

*Northwest Florida Water Management District*

*2008*

ANNUAL REPORT





# Northwest Florida

## Water Management District

Drought Proofing the Northwest . . . . . 2

Governing Board . . . . . 4

The Way We Were: Restoring Northwest Florida. . . . . 6

    Reforesting District Lands . . . . . 6

    Recovering through Mitigation . . . . . 9

    Renewing Apalachicola River and Bay. . . . . 13

    Removing the Effects of Stormwater . . . . . 16

    Rejuvenating Springs . . . . . 18

    Improving Water Quality with Florida Forever Grants . . . . . 19

Districtwide Activities . . . . . 20

    Jefferson, Leon and Wakulla Counties . . . . . 28

    Calhoun, Franklin, Gadsden, Gulf, Jackson  
    and Liberty Counties . . . . . 30

    Bay, Holmes, Okaloosa, Walton  
    and Washington Counties . . . . . 34

    Escambia and Santa Rosa Counties . . . . . 36

Combined Balance Sheet . . . . . 37

Financial Statement . . . . . 38

District Addresses and Contact Information. . . . . 40



# Drought Proofing the Northwest

Of critical importance to the Northwest Florida Water Management District is ensuring that there will be an adequate water supply for residents in this 16-county area for many years. The most vulnerable areas are the coastal areas, those most heavily populated and those that are experiencing, or expected to experience, a great deal of growth within the next 20 years.

Since the District began working on water supply problems over 30 years ago, it was possible to put plans in place to avoid many of the detrimental impacts associated with development seen throughout the remainder of the state. The District, local governments and various utilities have cooperated in an effort to “drought proof” the panhandle.

2 To achieve this, an important element, diversity, was integrated into the overall plan. Initially, steps were taken to move sources of water supply (primarily coastal Floridan Aquifer wells) to inland sources. Many of these coastal wells were, and are, susceptible to saltwater intrusion as fresh water is withdrawn for these popular, growing coastal communities. The goal was to make each county self-sufficient for meeting its average and maximum daily needs.

Now, plans are being put in place to interconnect these systems extending from Gulf Breeze to Port St. Joe to allow for the movement of water between systems and counties during periods of drought or other unforeseen interruptions. This interconnected, diverse base of sources will allow the short-term transfer of water among utilities. Once the interconnections are completed, there will be sufficient source capacity to meet water supply needs through 2030 and possibly even beyond.

This water supply plan integrates surface water and ground water into the same delivery system. It includes three surface water sources – Chipola

and Shoal rivers and Econfina Creek. Ground water sources primarily include the Floridan and the Sand and Gravel aquifers. Across the District, various communities and water utilities rely on different sources.

For example, Midway and Holly-Navarre continue to operate coastal Floridan Aquifer wells but Navarre Beach and Gulf Breeze receive water from the inland FairPoint Regional Utilities in Santa Rosa County. The District helped that utility obtain \$3 million in federal funds to assist with its wellfield. FairPoint Regional, drawing from the Sand and Gravel Aquifer, supplies an average of 6.08 million gallons a day (MGD). Its maximum capacity is 8.04 MGD.

While continuing to operate coastal wells, Okaloosa County, Fort Walton Beach, Eglin Air Force Base, Niceville and Valparaiso supplement their water supply with an inland Floridan Aquifer wellfield that, on average, supplies 3.61 MGD. Plans are underway to develop the Shoal River as an alternate supply that should be available sometime between 2010 and 2020. Use of the Shoal River will involve small reservoirs, upland storage or infiltration systems. The District will assist the county with a \$1.5 million land purchase needed to develop this source.

In Walton County, an inland Floridan Aquifer wellfield supplies 9.64 MGD but has a maximum capacity of 12.24 MGD. About \$6.5 million in grant funds were provided by the District for construction. This wellfield supplements coastal wells used by Destin Water Users and the South Walton Utility Company. Since the early 1960s, Bay County has received its water supply from the Deer Point Lake Reservoir, which is permitted at an average 69.5 MGD and 82.0 MGD at peak levels. Panama City, along with Mexico Beach and Tyndall Air Force Base, are served by the Deer Point Lake Reservoir. The District has purchased more than 41,000 acres north of Deer Point



Lake Reservoir along the Econfina Creek and in the Sand Hill Lakes area to protect these sensitive water resources. The Sand Hill Lakes area is an important recharge area where an estimated 40 inches of rainfall per year seep into the Floridan Aquifer and into numerous springs that are intersected by Econfina Creek. Econfina Creek contributes the majority of freshwater flow to the Deer Point Lake Reservoir.

Of particular concern is Bay County's continuing reliance on surface water for its water supply. This is an area that could be impacted by hurricanes, especially a saltwater surge. Several years ago, the District and the county began assessing the Floridan Aquifer in this area to determine if a ground water source could serve as an ongoing, safe alternative. Funding has been allocated to purchase the land needed for the wellfield. While extensive test wells and assessments have been done for the Bay County inland wellfield, construction is still to be scheduled. Once completed, this estimated \$15 million inland Floridan Aquifer wellfield is expected to produce between 5.0 and 10.0 MGD and could be used as an additional source as well as a backup source of supply. The District will provide approximately \$7.5 million for construction of the wellfield.

The District has taken several initiatives to assist the City of Port St. Joe in Gulf County with its water supply. An existing canal from the Chipola River to Port St. Joe was acquired and converted to provide fresh water to the area. Plans are currently underway to construct a water treatment plant, with a capacity

of 6.0 MGD. Four million dollars in grant funds were provided by the District for the water treatment facility. Inland test wells will help identify alternate water supply sources for adjacent Franklin County, currently dependent on coastal wells.

Over the past several years, various programs implemented by the District have helped protect the region's water resources. Since the mid-1980s, more than 216,000 acres have been acquired to protect water resources. The District's Surface Water Improvement and Management (SWIM) program, in place since the late 1980s, has led to the restoration and preservation of many surface waters across the District's 16-county area. Since the early 2000s, the District has cooperated with the Federal Emergency Management Agency (FEMA) in its floodplain map modernization effort. It is expected that these maps will be completed by 2010.

