valley Joint Venture                |
| MARSH | Matching Aid to Restore States Habitat                |
| NAWCA | North American Wetlands Conservation Act              |
| NAWMP | North American Waterfowl Management Plan              |
| NRCS  | Natural Resources Conservation Service (formerly SCS) |
| PFW   | Partners for Wildlife Program                         |
| PLEP  | Private Lands Enhancement Program                     |
| PLI   | Private Lands Initiative                              |

|       |                                                 |
|-------|-------------------------------------------------|
| PLJV  | Playa Lakes Joint Venture                       |
| PWP   | Prairie Wetlands Project                        |
| RCD   | Resource Conservation and Development           |
| SIP   | Stewardship Incentive Program                   |
| TNRCC | Texas Natural Resources Conservation Commission |
| TPWD  | Texas Parks and Wildlife Department             |
| USDA  | United States Department of Agriculture         |
| USFS  | United States Forest Service                    |
| USFWS | United States Fish and Wildlife Service         |
| WHAT  | Wetland Habitat Alliance of Texas               |
| WQIP  | Water Quality Incentives Program                |
| WRP   | Wetlands Reserve Program                        |

#### Contacts in Texas for Wetland Incentive Programs

##### Agricultural Conservation Program

Darrel Davis  
Consolidated Farm Service Agency  
P.O. Box 2900  
College Station, TX 77841  
409 • 260-9381

##### Challenge Cost Share Program

Bill Myer or Randy Porter  
U.S. Fish and Wildlife Service  
Refuges and Wildlife  
500 Gold SW  
Albuquerque, NM 87103  
505 • 766-2036

##### Conservation Easement Debt Cancellation Program

Robert C. Hopper  
Chief of Farmer Programs  
Consolidated Farm Service Agency  
101 S. Main Street, Suite 102  
Temple, TX 76501  
817 • 774-1304  
Fax 817 • 774-1477

##### Conservation Reserve Program

Sammy Orange  
Consolidated Farm Service Agency  
P.O. Box 2900  
College Station, TX 77841  
409 • 260-9235  
Fax 409 • 260-9488

##### Great Plains Conservation Program

##### Resource Conservation and Development

##### Wetlands Reserve Program

Gary Valentine  
Natural Resources Conservation Service  
101 S. Main Street  
Temple, TX 76501-7682  
817 • 774-1291  
Fax 817 • 774-1273

##### MARSH Program

Donald W. Thompson  
Ducks Unlimited Southern  
Regional Office  
101 Business Park Drive, Suite D  
Jackson, MS 39211  
601 • 956-1936

##### Natural Resources Conser- vation Service

##### Technical Assistance

Local NRCS Representative  
(see Appendix 2)

##### North American Waterfowl Management Plan

##### North American Wetlands Conservation Act

Vernon Beville  
Texas Parks and Wildlife  
Department  
4200 Smith School Road  
Austin, TX 78744  
512 • 389-4578  
Fax 512 • 389-4398

##### • Playa Lakes Joint Venture

James D. Ray  
Texas Parks and Wildlife  
Department  
3409 S. Georgia, #25  
Amarillo, TX 79109  
806 • 353-0486

##### • Gulf Coast Joint Venture

David S. Lohpries  
Texas Parks and Wildlife  
Department  
6414 Deer Trail Drive  
Wharton, TX 77488  
409 • 532-5517

##### • Lower Mississippi Valley Joint Venture

Carl D. Frentress  
Texas Parks and Wildlife  
Department  
Route 3, Box 3273  
Athens, TX 75751  
903 • 675-4177

### Partners for Wildlife Program

Mike McCollum  
U.S. Fish and Wildlife Service  
711 Stadium Dr., Suite 252  
Arlington, TX 76011  
817-885-7830  
Fax 817-885-7835

### Prairie Wetlands Project

Prairie Wetlands Project Office  
312 S. Main Street, Room 310  
Victoria, TX 77901  
512-576-0282 or  
713-239-8470  
Fax 512-575-9537

### Private Lands Initiative

#### Private Lands Enhancement Program

Kirby Brown  
Texas Parks and Wildlife  
Department  
4200 Smith School Road  
Austin, TX 78744  
512-389-4395  
Fax 512-389-4398

### Stewardship Incentive Program

#### Forestry Incentive Program Forest Stewardship Program

Tom Boggus  
Texas Forest Service (TFS)  
College Station, TX 77843-2136  
409-845-2641  
Fax 409-845-5764

Scotty Parsons  
Texas Parks and Wildlife  
Department  
1805 E. Lufkin Ave.  
Lufkin, TX 75901  
409-639-1879

