

Texas Parks and Wildlife • 4200 Smith School Road, Austin, Texas 78744

## TPW hires two Wetland Specialists

You might have noticed that it has been a while since you last received a wetland newsletter. Regretfully, Texas Parks and Wildlife (TPW) lost both Julie Anderson Shackelford and Heather Bond within two months of each other last spring and summer. Due to factors beyond our control, it has taken until this February and April to replace these two important positions.

Jeff Raasch took over as State Wetland Planner on February 7 and Jennifer Key started on April 6 as the new Wetland Biologist. Jeff's previous job was with the Arkansas Game and Fish Commission, where he worked with wetland conservation issues on statewide basis. Jeff grew up in Sherman, Texas and later received his undergraduate degree from Texas A&M University and a Master's degree from the University of Missouri-Columbia. Jeff has not lived in Texas since 1992, and is excited to be back in the state.

Before joining TPW, Jennifer Key worked as an ecologist for the Austin office of PBS&J, an engineering and environmental consulting company. Jennifer received her education in the Pineywoods of East Texas, where she earned both a Bachelor of Science in Forestry and a Master of Science in Forestry degree from Stephen F. Austin State University in Nacogdoches.

Both Jennifer and Jeff are looking forward to working on wetland issues throughout the state.

Feel free to contact Jeff Raasch or Jennifer Key in the State Wetland Planners office at any time to discuss wetlands or just to say welcome. Jeff can be reached at 512-389-4328 or e-mailed at: jeff.raasch@tpwd.state.tx.us Jennifer Key can be contacted at 512-389-8521 or e-mailed at: jennifer.key@tpwd.state.tx.us

## Armand Bayou Nature Center Wetland Prairie Restoration Project

Texas Parks and Wildlife (TPW) and the Armand Bayou Nature Center (ABNC), along with the Texas Agricultural Extension Agency, U.S. Fish and Wildlife Service, and Houston Light and Power are beginning the process of restoring 80 acres of severely degraded prairie wetland habitat at the ABNC through the control of exotic and woody plant species and the harvest and transplanting of native grasses. Located upstream of Galveston Bay, the ABNC and Wilderness Preserve is part of one of the nation's most productive estuaries. It is also particularly valuable to wildlife because it provides a corridor of natural habitat that supports sedentary and migratory species within an otherwise developed area. The ABNC is a private not-for-profit preserve consisting of 2,500 acres of county-owned property in Pasadena, TX. The Center is open to the public on a year-round basis and has a twofold mission statement: 1) to provide environmental education to the public and 2) to perpetually preserve the ecosystems it protects. Encompassing three diverse but interrelated ecosystems, ABNC protects remnants of this region's original ecosystems such as wetlands, bottomland forest, and tallgrass prairies. The presence of established wilderness preserves within highly urbanized areas improves the opportunity for resource conservation and increases the scope of work that may be accomplished. Partnerships developed between cooperating groups can facilitate the improvement of habitat diversity while additionally providing education on the importance of these ecosystems to a broad populace.

> Herbaceous prairie wetland vegetation, previously managed by native grass fires and grazers has been out-competed by the exotic Chinese tallow-tree and other woody plants.

> > Prairie wetlands like those found along the Texas Gulf Coast have been altered to the extent that they are now one of the most endangered and fragmented ecosystems in Texas. Few remnant prairies remain on the upper Gulf Coast, and there are fewer yet of the wet prairies like those found on the ABNC preserve. The prairie vegetation at the ABNC is characterized by climax bunch grasses and hydrophytic species, which are typical of wet, clayey prairies on the Texas Gulf Coast. Most of the prairie wetlands on the ABNC property have been further impacted by the invasion of Chinese tallow-tree (*Sapium*

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## **Armand Bayou Nature Center**

*sebiferum*). The encroachment of this and other undesirable exotic woody plants has reduced the viability of native plant populations. These circumstances highlight the importance of restorative efforts on wildlife refuges in highly urbanized regions and make their role even more significant in providing environmental education and overall ecosystem integrity.