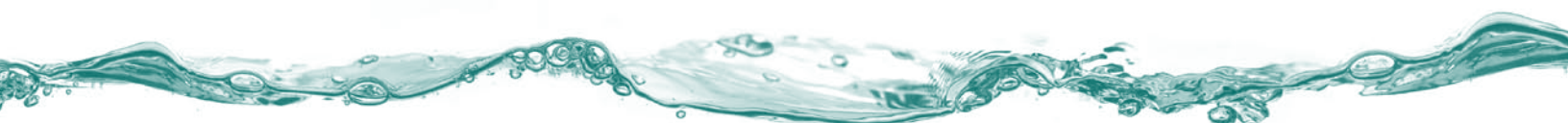
Anticipating growth and an area's water supply needs require a long planning horizon to project needs and to develop resources to meet those anticipated needs. In the interim, the northwest area must cope with periodic droughts. In June of 2007, the District issued a water shortage warning, the second in its history, and it is still in effect. To provide for a stable and more predictable water supply, a diverse and interconnected system of sources is needed if the goal of drought proofing the Northwest Florida Water Management District area is to be attained.



George Roberts  
Chair, Governing Board



Douglas E. Barr  
Executive Director





# Governing Board



## George Roberts

*Chair*

Panama City

Represents Basin III

Appointed: March 3, 2006

Term Expires: March 1, 2010



## Philip McMillan

*Vice Chair*

Blountstown

Represents Basin IV

Appointed: March 3, 2006

Reappointed: April 27, 2007

Term Expires: March 1, 2011



## Sharon Pinkerton

*Secretary/Treasurer*

Pensacola

Represents Basin I

Appointed: March 15, 2005

Term Expires: March 1, 2009



## Douglas E. Barr

*Executive Director*

Northwest Florida

Water Management District

Appointed: February 1992

## 2009 Governing Board Meetings

January 22

February 26

March 26

April 23

May 28\*

June 25

July 23

August 27

September 15\*

September 24\*

October 22

November 19

December 10

Governing Board meetings will be held at the District's headquarters office on U.S. Highway 90, except for those with an asterisk (\*). The May meeting will be held at the District's Crestview Field Office as will be the September 15 public hearing on the proposed 2009-2010 budget. The September 24 meeting will be held in Marianna with a public hearing on the proposed budget to follow. This schedule of meetings is tentative and subject to change.





**Peter Antonacci**

Tallahassee  
Represents Basin V  
Appointed: March 31, 2006  
Reappointed: April 1, 2008  
Term Expires: March 1, 2012



**Stephanie Bloyd**

Panama City Beach  
Serves at Large  
Appointed: March 2, 2001  
Reappointed: March 2, 2002  
Reappointed: March 3, 2006  
Term Expires: March 1, 2010



**Steve Ghazvini**

Tallahassee  
Serves at Large  
Appointed: April 27, 2007  
Term Expires: March 1, 2011



**Tim Norris**

Santa Rosa Beach  
Represents Basin II  
Appointed: April 27, 2007  
Term Expires: March 1, 2011



**Jerry Pate**

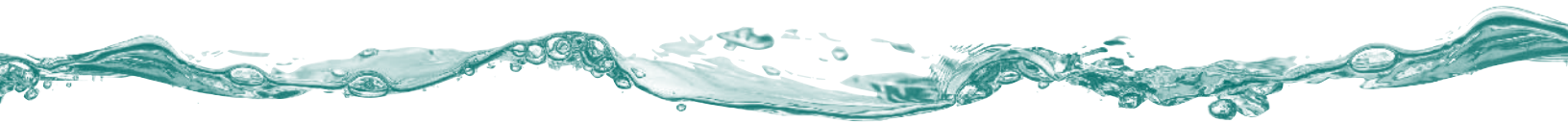
Pensacola  
Serves at Large  
Appointed: November 14, 2006  
Appointed: May 5, 2007  
Term Expires: March 1, 2009

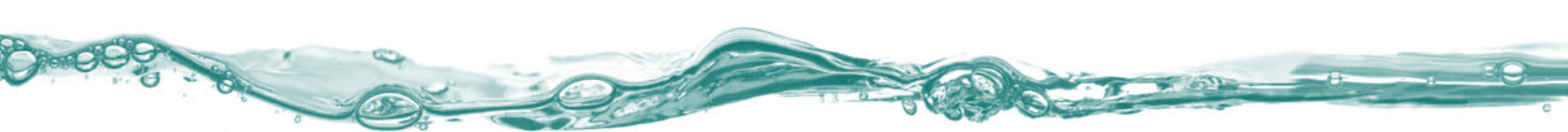


**J. Luis Rodriguez**

Monticello  
Serves at Large  
Appointed: April 1, 2008  
Term Expires: March 1, 2012

- Basin I:** Perdido and Escambia rivers
- Basin II:** Blackwater and Yellow rivers
- Basin III:** Choctawhatchee River and St. Andrew Bay Coast
- Basin IV:** Apalachicola and Chipola rivers
- Basin V:** Ochlockonee, Wakulla and St. Marks rivers





# The Way We Were

## Restoring Northwest Florida

With over 216,000 acres being protected and preserved by the District, including a multitude of environmentally sensitive springs and extensive floodplain acreage along several of Florida's largest rivers, restoration and protection may seem like a vast undertaking. But once targeted areas were identified and assigned a priority, the District has made strategic and determined progress toward restoring many of these environmentally sensitive areas and ecosystems since the early 1990s.

Areas that had once been intensely harvested or turned into pine plantations are slowly returning to the way they were. In earlier times, extensive forests were removed to make way for cities, homes, farms or pine plantations. The uses of wood and wood products grew and, today, only about three percent (or three million acres) remain of the original longleaf pine forests that once were found from Texas through northern Florida to Virginia. Logging, water-powered sawmills, agriculture, livestock and use of longleaf pines for tar, pitch, rosin and turpentine led to their fallen numbers. Most of these areas were not replanted with longleaf or for future timber production.

The oft quoted philosophical riddle – if a tree falls in the forest and no one is around to hear it, does it make a sound? – comes to mind. We may not have “heard” those millions of trees fall in the forest, but we can see the decimation of 97 percent of the longleaf pines that once stood tall and stretched across several states. The loss of those trees came with the loss of many important habitats and the wildlife heard the trees fall as did the timber crews that came and went. Fortunately, many of the land areas owned by the District only require preservation, enhancement and protection, although there are large areas

that require extensive restoration to promote natural vegetation and habitat.

Legislatively approved land acquisition programs such as Save Our Rivers, Preservation 2000 and Florida Forever made it possible to acquire large floodplain and upland buffer tracts along the Apalachicola, Chipola, Choctawhatchee, Escambia, Perdido and Yellow river corridors and Econfina Creek. Recharge areas known for their ground water recharge potential and other sensitive water resource areas such as springs were purchased. In recent years, the District's mitigation program also has acquired substantial acreage that is being preserved and restored, including the Sand Hill Lakes Mitigation Bank.