### Water Quality Incentives Program

Darrel Davis  
Consolidated Farm Service  
Agency  
P.O. Box 2900  
College Station, TX 77841  
409-260-9381

### Wetland Habitat Alliance of Texas

Eric Frasier  
WHAT  
118 E. Hospital, Suite 208  
Nacogdoches, TX 75961  
409-569-9428  
Fax 409-569-6349

### The Private Lands Enhancement Program Texas Parks and Wildlife Department

#### Region 1 Panhandle/West Texas

**Director:** Bob West  
3407 S. Chadbourne  
San Angelo, TX 76904  
915-651-4748

#### Region 2 North Central

**Director:** Roy D. Welch  
1601 East Crest  
Waco, TX 76705  
817-799-2564

#### Region 3 East Texas

**Director:** Nathan Garner  
11942 FM 848  
Tyler, TX 75707  
903-566-1626

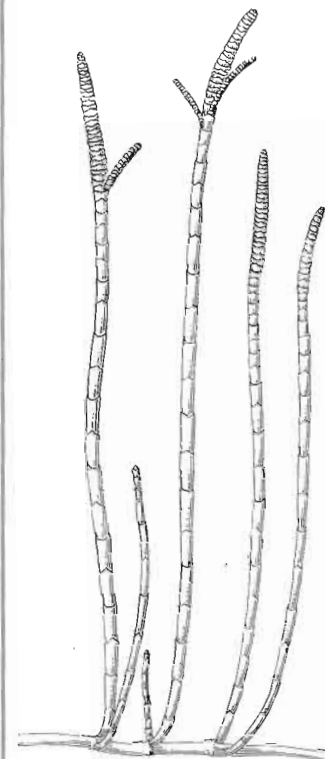
### Region 4 Coastal & South Texas

**Director:** Don Frels  
715 S. Hwy. 35  
Rockport, TX 78382  
512-729-2315

Persons interested in receiving technical assistance for private lands enhancement should contact the above Wildlife Division regional office for their respective area or contact:

Kirby Brown, Program Director  
Private Lands Enhancement Program  
Texas Parks and Wildlife Department  
4200 Smith School Road  
Austin, Texas 78744  
512-389-4395

Drawing courtesy of  
North Carolina  
Agricultural  
Research Service



### Saltwort

*Salicornia virginica*  
(found in brackish marshes  
and salt flats)

## APPENDIX II

### *Federal and State Offices*

#### Federal Agencies

##### Federal Information Center

Washington, D.C.  
1 • 800 • 366-2998

##### USDA State Contacts

Austin 512 • 463-7552  
Pesticide  
Hotline 1 • 800 • 832-7347  
Amarillo 806 • 358-7285  
Lubbock 806 • 799-8555  
El Paso 915 • 532-6567  
Vernon 817 • 552-9954  
Stephenville 817 • 965-5097  
San Antonio 210 • 225-3464  
Pharr 210 • 787-8866  
Dallas 214 • 954-0672  
Brenham 409 • 836-5641  
Houston 713 • 870-9911  
Tyler 214 • 597-6571  
Beaumont 409 • 892-5655  
Odessa 915 • 337-0491  
Brownsville 512 • 546-6621

##### U.S. Army Corps of Engineers (Having jurisdiction in Texas)

Ft. Worth 817 • 334-2681  
Galveston 409 • 766-3930  
Tulsa 918 • 581-7261  
Albuquerque 505 • 766-2776

##### USFWS Texas Regional Offices

Office of the State Administrator  
10711 Burnet Road, Suite 301  
Hartland Bank Building  
Austin, TX 78758  
512 • 339-9617  
Fax 512 • 490-0978

U.S. Fish & Wildlife Service  
Ecological Services Austin Field  
Office  
10711 Burnet Road, Suite 200  
Hartland Bank Building  
Austin, TX 78758  
512 • 490-0057  
Fax 512 • 490-0974

Field Supervisor  
U.S. Fish & Wildlife Service  
711 Stadium Drive, Suite 252  
Arlington, TX 76011  
817 • 885-7830  
Fax 817 • 885-7835  
Field Supervisor  
U.S. Fish & Wildlife Service  
17629 El Camino Real, Suite 211  
Houston, TX 77058  
713 • 286-8282  
Fax 713 • 488-5882

Field Supervisor  
U.S. Fish & Wildlife Service  
c/o TAMU-CC  
Campus Box 338  
6300 Ocean Drive  
Corpus Christi, TX 78412  
512 • 994-9005  
Fax 512 • 994-8262

U.S. Environmental Protection  
Agency  
Bill Kirschner  
Environmental Protection Agency  
1445 Ross Avenue  
Dallas, TX 75202-2733  
214 • 665-8332  
Wetlands Hotline: 1-800-832-7828