The project will take place on approximately 80 acres of degraded wetland prairie over the course of two growing seasons, starting in May 2000. Herbaceous prairie wetland vegetation, previously managed by native grass fires and grazers has been out-competed by the exotic Chinese tallow-tree and other woody plants. The first step in restoring the site will be to initiate an intensive mechanical removal of the woody vegetation followed by an application of herbicide. A second herbicide application will take place

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during the second growing season as needed. Although this woody vegetation removal and herbicide method is considered the best at controlling the Chinese tallow-tree, this study will include several test plots that will explore different methods of control. In addition, transects will be established to monitor the success of the treatment. To ensure the desired species will be established at this site, selected plant species will be relocated from off-site threatened populations and transplanted in the ABNC prairie site. These species will include a number of grasses that once dominated the prairie landscape. This project will protect and restore a critically endangered habitat for priority plant species in the prairie community and will enable the ABNC to provide public education about the needs and importance of prairie wetland conservation. If you would like more information about the ABNC, you may contact the Center's office at 281-474-2551.

## **Habitat Restoration in West Galveston Bay**

#### Submitted by Jarrett "Woody" Woodrow - TPW, Houston, Texas

Erosion on Galveston Island and the upper coast of Texas has become a hot issue. Attention has focused primarily on beachfront erosion, but now people are quick to realize that Galveston Island is eroding from both sides. West Bay has lost and is continuing to lose hundreds of acres of marsh that once paralleled the entire shoreline. Through recent funding opportunities, Texas Parks and Wildlife (TPW) in coordination with other resource agencies and advocacy groups are restoring valuable fish and wildlife habitats. West Bay has three funded restoration projects: 1) the Galveston Island State Park Restoration Project, which is near completion, 2) the Jumbile Cove Restoration Project, which will begin construction in the summer of 2000, and 3) the Hall's Lake Restoration and Protection Project, which will begin this year.



Spartina alterniflora marsh in Galveston Bay

#### **Jumbile** Cove

In 1930, 184 acres of Jumbile Cove was comprised of 75 acres of intertidal marshes, 56 acres of tidal flats, 29 acres of lagoon/open water, and more than 24 acres of prairie (high marsh to uplands). Today, this area has been reduced and converted as a result of subsidence and erosion to 35 acres of intertidal marshes, 18 acres of tidal flats, 116 acres of shallow open water, and 15 acres of prairie (high marsh). At the present rate of erosion, most of the remaining intertidal habitats will be gone within five years. Soft sediments, which formerly supported emergent vegetation at the cove, have disappeared, further reducing the ability of the marsh to recover from impacts.

The project goals are to restore elevations necessary for intertidal marsh (smooth cordgrass or *Spartina alterniflora*) to grow and to create a wave barrier and bird nesting habitat and to protect the remaining 35 acres of intertidal marsh and 18 acres of tidal flat.

The project will be constructed by hydraulically dredging material from a nearby borrow site to build 200 marsh (restoration) mounds, which will each be approximately 2,642 square feet (0.06 acre) in size. The mounds will have a 58-foot (ft) wide base diameter, and will be 3 ft above the bay bottom with a 6:1 slope. The marsh mounds will be placed to allow unrestricted ebb and flow of tidal waters and ingress and egress of aquatic organisms between them. A 2,500-foot wave barrier/bird island (levee embankment with rock

system) will also be constructed to provide bird nesting habitat and as a protective breakwater to the existing marsh and restored marsh habitats. The wave barrier/bird island will be constructed by hydraulically dredging material from the borrow site. It will have a 78-ft base width, 8-ft top width, and will be 5 ft above the bay bottom with a 6:1 slope. The wave break will be armored with clean riprap on the windward side and the top will be dressed with limestone for nesting habitat. The backside of the break water/bird island will be planted with smooth cordgrass.