### REFORESTING DISTRICT LANDS

While northwest Florida did not escape impacts to its forests, fortunately several remnants of isolated old-growth forest still remain and are being



*A restored natural longleaf pine and wiregrass habitat in the Econfina Creek Water Management Area. (James Valentine)*

protected under District ownership. These remnants, in hard to reach backwater sloughs and stands along the Choctawhatchee and Apalachicola rivers, are now being searched for the thought-to-be extinct Ivory-billed woodpecker.

For District-owned lands that were disturbed or altered, the Division of Land Management and Acquisition charts a course for restoration emphasizing replanting of appropriate areas to their original habitats, often longleaf pine and wiregrass communities. Upland and bottomland habitats also are being restored with endemic trees such as hardwoods, cypress and loblolly, slash and shortleaf pines. Through lands restoration efforts, nearly 9 million longleaf pines and 3.3 million wiregrass plugs have been planted. These plantings have included about 704,478 slash, 85,000 loblolly, 28,000



*Planting wiregrass in District-owned portion of Elinor Klapp-Phipps Park.*



*Harvesting pine plantations in the Sand Hill Lakes Mitigation Bank to prepare the site for longleaf and wiregrass tubelings.*



*Harvesting wiregrass seed on restored habitat areas of the Econfinia Creek Water Management Area.*



*Using prescribed fire to promote wiregrass flowering and seed release.*



## LANDS REFORESTATION

Year	Longleaf	Loblolly	Slash	Shortleaf	Hardwoods/ Cypress	Wiregrass	Acres
1993-94	110,000	-	-	-	79,000	8,000	356
1994-95	396,400	85,000	91,000	28,000	109,000	-	1,168
1995-96	932,000	-	181,000	-	80,800	60,000	1,843
1996-97	200,000	-	180,000	-	68,000	100,000	638
1997-98	500,000	-	-	-	90,700	100,000	1,091
1998-99	1,000,000	-	-	-	36,000	100,000	1,511
1999-00	647,000	-	-	-	19,000	95,000	1,052
2000-01	587,000	-	-	-	-	100,000	916
2001-02	458,000	-	24,000	-	-	100,000	759
2002-03	398,000	-	95,000	-	98,000	100,000	853
2003-04	729,250	-	18,000	-	8,000	200,000	1,250
2004-05	506,858	-	57,204	-	-	100,430	954
2005-06	547,264	-	10,896	-	-	96,800	851
2006-07	778,006	-	11,804	-	-	133,100	1,578
2007-08	601,074	-	21,054	-	4,839	1,159,495	1,658
2008-09	557,500	-	14,520	-	-	909,920	1,602
<b>Total</b>	<b>8,948,352</b>	<b>85,000</b>	<b>704,478</b>	<b>28,000</b>	<b>593,339</b>	<b>3,362,745</b>	<b>18,080</b>

(Because several kinds of trees, or both longleaf and wiregrass, may have been planted on the same acreage, the “acres” figure does not reflect the total individual acres planted. Additionally, the 2007-08 figures include 2,725 cypress trees and 164,875 wiregrass tubelings that were planted for Department of Transportation mitigation purposes on Tate’s Hell State Forest lands, which are not owned by the District.)

shortleaf pines and more than 593,339 cypress and hardwood trees. Reforestation efforts involved 18,080 acres but some of the same acres were planted with more than one species. For example, longleaf and wiregrass coexist.

## RECOVERING THROUGH MITIGATION

Wetland mitigation is the practice of restoring, protecting or creating a wetland area in exchange for permitting another wetland area to be impacted by activities such as road or bridge construction. Florida Department of Transportation (DOT) mitigation activities primarily take place on District-owned lands and within the District's Sand Hill Lakes Mitigation Bank. Some lands acquired by the District had been altered hydrologically and biologically by earlier silvicultural activities or other practices resulting in the loss of natural ecosystem functions. Roads and ditches were built across sloughs, wetlands were drained and natural drainage patterns of streams and floodplains were changed. Mitigation

funding from DOT has enhanced the District's ability to restore some of these impacted areas.

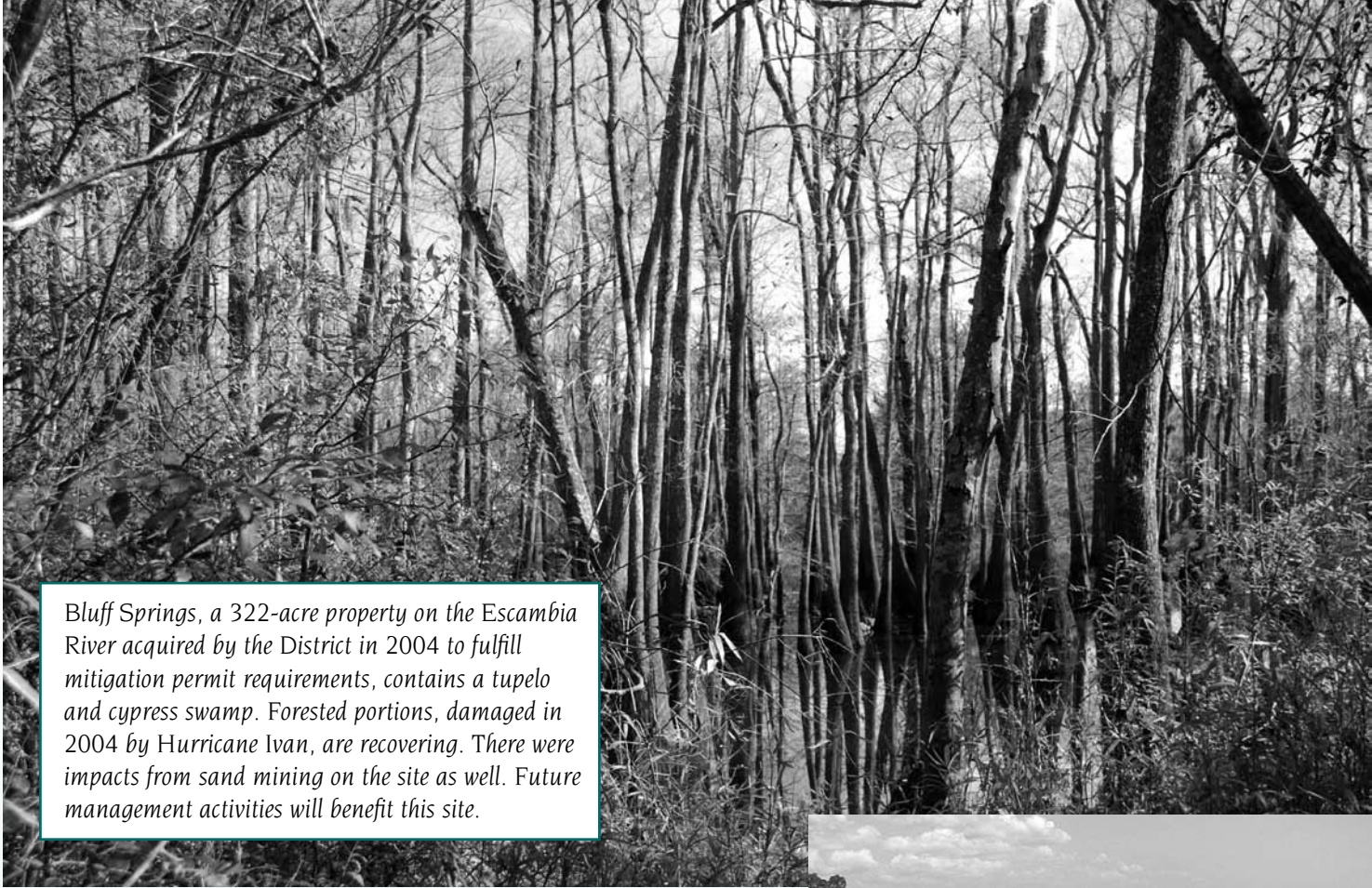
The District's first Regional Mitigation Plan, initiated in 1996, outlined an approach to offset wetland impacts associated with eligible projects. Since then numerous mitigation projects have been undertaken. The current mitigation plan and periodic monitoring reports for various mitigation projects are available on the District's wetland web site: [www.nwfwmdwetlands.com/index.php](http://www.nwfwmdwetlands.com/index.php)