#### Texas State Agencies

##### Texas Department of

**Agriculture**  
P.O. Box 12847  
Capitol Station  
Austin, TX 78711  
512 • 463-7476

##### Texas Forest Service

Forest Resource Development  
Department  
College Station, TX 77843-2136  
409 • 845-2641

##### Texas General Land Office

1700 N. Congress  
Austin, TX 78701  
512 • 463-5001

##### Texas Natural Resources

##### Conservation Commission

P.O. Box 13087  
Capitol Station  
Austin, TX 78711-3087  
512 • 239-1000

##### Texas Parks and Wildlife Department

4200 Smith School Road  
Austin, TX 78744  
512 • 389-4800

##### Texas Water Development Board

1700 N. Congress Avenue  
Austin, TX 78711  
512 • 463-7847

#### Natural Resources Conservation Service District Offices

**Alice**  
2287 North Texas Blvd.  
78338  
512 • 664-0903

**Amarillo**  
20 I-H Westgate Pkwy.  
79121  
806 • 376-2282

**Bryan**  
1737 Briarcrest Dr. #10  
77802  
409 • 774-7030

**Lubbock**  
4609 W. Loop 289  
79414  
806 • 743-7644

**Nacogdoches**  
118 E. Hospital, Suite 102  
75961  
409 • 564-1153

**Pecos**  
209 South Cypress  
79772  
915 • 445-2423

**San Angelo**  
33 E. Twohig #108  
76903  
915 • 658-6269

**Stephenville**  
239 East McNeill  
76401  
817 • 965-3213

**Terrell**  
808-B West Moore Ave.  
75106  
214 • 563-6431

**Uvalde**

1022 Garner Field Rd #101  
78801  
512 • 278-7444

**Vernon**

5020 Wilbarger  
76384  
817 • 553-4336

## **Texas Agriculture Extension Service Area Offices**

**District 1****Panhandle**

6500 Amarillo Blvd., W.  
Amarillo, TX 79106  
806 • 359-5401  
Fax 806 • 358-9718

**District 2****South Plains**

Route 3, Box 213 AA  
Lubbock, TX 79401-9746  
806 • 746-6101  
Fax 806 • 746-6528

**District 3****Rolling Plains**

P.O. Box 2159  
Vernon, TX 76385-2159  
817 • 552-9941  
Fax 817 • 553-4657

**District 4****North**

17360 Coit Road  
Dallas, TX 75252-6599  
214 • 231-5362  
Fax 214 • 231-5600

**District 5****East**

P.O. Box 38  
Overton, TX 75684  
903 • 834-6191  
Fax 903 • 834-7140

**District 6****Far West**

P.O. Box 1298  
Ft. Stockton, TX 79735-1298  
915 • 336-8585  
Fax 915 • 336-3813

**District 7****West Central**

7887 North Hwy. 87  
San Angelo, TX 76901-9728  
915 • 658-4576  
Fax 915 • 658-4364

**District 8****Central**

Route 2, Box 1  
Stephenville, TX 76401  
817 • 968-4144  
Fax 817 • 965-3759

**District 9****Southeast**

P.O. Box 2150  
Bryan, TX 77806-2150  
409 • 845-6800  
Fax 409 • 845-6501

**District 10****Southwest**

P.O. Box 1849  
Uvalde, TX 78802-1849  
210 • 278-9151  
Fax 210 • 278-4008

**District 11****Coastal Bend**

Route 2, Box 589  
Corpus Christi, TX  
512 • 265-9203  
Fax 512 • 265-9439

**District 12****South**

2401 East Hwy. 83  
Weslaco, TX 78596  
210 • 968-5581  
Fax 210 • 969-5639

## **Private Organizations**

**Ducks Unlimited**

Ducks Unlimited, Texas  
c/o Roger S. Hoyt, Jr.  
HC 34, #1051  
Uvalde, TX 78801  
210 • 278-3833

David Wesley

Director of Operations,

Southern Regional Office

Ducks Unlimited

101 Business Park Drive, Suite D

Jackson, MS 39213

601 • 956-1936

Ed Ritter

Texas Project Biologist

Ducks Unlimited, Inc.