Funding for the Jumbile Cove Restoration project is provided by FWS National Coastal Wetlands Grant Program, Shell Marine Habitat Program of NFWF, Galveston Bay Estuary Program, University of Houston Clear Lake Environmental Institute of Houston, and Reliant Energy. For more Information on Jumbile Cove contact Cherie O'Brien at 281-461-4071.

#### Hall's Lake

The Hall's Lake project will protect and restore wetland habitats that are integral parts of the Texas Gulf coast and the Galveston Bay estuarine ecosystem and that have tremendous biologic and economic values. Hall's Lake is a shallow, 325-acre tertiary bay on the north shoreline of West

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2

## **Upcoming Changes at Aquarena Springs**

Southwest Texas State University (SWT) recently a c q u i r e d A q u a r e n a Springs Resort in San Marcos. Currently, SWT intends to convert it from a theme park to a multi-purpose environmental



education and research center highlighting Central Texas' rivers and springs. SWT, in cooperation with Texas Parks and Wildlife (TPW), Chevrolet, and the U.S. Fish and Wildlife Foundation, will restore wetlands along Spring Lake through the manual removal of exotic vegetation, the planting of native species, and the construction of a boardwalk on the lake to educate visitors about wetlands.

Historical records indicate a dramatic change in plant communities in and around Spring Lake during the past 65 years. Many native plants were intentionally removed and eventually replaced by exotic species. This project

### **Habitat Restoration**

Galveston Bay that is separated from the Gulf Intracoastal Waterway (GIWW) and West Bay by a narrow, 50- to 100-ft wide isthmus. Marshes along the Hall's Lake shoreline and the lower part of Hall's Bayou are primarily irregularly flooded emergent low and high marsh consisting of smooth cordgrass, saltwort, glasswort, and sea ox-eye daisy. Extensive beds of wild celery, a submerged aquatic plant that grows in brackish to freshwater areas, is found along the banks of Hall's Bayou.

Hall's Lake and Hall's Bayou marshes are nursery areas where commercial shrimp, blue crabs, Gulf menhaden, sand seatrout, southern flounder, red drum, and other marine species develop into juveniles. The estuary also supports a substantial recreational sport and live-bait shrimp fishery. The same populations of geese and ducks that roost and feed on the Brazoria and San Bernard National Wildlife Refuges use the Hall's Bayou marsh, including the Hall's Lake area.

Erosion currently threatens to breach the narrow isthmus separating Hall's Lake from the GIWW and West Bay. At the present rate of erosion, a breach could occur within five years or sooner if a tropical storm impacted the area. If a breach occurs, salinities in Hall's Lake would immediately increase as more saline waters from West Bay enter the Lake. Overall, the integrity of the entire Hall's Lake/Hall's Bayou wetland system is threatened, including its value as nursery habitat for juvenile fish and shellfish and as a wintering habitat for birds.

This project will provide immediate, long-term protection and restoration of the wetland and estuarine systems. The objective of this project is to stabilize would use historical vegetation records as a guide to revegetate target areas of the slough with native vegetation, which in turn would restore the habitat for many wetland-dependent birds, animals, fish and invertebrates. Restoration would also improve other important wetland functions such as water purification and sediment control, which help to maintain high water quality in Spring Lake and the San Marcos River.

A quarter-mile long boardwalk will wind through the wetlands around Spring Lake. The boardwalk trail system will be constructed in the slough area where the exotic species removal and native vegetation replanting is occurring. Interpretive panels will be placed on the self-guided boardwalk to address topics such as wetland features and functions, the importance of San Marcos Springs to the Edwards Aquifer, the San Marcos River and downstream ecosystems, the removal of exotic species and restoration to natural systems, and endangered species. In addition, two outdoor kiosks will be constructed: one will illustrate the ecological structure and processes that occur in wetlands including descriptions of important wetland plants and wildlife, and the other will explain riparian habitats as they relate to wildlife and important anthropological features of the area and lake. The boardwalk will feature several bird viewing platforms and rest stops and will be designed to draw the observer along the ecological gradient from a riparian habitat through an emergent wetland to an open water habitat. Look for future updates for the opening of the boardwalk.