Additionally, the District entered into a regional mitigation agreement with the U.S. Army Corps of Engineers, facilitating development of the innovative web-based Northwest Florida Umbrella Watershed-based Regional Mitigation Plan. Implementation of this plan makes the process of mitigating for DOT wetland impacts more effective and efficient, allowing the District essentially to bank mitigation credits for wetland impacts before they occur. This method of planning offers a comprehensive watershed planning tool for mitigation and streamlines and clarifies permitting requirements.

### MITIGATION PROJECTS UNDERTAKEN

(Compensating for DOT Construction Impacts)

Watershed Area	Mitigation Project
Perdido River and Bay	Perdido River Water Management Area
Pensacola Bay System	Yellow River Ranch Jones Swamp Bluff Springs Brewer Tract Rogers Tract
Choctawhatchee River and Bay	Devils Swamp Live Oak Point Sand Hill Lakes Mitigation Bank Lafayette Creek Holmes Creek Choctawhatchee – Caryville
St. Andrew Bay	Ward Creek West Lynn Haven
Apalachicola River and Bay	Doyle Creek Cat Point Juniper Creek Headwaters
Ochlockonee River and Bay	Womack Creek Meginniss Arm



*Bluff Springs, a 322-acre property on the Escambia River acquired by the District in 2004 to fulfill mitigation permit requirements, contains a tupelo and cypress swamp. Forested portions, damaged in 2004 by Hurricane Ivan, are recovering. There were impacts from sand mining on the site as well. Future management activities will benefit this site.*



*At Doyle Creek, a Tate's Hell Swamp wetland restoration site located in Franklin County, road removal resulted in natural recolonization of vegetation. The project eliminated 18,000 feet of logging roads and associated ditching, reestablished the natural grade and replanted about 25 acres with wiregrass and cypress. Three low-water crossings were installed downstream of the road removal to enhance hydrologic flows.*



*Cat Point, an Apalachicola Bay breakwater and salt marsh restoration site, is located in Eastpoint, Franklin County. Through this project, 0.8 acres of shoreline were restored to mitigate for a 0.3-acre impact to seagrass beds in Apalachicola Bay with the replacement of the St. George Island Bridge. The project will be used to educate the general public about alternatives to shoreline hardening techniques that result in the loss of aquatic and upland habitat. The site was planted with nearly ten thousand smooth cordgrass (*Spartina alterniflora*) tubelings as well as upland buffer species such as saltmeadow cordgrass (*Spartina patens*), muhly grass (*Muhlenbergia capillaris*) and saltbush (*Baccharis hamlimiflora*).*



*Lynn Haven salt marsh, a restored 1.24-acre marsh completed in 2003 in Bay County, is now well established. The salt marsh continues to thrive with blanket flower, meadow cordgrass and many additional salt marsh species that have volunteered.*



*Several hundred acres within the Lafayette Creek tract in Walton County are being managed and restored for mitigation. The tract was acquired by the District in 2006. Failing culverts and a dilapidated bridge were removed. Exotic species such as cogon and bahia grass were eradicated and several acres were replanted with wiregrass and longleaf.*



*Juniper Creek Headwaters Preserve, a project of the Bay County Conservancy in cooperation with the District, encompasses about 40 acres. Volunteers have removed accumulated trash as well as the nonnative invasive popcorn tree (Chinese tallow).*



*Meginniss Arm shoreline restoration in the southern portion of Lake Jackson involves approximately 17 acres. Much of the site is dominated by exotic and invasive vegetation. The project involves eradication and management of Chinese tallow (popcorn tree), wild taro, purple sesban and other species. This work has been ongoing since 2006. While herbicide-treated popcorn trees are eradicated, desirable marsh mallow wildflowers flourish.*