2205 Ave. I, #114

Rosenberg, TX 77471

713 • 239-8470



*Agencies like the Natural Resources Conservation Service provide technical assistance to landowners for wetland management.*

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## APPENDIX III

### *Texas Land Trusts*

#### **Armand Bayou Nature Center**

8500 Bay Area Boulevard  
P.O. Box 58828  
Houston, TX 77258  
713 • 474-2551

**Purpose:** Provide environmental education for the public and to be stewards of the land.

**Main land types:** wetlands, prairies, forests

#### **Bayou Preservation Association**

P.O. Box 980863  
Houston, TX 77098  
713 • 529-6443

**Purpose:** Preserve and conserve bayous and other waterways and their floodplains.

**Main land types:** river corridors, recreation/public access, ecological

#### **Committee for Wild Basin Wilderness**

805 N. Capitol of Texas Hwy.  
Austin, TX 78746  
512 • 327-7622

**Purpose:** Conserve, protect, and restore Wild Basin Preserve's cultural and indigenous natural resources; maintain the Preserve's natural diversity of flora and fauna; implement interpretive, educational research programs for the public.

**Main land types:** ecological, trails, recreation/public access

#### **Connemara Conservancy**

3712 Beverly Drive  
Dallas, TX 75205  
214 • 528-2603

**Purpose:** Hold in trust beautiful tracts of land for the enjoyment of the people.

**Main land types:** ecological, trails, recreation/public access

#### **Dallas Nature Center**

7171 Mountain Creek Parkway  
Dallas, TX 75249  
214 • 296-1955

**Purpose:** Engage in conservation, education, recreation and research for the benefit of natural spaces and resources.

**Main land types:** wildlife habitat, trails, recreation/public access

#### **Katy Prairie Land Conservancy**

P.O. Box 61313  
Houston, TX 77208-1313  
713 • 759-9110

**Purpose:** Preserve and protect vital habitat for North America's winter waterfowl migration.

**Main land types:** ecological, wetlands

#### **Natural Area Preservation Association**

4144 Cochran Chapel Road  
Dallas, TX 75209  
214 • 352-8370

**Purpose:** Preserve significant natural areas for wildlife protection and advise and help people to preserve ecosystems and to protect wildlife.

**Main land types:** ecological, wetlands, wildlife habitat

#### **Parks for Brazoria County**

1800 C.R. 171  
Angleton, TX 77515  
409 • 849-5711

**Purpose:** Acquire, trade, sell, and donate goods, services and property for the purpose of expanding open space in Brazoria County.

**Main land types:** wetlands, recreation/public access, historical/cultural sites or landscapes

#### **Save Open Space**

P.O. Box 670407  
Dallas, TX 75367  
214 • 358-1629

**Purpose:** Advocate intelligent use and acquisition of natural open space in and around Dallas.

**Main land types:** general open space, river corridors, wetlands

#### **Valley Land Fund**

P. O. Box 2891  
McAllen, TX 78502  
210 • 381-1264

**Purpose:** Identify and protect those unique natural areas that are not within the current parameters of land acquisition of the U.S. Fish and Wildlife Service or Texas Parks and Wildlife Department; preserve and restore wildlife habitat.

**Main land types:** ecological, deserts, river corridors

## APPENDIX IV

### Wetlands Education Assistance

A variety of wetlands education programs offered by a range of public and private groups are available that cover wetlands topics ranging from regulations to youth education. Please consult **Roles of Federal and State Agencies in Wetlands** in this document to match your area of interest to the appropriate agency. Agency contacts can be found in Appendix 2. The programs summarized below may offer wetlands education and monitoring training opportunities to adults.

#### Adopt-A-Wetland Program

Nivra Kelley  
Center for Coastal Studies  
Texas A&M University -  
Corpus Christi  
6300 Ocean Drive  
Corpus Christi, TX 78412  
512 • 994-9005

**Purpose:** Participants are encouraged to disseminate wetland information to youth by utilizing a variety of approaches including monthly monitoring of flora, fauna, and water quality at a wetland in their area. The program also encourages students to participate in wetland restoration, creation, and enhancement projects through surveying and monitoring activities.

#### Project and Aquatic WILD

Texas Parks and Wildlife  
Department  
4200 Smith School Road  
Austin, TX 78744  
512 • 328-6035

**Purpose:** The goal of Project WILD (Wildlife in Learning Design) is to assist learners of any age in developing awareness, knowledge, skills and commitment that results in informed decisions, responsible behavior, and constructive actions concerning wildlife. Aquatic WILD is a similar program that offers conservation education of our aquatic resources.

#### Texas Watch

Texas Natural Resources  
Conservation Commission  
P.O. Box 13087 Capitol Station  
Austin, TX 78711-3087  
512 • 239-4738

**Purpose:** Texas Watch is designed to help volunteer environmental monitoring programs address environmental problems. This volunteer program helps to produce environmental information that agencies, waste generators, and the public need to make environmentally sound decisions.



Drawing  
courtesy of  
North  
Carolina  
Agricultural  
Research  
Service

**Smooth Cord-grass**  
*Spartina alterniflora*  
(found in saline marsh  
environments)

*Citizen monitoring of wetlands  
can provide helpful data to  
resource agencies.*

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