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the isthmus/levee separating Hall's Lake from West Bay with approximately 3,000 feet of protective features in order to protect 353 acres of estuarine emergent marsh and 4 acres of palustrine emergent marsh. Approximately 1,000 ft of breakwater will be constructed to protect an additional 6 acres of estuarine emergent marsh to be restored through plantings.

Funding for the Hall's Lake project includes state and private funding from TPW, Nature Conservancy of Texas, Reliant Energy, Galveston Bay Foundation/Shell Marine Habitat Program, Galveston Bay Estuary Program, and Texas General Land Office. Federal contributions include funds from the Texas Coastal Ecosystem Program (USFWS) and a Coastal Wetlands Planning, Protection and Restoration Act grant. For more information contact Kay Jenkins at 281-461-4071.

TPW Coastal Conservation staff is currently working on additional restoration proposals for Delehide Cove east of Galveston Island State Park and North Deer Island, a rookery island in West Bay. By partnering with various federal, state, local governments, private sector and non-governmental entities, TPW is able to leverage and facilitate large restoration and protection projects. Each project has a team of representatives (biologists) from the various partners. This group works with the engineers, hydrologists, and geologists to design the restoration and protection of the habitats of interest. The synergy of having a diverse group of partners results in the whole being greater than the sum of the parts. Critical agency involvement from the General Land Office and Galveston Bay Estuary Program will result in projects where each partner brings something important to the table. Wildlife Management Cooperative

Submitted by Matt Wagner, Technical Guidance Biologist – TPW, College Station

Although agricultural products remain the most important economic activity in the Trinity Basin, wildlife-based recreation and watershed management for water quality and supply will grow in economic value to private landowners.

Landowners in a 9-county region along the Trinity River are forming an emerging effort in watershed management. A meeting was held on March 22, 2000 at the request of Dr. Bob MacFarlane (Palestine) to inform interested parties of the potential for cooperative management of deer, waterfowl and non-game animals. About 20 landowners and representatives from Advanced Ecology, Texas Department of Criminal Justice (TDCJ), TPW, U.S. Army Corps of Engineers attended this meeting. In Anderson and Freestone counties, three Wildlife Management Areas, plus units of the TDCI prison system form the core area of public lands. When coupled with private lands, a public-private partnership of well over 100,000 core-area acres will be incorporated in the association. The association will eventually extend along the Trinity River from Kaufman County to Madison County.

#### Background

ETRINITY

The entire Trinity River basin drains approximately 18,000 square miles from Cooke County on the northern border of Texas to Trinity Bay. The Trinity River originates and ends in or near metropolitan areas, but for the majority of its length flows through a rural countryside that is one of the most populated in the state. Some of the water quality issues that face the river and its users are eutrophication of reservoirs, urban storm water runoff and wastewater effluent, nutrient and freshwater flows into Trinity Bay, and toxin and sediment runoff. The Trinity River corridor serves asone of the most important habitat systems in the Post Oak Savannah Region for waterfowl, upland game and non-game species. In fact, the Trinity River contains about 300,000 acres of bottomland hardwood forest, which is more than any other river system in the state. Although agricultural products remain the most important economic activity in the Trinity Basin, wildlife-based recreation and watershed management for water quality and supply will grow in economic value to private landowners. New and innovative sources of economic returns from the land will prevent or at least slow the fragmentation of large land holdings into smaller tracts for development. For example, hunting lease revenue is rapidly becoming a larger share of ranch income compared to traditional agriculture.

Some well-managed ranches are charging over \$1,000 per gun for quality duck and deer hunting. In addition, the Tarrant Regional Water District is testing the feasibility of constructing wetlands in the Trinity Basin for water purification purposes. It is conceivable that, in the future, landowners could be paid to have wetlands constructed on their property to meet increasing demands for water quality and supply.