### SAND HILL LAKES MITIGATION BANK

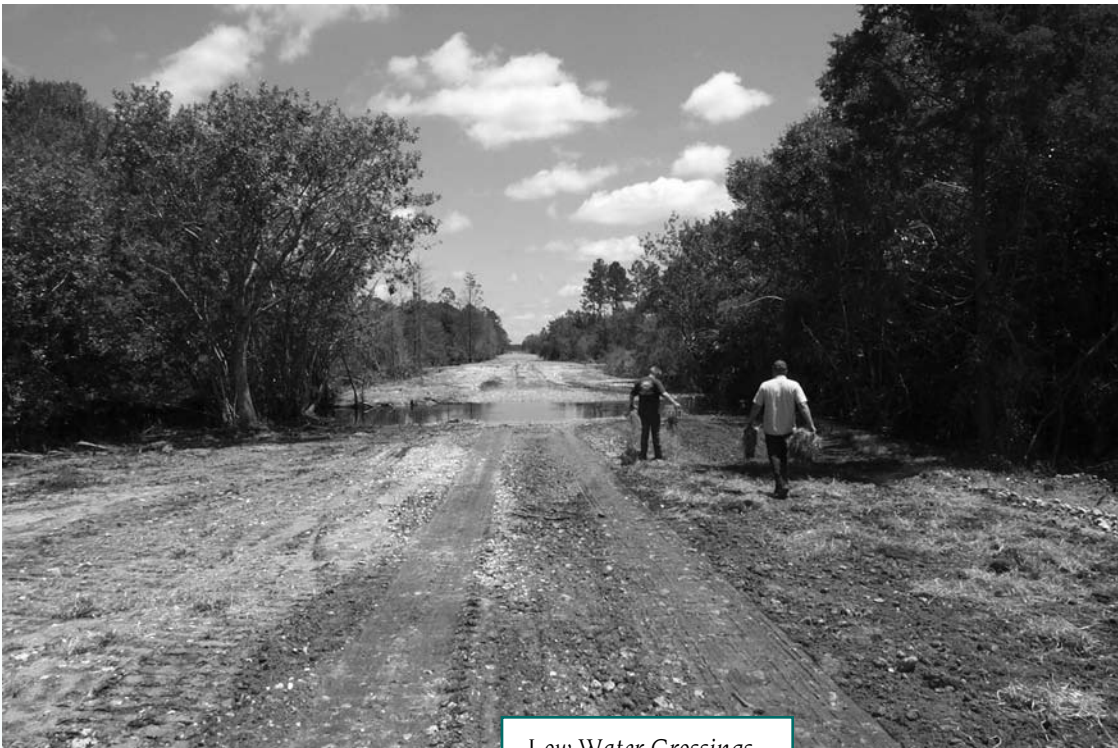
In south-central Washington County, the District purchased 2,155 acres of wetlands, lakes and upland buffers in 2003 to establish the Sand Hill Lakes Mitigation Bank, the District's first. The larger Sand Hill Lakes region is an important recharge area for Econfina and Holmes creeks and the springs that flow into them. It has a potential ground water recharge of approximately 40 inches a year. The District purchased over 41,000 acres in the Econfina Creek watershed to protect the Deer Point Lake Reservoir, Bay County's primary water supply.

While some areas within the Sand Hill Lakes Mitigation Bank needed restoring, other portions support rare and sensitive ecological resources. The District is preserving cypress, bayhead and emergent wetland areas. Mitigation work reestablished natural historic flow paths, stabilized eroding areas, removed sediment plumes and road-fill impacting wetlands and restored longleaf pine and wiregrass upland areas. All hydrologic restoration activities, which included Black and Dykes Mill ponds, have been completed. Attention is now directed to reducing shrubs and eradicating exotic (nonnative) species such as bahia grass so that the historical habitats can be restored.

The Sand Hill Lakes Mitigation Bank offers a unique opportunity to combine restoration and protection with recreation. In cooperation with the Fish and Wildlife Conservation Commission, the property has been developed into a low-impact public recreational area offering special opportunity fishing, hunting under a limited quota hunt permit system and other passive uses (birding, hiking, etc.). The bank officially opened in 2007.

*Dykes Mill Pond.*





*Low Water Crossings.*



## RENEWING APALACHICOLA RIVER AND BAY

Of highest importance on the Surface Water Improvement and Management (SWIM) program priority list, the Apalachicola River and Bay were found to need both protection and restoration. Impacts to the system largely resulted from logging and harvesting activities and from dredging a navigation channel.

One of the earliest restoration projects took place in Tate's Hell Swamp in 1994 with the hydrologic restoration of the Big Slough and Sand Beach Branch areas, in part through a grant from the U.S.

Environmental Protection Agency. Ditched and drained to facilitate timber harvesting, the natural flow of fresh water into Apalachicola Bay was disrupted. Similarly, the floodplain near Pig and Coon Island, upstream on the Apalachicola River, was restored in 1996. It too had been impacted by logging activities.

The Tate's Hell Gator Creek and Gully Branch hydrologic restoration project, which began in 2003, was completed in 2004. Approximately 4,200 acres were restored to a more natural hydrology that existed before being ditched and drained in the 1960s and 1970s. Streams and wetlands were reconnected, rehydrating wetlands.

In 2006, a cooperative project with Gulf County was begun to remove dredge spoil (sand) from about 16 acres of the Apalachicola River floodplain (disposal site 39). It once had been bottomland hardwood forest. An off-load site to receive the sand has been constructed and a canal needed for the work has been cleared of vegetation. To mobilize equipment and barges needed for the removal of sand, the Apalachicola River must be at a specified level. Sand removal will take place when the river is at or above the designated level. After the dredged sand is removed, the floodplain will

be restored with a mix of plantings such as swamp laurel oak, water hickory, overcup oak and bald cypress.

To maintain a 100-by-9 foot navigation channel, enough sand was dredged by the U.S. Army Corps of Engineers from the entire river to fill a football field nearly twice the height of the 23-story Florida Capitol. Sand removed from Site 39 would be one-half the height of the Florida Capitol. This dredged material often blocks flow to sloughs, creeks and tributaries. Site 39 is one of many sand disposal sites along the river that are in need of restoration.

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## TATE'S HELL SWAMP

A large "Welcome to Tate's Hell" sign may seem incongruous, but the acquisition of large tracts within it by the State of Florida is considered quite an accomplishment. Tate's Hell Swamp is situated between the Apalachicola and Ochlockonee rivers in the panhandle of northwest Florida. How the swamp got its name is recounted in a Division of Forestry brochure:

"Local legend has it that in the late 1800s a farmer named Cebe Tate journeyed into the great swamp. Armed with only a shotgun and accompanied by his hunting dogs, he set out to track down the panther that was killing his livestock. Tate never planned to venture very far into this uncharted land, however, following the baying of his dogs and feeling he was close to cornering the panther, Tate went deeper into the swamp. After a couple of days he had lost sight of both the dogs and the panther.

For several more days Tate wandered aimlessly in the swamp. During the ordeal, he lost his shotgun and was bitten by a water moccasin. Delirious, Tate stumbled out of the swamp in front of a couple of woodsmen near Carrabelle. When asked his name and where he came from, the disoriented man simply replied, 'My name's Tate and I've just been through Hell!'"

Historically the area hosted a variety of wetland types such as wet savannas, wet flatwoods, cypress stands and hardwood swamps. Much of the swamp was converted to slash pine plantation during the 1960s and 1970s. Harvesting and planting activities (silviculture) led to the construction of over 800 miles of logging roads and drainage ditches and the establishment of bedded pine stands. These ditches disrupted natural flow patterns and resulted in high rates of stormwater discharging from the forest, along with increased sedimentation and pollutant loading to the bay. The ditches also resulted in a lower water table, altering the natural wetland function of immediately adjacent land. Silviculture practices and conversion to forest also impacted the natural function and biotic diversity of the swamp.

In the early 1990s, the District and the State of Florida began acquiring portions of Tate's Hell Swamp to preserve wetland habitat and preempt further water quality declines downstream in Apalachicola Bay. Publicly owned areas now total 205,000 acres and are managed by the Florida Division of Forestry (DOF) as Tate's Hell State Forest. Freshwater flows from Tate's Hell Swamp are essential to the ecological health of Apalachicola Bay.