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#### Need

Efforts are underway to maintain and manage open space along the Upper Trinity River (Dallas/Fort Worth Metroplex) through the North Central Texas Council of Government's Common Vision Program, and the Lower Trinity (below Lake Livingston) through the Trinity River National Wildlife Refuge. A new initiative focused on the Middle Trinity (approximately 9 counties between DFW and Lake Livingston) is needed. This would provide a forum for information exchange between Middle Trinity River landowners, water authorities, and other natural resource agencies to the benefit of all stakeholders, especially as future issues arise. Within the Middle Trinity, TPW manages four wildlife management areas over 29,000 acres and 3 state parks totaling nearly 4,900 acres. However, the vast majority of land within the watershed is under private ownership. TPW also works directly with landowners to provide technical assistance to those desiring wildlife management plans on their property. Currently, there are approximately 100,000 acres under TPW wildlife management plans in a 9-county region surrounding the Middle Trinity River, including properties owned by the Tarrant Regional Water District. In addition, TPW provides wildlife management assistance to at least four prison units operated by the TDCJ totaling nearly 60,000 acres.

The future of wildlife management in Texas will depend on the success of public/private partnerships such as landowner cooperatives and associations. By focusing on the Trinity River corridor, important habitat will be conserved while disseminating information to landowners through demonstrations of wildlife management practices, workshops, the use of Geographic Information Systems (GIS), distribution of printed materials, and creation of a Web site.

Texas Seagrass ONSERVIN

Submerged seagrass meadows are a dominant, unique subtropical habitat that exists in many Texas bays and estuaries. These highly evolved marine flowering plants play critical roles in the coastal environment, such as providing nursery habitat for estuarine fisheries, organic biomass for coastal food webs, acting as effective agents for stabilizing coastal erosion and sedimentation, and as major biological agents in nutrient cycling and water quality processes. Recent studies show that seagrasses are sensitive to nutrient enrichment and water quality problems, as well as physical stress from human disturbances. As a result, many Texas scientists, resource managers and environmentally aware citizens have concerns about the ecosystem health of these seagrass resources.

In January 1999, Texas Parks and Wildlife (TPW), Texas General Land Office and the Texas Natural Resource Conservation Commission published The Seagrass Conservation Plan for Texas. An outgrowth of the "Symposium on Texas Seagrasses" which took place in November 1996 in Corpus Christi, Texas, the Plan identified several man-induced threats to Texas' seagrasses:

> conservation Plan Anthropogenic disturbances include a variety of activities the babitats. The frequency of all anthropogenic activities increases with increasing human populations and use of the ecosystem. The activities are a direct result of marine transportation, commercial fishing, recreational boating, and agricultural practices (p 34-35).

#### Seagrass Task Force

for Texas

In July 1999, TPW assembled a citizen's advisory group to help staff begin the process of developing a management strategy for seagrass conservation. The members were carefully selected to represent the broad diversity of social, recreational and economic interests in this area. Members of the Task Force considered two areas for initial management initiatives: Redfish Bay (in Aransas Bay) and the Nine-mile Hole. The Task Force in its entirety and three subcommittees (Redfish Bay Subcommittee, Education Subcommittee, and Nine-Mile Hole Subcommittee) met throughout the period of July 1999 to February 2000.

#### The Seagrass Conservation Task Force made the following findings:

- 1. Local seagrass meadow fragmentation in Redfish Bay has occurred and continues to occur in several areas of Estes Flats. Seagrass damage in Estes Flats tends to be concentrated in and adjacent to high boat-traffic areas, often associated with popular angling areas.
- 2. Much of the seagrass damage is the result of boating activities carried on by boaters unfamiliar with the nuances of navigating this bay system. However, seagrass damage is also resulting from high traffic in areas used as "shortcuts" between major travel arteries.



Submerged seagrass beds along Texas' coast

- 3. Increasing boat traffic and angling activities in Redfish Bay are resulting in substantial user conflicts, largely as a result of density of angling activities north of the SH 361 causeway.
- 4. Education of boaters is the single most likely action to result the decrease of seagrass fragmentation.
- 5. Research into causes of seagrass meadow fragmentation and species changes should continue.
- 6. Fragmented seagrass beds in Redfish Bay should be protected from further destruction by routing of boat traffic around these areas.
- 7. Access should be improved in Brown and Root Flat and North Harbor Island.

#### **Management Strategies**

In fulfilling its charge under the Seagrass Conservation Plan, TPW staff and constituents identified the first coastal areas that will require active boater education, seagrass restoration and protection. Redfish Bay (located in Aransas, San Patricio and Nueces counties) is a true jewel of the Texas Coast. However, the excellent fishing, ease of access and attendant increases in boat traffic characteristic of this area has led to a significant fragmentation of seagrass resources and threatens the ecological integrity of this system. Further, user-conflicts between traditional and recently evolved fishing strategies have begun to rapidly escalate.

A second site, located south of Baffin Bay in an area called the "Nine-mile Hole," was selected as a pilot site to determine the effects of boat traffic on fishing experience. Although seagrass fragmentation and loss are not significant in this expansive, shallow, off-channel depression, the "Hole" provides an opportunity for assessing strategies for reducing user-conflicts and providing quality fishing experiences.

The Parks and Wildlife Commission will consider implementation of these management strategies for Redfish Bay and the Nine-mile Hole at the June 1, 2000 public hearing, which will begin at 9:00 AM in the Commission Hearing Room, TPW Headquarters, 4200 Smith School Road, Austin, TX 78744. Specific information concerning proposed management strategies for Redfish Bay and Nine-mile Hole can be obtained from the TPW Web site: http://www.tpwd.state.tx.us/admin/about us/financial rpts/pdf docs/com binedplanscientificarea.pdf

## **Chevron USA Makes Drought Relief Contribution to the J.D. Murphree WMA**

#### Submitted by Jim Sutherlin, Area Manager – J.D. Murphree WMA

The drought of 1999 brought unusually dry conditions to the Texas Upper Coast by the beginning of September. When there was no significant rain relief through mid-November, TPW Wildlife Division staff on the Upper Coast Wetland Ecosystem Project became very concerned about dry marsh habitats and a lack of fresh water available to migratory waterfowl. The National Weather Service confirmed that dry conditions would persist through February 2000. In order to relieve these conditions, TPW staff developed a strategy to pump water into the wetland management impoundments of the Big Hill Unit of the J.D. Murphree Wildlife Management Area (WMA). This

## The logistics of pumping 6 to 8 inches of water over 2,000 acres of marsh with portable pumps required a wellorchestrated team effort.

would be the first pumping of seasonal water into the impoundments since the wetland compartments were leveed during the early 1960s. J.D. Murphree staff developed a pumping plan that would provide shallow water for up to 2,000 acres of the approximately 6,700 acres of impounded wetlands on the WMA. The logistics of pumping 6 to 8 inches of water over 2,000 acres of marsh with portable pumps required a well-orchestrated team effort.

Besides the logistics of using portable pumps and transporting fuel several miles down Big Hill Bayou to support pumping efforts, funding was also needed. TPW sought out local industries and commercial businesses that would be willing to contribute. Mr. Aaron Allen, of Chevron USA, Port Arthur, responded to requests by TPW field staff. Together they devised a plan, which would include providing four 6-inch high output pumps and fuel to operate the pumps around-the-clock until the initial goal of flooding 1,200 acres was reached. Beyond the initial goal, there was also a possibility of pumping water for up to 2,000 acres.