Currently, the District is developing a hydrologic restoration plan that will designate priority areas for restoration, call for conceptual engineering designs, outline monitoring and maintenance activities and clarify agency roles and responsibilities. This plan is scheduled for completion by early 2009.



*District staff survey Site 39 along the Apalachicola River.*



*Sand is removed from Site 40 (across the river from Site 39) to determine the feasibility of a large-scale project.*

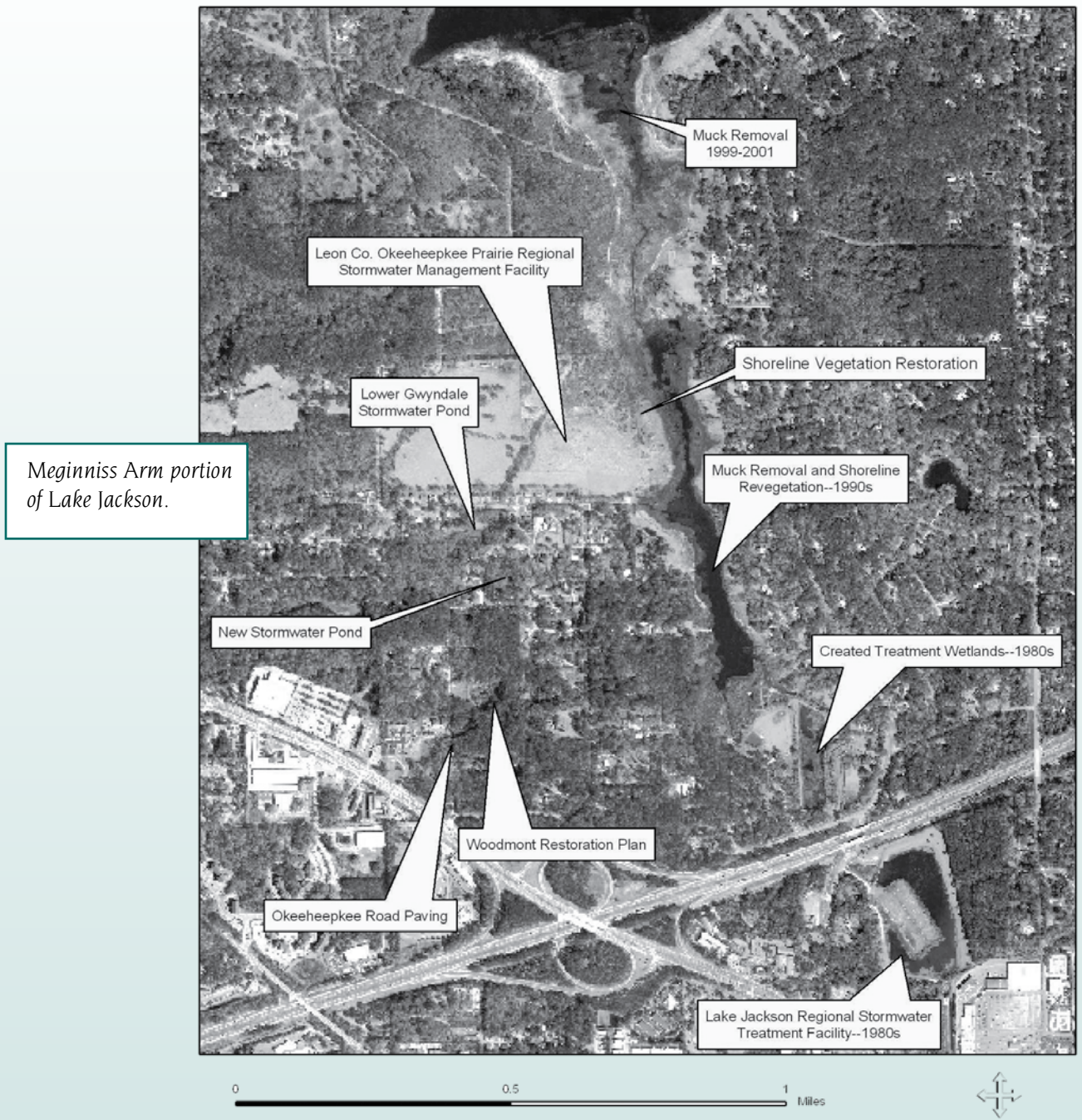


## REMOVING THE EFFECTS OF STORMWATER

Before the SWIM program began in 1987, an innovative demonstration stormwater treatment facility was constructed at Lake Jackson's southern portion, Meginniss Arm in Leon County. It was constructed in 1983 through a grant with the U.S. Environmental Protection Agency and in cooperation with other state and local entities. After SWIM began, a number of projects were undertaken to restore the lake's water quality. One undertaken in the early

1990s, called for removing years of accumulated degraded sediment (muck) from the lake's bottom. Most notable, though, was the removal of over 2 million cubic yards of sediment after a prolonged drought and natural drawdown that began in 1999 in the southern portion of the lake including Porter Hole Sink. In 2008, the District removed an additional 32,686 cubic yards of accumulated stormwater sediment from the Lake Jackson Regional Stormwater Treatment Facility.

### Meginniss Arm Stormwater Retrofit





*“W” Street Sediment Trap.*

Several stormwater improvement projects have been undertaken for Pensacola’s bayous Texar and Chico, primarily the construction of new stormwater treatment facilities and the retrofit of existing ones. Since the 1980s, the District has partnered with state and local entities to clean up these bayous.

An early effort to reduce discharges to Bayou Chico was the “W” Street sediment trap designed and constructed by the Florida Department of Environmental Protection. To extend that project, the District designed a natural meandering wetland marsh to replace a hardened, trash-filled canal, known as Maggie’s Ditch. It was augmented by a five-acre section of open water, complete with bird nesting islands. The District has continued to assist Escambia County buy undeveloped land, primarily wetlands, in the Jones Creek and Jones Swamp areas of the bayou’s southwestern shore. The Jones Swamp Preserve has grown into a 1,500-acre park that is

helping protect floodplain functions and sensitive habitat areas.

Approximately 180,000 cubic yards of accumulated sediment were removed from Bayou Chico by the U.S. Army Corps of Engineers to improve water quality and estuarine habitat, with permitting and monitoring assistance from the District. The dredged material was placed in one of the pits at the old Clark Sand mining site which was purchased with District SWIM funds for Escambia County’s use as a sponsor of the sediment removal project. The site also has been recently developed by the county as a stormwater retrofit facility to treat stormwater discharging from Jackson Branch. Monitoring of the site where the dredged material was deposited continues and has indicated no problems with the use of the site for this purpose. The project is funded through the Pensacola SWIM program.