The wildlife technicians on the Upper Coast staff took charge of the project once the equipment was delivered. They selected the pumping sites, and with the assistance of inmates provided by the Jefferson County Sheriff's Department, cleared and mowed an area for each 6-inch diesel pump. The pumps were set up in pairs to water two impoundments simultaneously. Compartments 3 and 5 were selected because they shared water control with adjacent compartments, which could be flooded by gravity flow once the initial impoundments reached target water levels. Pumping began in earnest the first week of December 1999. By mid-December, surface water was available for waterfowl use, and by Christmas water levels had improved enough to begin watering the adjacent impoundments. Wildlife staff continued to fuel and monitor pumping through the holidays. By late January target water levels were reached across the 2,000 acres where pumping was conducted. The remainder of the freshwater wetlands in the Big Hill Unit continued to hold only very limited surface water. Pumping ceased by February 2000. The pumped fresh water maintained suitable wetland habitats in good seasonal conditions for many wetland species, including waterfowl well into April 2000.



The marshes of J.D. Murphree WMA

## The pumped fresh water maintained suitable wetland habitats in good seasonal conditions for many wetland species, including waterfowl well into April 2000.

Two private citizens supported the effort by each loaning TPW 500-gallon portable diesel fuel tanks for fueling the pumps. In addition, 1,100 sixty-pound sandbags donated by Alpha Leak Detection and Pipeline Repair Company were used to construct oil spill perimeter berms, and dockside fuel storage on Taylor Bayou was donated by Jack's Shrimp House. The total effort included in excess of \$40,000 in pump rental and fuel by Chevron USA (plus equipment and crews to stage the pump set-up), 1,156 man hours of labor provided by the Jefferson County Sheriff's Department inmate crew for logistical field support, and over 45 man days by TPW field staff. This project received the Port Arthur Rotary Club's "Works Well Award for 1999," and has been submitted by Chevron for the Gulf of Mexico Gulf Guardian Award.

# **Other Wetland News and Plan Updates**

## Forested Wetland Incentive Program gets Back on Track

Nine landowners were selected to participate in the Forested Wetland Incentive Program in East Texas in May 1999. Due to the long delay in replacing the State Wetland Planner position, many of these projects have yet to get underway. Nevertheless, thanks to the hard work and persistence of biologist Carl Frentress of TPW, two of the landowners have signed contracts with TPW and one of these projects is complete. Over the next several months all the programs projects will have a welldesigned management plan and will be on their way to completion. Stay tuned for more information on each of these projects.

## TPW is Updating and Organizing the Wetland Information on their Web site

The Internet has become an important tool for delivering information to the public. Several projects have been specifically designed for utilizing the Internet as the tool for distribution. For example, the *Wetland Project Site Registry* is up and running on the TPW Web site and is a database for people to access landowners who are interested in restoring wetlands on their property. In addition, a *Wetlands Grant Database* has been developed that will allow people to search online for sources of funding for wetland conservation projects. As more information is added to the website over time, the need for maintenance becomes more important. A committee of interested personnel will be working with the State Wetland Planner and a web designer to develop a well-organized wetland Web site on TPW webpage. This will allow for easier updates and access to resources such as the *Wetlands Grant Database*.

## Wetlands Project Site Registry Gains a New Program Manager

Since the loss of Heather Bond from TPW approximately 10 months ago, the Wetland Project Site Registry Program has not had the benefit of periodic updates. With the addition of Jennifer Key as the newest member of TPW's Wetland Conservation Team, several changes to the Wetlands Registry Web site are planned for the near future. The Wetlands Project Site Registry is a program that functions as "want ads," linking those who need or want to perform wetland restoration with property owners who have similar goals. The current Web site can be viewed at the following address: http://realvid.tpwd.state.tx.us:8080/wetland/ This Web site will soon undergo some renovation; in the meantime, if you would like more information about the Wetlands Project Site Registry, please contact Jennifer Key at 512-389-8521 or e-mail jennifer.key@tpwd.state.tx.us

# Have Any WETLANDS NEWS?

We welcome short articles or notices of coming events concerning wetlands conservation or wetlands-related activities. Address submissions to:

Jeff Raasch, Resource Protection Division Texas Wetlands News 4200 Smith School Road Austin, Texas 78744 or e-mail jeff.raasch@tpwd.state.tx.us TEXAS PARKS AND WILDLIFE

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2000