*Installation of a baffle box system in Eastpoint.*

To protect Bayou Texar, and subsequently Pensacola Bay, the 17<sup>th</sup> Avenue pond and the 19<sup>th</sup> Street stormwater retrofit projects were initiated. The “L” Street alum injection stormwater facility helps protect the bay’s Palafox basin.

In the early 2000s, \$1.6 million was provided by the District (about half through the Florida Forever Program and half from a Legislative appropriation) to restore 1,000 acres of wetlands and eliminate approximately 10,000 tons of sediment from washing annually into the Escambia River and Bay (part of the Pensacola Bay System). The Big Escambia Creek restoration project, completed in 2005, was a \$7.7 million interstate initiative to return the creek to its original channel. Four miles were restored, including two miles of the original creek channel.

In 2008, a series of baffle boxes were constructed along U.S. Highway 98 in Eastpoint reducing pollutants in stormwater that once discharged untreated to the Apalachicola Bay. This retrofit

project offered a unique solution for treating stormwater in an area where there was little space to capture and filter flows. Combined, these stormwater vaults or baffle boxes may remove up to 50,000 pounds of sediment per month.

## REJUVENATING SPRINGS

More and more attention has been given to the sensitive spring areas of northwest Florida that have been characterized as “windows to our aquifers.” In recent years, the District has undertaken inventories of springs throughout the northwest area. Those identified included the Chipola River (67 springs), Econfinia Creek (36 springs), Choctawhatchee River and Pine Log Creek (15 springs), St. Marks and Wakulla rivers (51 springs) and Holmes Creek (53 springs).

Springs associated with Econfinia Creek have received a great deal of attention because the creek serves as Bay County’s water supply. These springs

are popular recreational sites, contain globally imperiled habitats and are extremely sensitive to disturbance. A comprehensive spring restoration and protection project for five District-owned springs located along Econfina Creek, (Pitt, Sylvan, Williford, McCormick and Blue) is being developed. Restoration plans for Phase I are now being finalized. Some of the proposed restoration and protection plans call for replacing the retaining wall at Pitt Spring with natural lime rock and vegetation, enhancing the canoe dock with ladders, adding a tube launch dock with ladders, constructing decks to overlook spring pools, extending boardwalks over sensitive natural areas and building an elevated observation deck at Williford.

### **IMPROVING WATER QUALITY WITH FLORIDA FOREVER GRANTS**

Through the Florida Forever Capital Improvement Grant program, many local governments have implemented restoration and retrofit projects that improve water quality. This program supports efforts not only to implement stormwater plans

but to restore natural systems with water resources value. Florida Forever grants were made available to local governments for the first time in 2003. To date, the District has awarded over \$23 million for 55 projects throughout northwest Florida, estimated to cost over \$72 million when local contributions were added.

Restoration and stabilization efforts were made to correct or prevent erosion. Several dirt roads were stabilized to improve the water quality of Deer Point Lake Reservoir in Bay County. Similar projects were undertaken in Calhoun and Gulf counties to reduce sedimentation to the Apalachicola River and other erosion-control projects were undertaken for Holmes, Jackson, Walton and Washington counties.

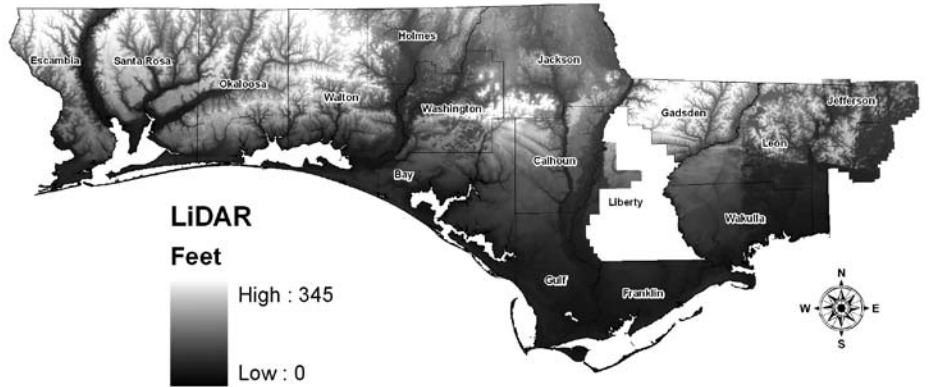
Numerous stormwater improvement and restoration projects also were implemented throughout the District's 16-county area. Restoration projects were undertaken for many of the District's rivers, creeks and streams such as Big Escambia, Clear, Carpenter and East Ten Mile creeks. Many of the region's bays and bayous also benefited from Florida Forever projects.



*Williford Spring in the Econfina Creek Water Management Area.*



## Districtwide Activities



### FLORIDA FOREVER GRANTS AWARDED

In January, the District Governing Board approved 11 Florida Forever local governmental grants totaling almost \$4.4 million. Projects selected included stormwater treatment, stream and habitat restoration, road stabilization and erosion control. To date, the District has contributed over \$23 million in grants toward 55 projects whose total costs are estimated at over \$72 million, when local contributions are added. Grants awarded in January included:

*Bay County:* \$726,176 to stabilize nine miles of road within the Deer Point Lake Protection Zone

*Escambia County:* \$350,000 for a stormwater treatment marsh at Second and Sunset avenues to reduce pollutants; \$150,000 for Project Greenshores Site II on Pensacola Bay, which involves planting salt marsh and creating oyster reef habitat

*Franklin County:* City of Apalachicola, \$500,000 for a stormwater treatment vault system and improved drainage; City of Carrabelle, \$662,582 for 10th Street stormwater improvements

*Gulf County:* \$950,000 for stabilization and erosion control of two miles of Iola Road, a dirt road near Wewahitchka; City of Port St. Joe, \$300,000 for the Sand Hills Pond stormwater improvement project

*Okaloosa County:* \$33,800 and \$75,300 for Mainsail and Rocky Drive stormwater retrofit projects near Niceville; City of Fort Walton Beach, \$150,000 for a stormwater pollutant separator unit at Eglin Parkway

*Santa Rosa County:* City of Gulf Breeze, \$500,000 for Phase II of its stormwater drainage improvement program

*Projects and programs undertaken during 2008 by the Northwest Florida Water Management District throughout its 16-counties or in multi-county areas, are reviewed in this section. Projects and programs specific to the various county groupings are discussed in their respective sections. Many programs are ongoing and may not be included in this report.*

### LiDAR ACQUISITION COMPLETE

Accurate topographic and elevation data are the starting point of nearly all water resources projects, including hydrologic and hydraulic analysis projects, stormwater master planning, floodplain mapping, environmental permitting, other environmental planning and wetland restoration projects, among others. Light Detection and Ranging (LiDAR) data acquisition is a fast, efficient, accurate and effective way to gather topographic and elevation data vital to so many different types of projects.

In 2008, a LiDAR acquisition effort was completed that covered almost the entire District.

Throughout the panhandle, approximately 12,141 square miles of LiDAR were collected. This has been a cooperative effort involving federal, state and local governments. The only area that lacks LiDAR is a portion of Liberty County that is mostly Apalachicola National Forest land. The District is continuing to process these data and, with local government support, is currently seeking efficient and effective ways to distribute it via the internet for public use. New uses are found almost daily.

## WETLANDS COMPONENT OF ERP

In place in the rest of Florida since 1995, Environmental Resource Permitting (ERP) is now in effect in northwest Florida. It will protect water and natural resources by requiring permits for any activity that generates stormwater runoff. Rule development is underway for ERP Phase II, which includes wetland regulations.

Rulemaking will add additional environmental criteria to Phase I rules, covering connected and isolated wetlands and other surface waters. Rule provisions improve the management and storage of surface waters with minimal impact on property and in consideration of the rural nature of the District. The rule focuses on no net loss in wetlands or other surface water functions. To conserve beneficial functions of wetland communities, permits will usually be required for construction, alteration, operation, maintenance, abandonment and removal of facilities.

Nine public workshops on

the Phase II rule were held throughout the District during 2008 (Tallahassee, Panama City and Pensacola). A public hearing for rule adoption is anticipated in mid-2009 with the rule becoming effective later in 2009.

September 2008 marked the end of the first year of Phase I (stormwater). During this period, 461 permits were received with 332 being approved. In the new fiscal year, from October through December, an additional 55 were received with 54 permits being issued. The District required, on average, fewer than 30 days to issue a permit once the application was complete. This is considerably less than the 90 days provided by statute and rule.

## WATER REUSE GRANTS

Reuse of reclaimed water is an important component of the District's water supply strategy. It is included in the water resource and water supply development components of the

District's regional water supply plans. Reuse is considered an alternative water supply source as defined in the Florida Statutes.

Water reuse involves applying a high level of treatment to domestic wastewater and using the reclaimed water for beneficial purposes. Among the most common beneficial uses of reclaimed water in northwest Florida are irrigation of golf courses, parks, road medians, residential areas and other landscaped areas. The primary source of funding for reuse construction grants is the Water Protection and Sustainability Program Trust Fund, established in 2005. Florida Forever capital improvement funding also may be used for reuse storage facilities and the Ecosystem Management and Restoration Trust Fund may contribute funding for projects that address watershed restoration priorities. Recent reuse projects receiving grant funding are listed below:

*Leon County:* \$1,350,000 to construct Tallahassee's Tram Road Public Access Reuse Facility; \$500,000 for the upgrade of Tallahassee's Lake Bradford Road and the T. P. Smith advanced wastewater treatment facilities

*Okaloosa County:* \$2,000,000 for an expansion and treatment upgrade for the Bob Sikes Water Reclamation Facility

*Wakulla County:* \$500,000 for the construction of a reclaimed water system associated with a wastewater treatment system upgrade

*Walton County:* \$3,000,000 for the construction of the City of Freeport's reclaimed water system associated with a wastewater treatment system upgrade

*Washington County:* \$500,000 for construction of Chipley's reclaimed water system associated with a wastewater treatment system upgrade

## UMBRELLA WATERSHED-BASED REGIONAL MITIGATION PLAN

The District entered into a regional mitigation agreement with the U.S. Army Corps of Engineers, to facilitate development of an innovative web-based Northwest Florida Umbrella Watershed-based Regional Mitigation Plan. Implementation of this plan makes the process of mitigating for Department of Transportation (DOT) wetland impacts more effective and efficient, allowing the District essentially to bank mitigation credits for wetland impacts before they occur. The plan is implemented year-round for DOT wetland impacts and U.S. Army Corps approval of mitigation projects throughout the District. This method of planning also offers a comprehensive watershed planning tool for mitigation and streamlines and clarifies permitting requirements. Quarterly meetings with the Corps and other agencies help facilitate mitigation efforts. For further information, see the plan at: [nwfwmdwetlands.com](http://nwfwmdwetlands.com)

## MAP MODERNIZATION NEARLY COMPLETE

Additional funding from the Federal Emergency Management Agency (FEMA) was provided in 2008 to complete map modernization work for the District's 16-county region. This brought the total funding to \$8,587,060. New funding was used for map modernization work for riverine flooding in Jackson, Jefferson and Liberty counties and for detailed coastal flood studies in Franklin and Wakulla counties. Franklin and Wakulla are coastal

communities where the flood risk is predominantly from Gulf of Mexico storm surge. A number of partners assisted with this project, including local governments and Florida's universities.

## EFFICIENT TRANSPORTATION DECISION MAKING

An agreement to continue the Efficient Transportation Decision Making (ETDM) process with DOT and Federal Highway Administration was approved in November. The process, underway for the last four years, is an early involvement process. It allows the District to comment on DOT roadway projects during the early planning and programming stages, which may be as much as five to fifteen years prior to construction. Funding provided by DOT for this agreement is \$750,000 for the next five years.

## OVERLAND WAVE MODEL

In June, the District approved an agreement with the University of Florida to research and develop a new approach for wave modeling along the northwest coast. This effort is designed to change the way overland wave analysis is performed, resulting in more accurate floodplain maps. A two-dimensional model will be developed and tested, which will allow for more accurate estimates of wave heights. Funding for this research is, in part, provided by FEMA.

## INTEGRATED WATER RESOURCES MONITORING PROGRAM

In June, approval was given to continue a contract

with the Florida Department of Environmental Protection (DEP) for work on the statewide Integrated Water Resources Monitoring program. The program provides water quality sampling at a network of ground and surface water sites across the District and serves as a significant tool for assessing the quality of these water resources. DEP has requested the assistance of the District for a number of years in collecting and interpreting water quality data from confined and unconfined aquifers, rivers, streams and lakes.

## AMBIENT SURFACE WATER QUALITY MONITORING

For the past 17 years, the District has participated in an Ambient Surface Water Quality Assessment program with DEP. In September, the agreement with DEP was continued for another year. The monitoring effort provides surface water quality data for assessing long-term water quality trends for major streams and rivers within the District. Data collected are used to develop management strategies to improve surface water quality and minimize negative impacts to surface water resources.

## FLORIDA SPRINGS INITIATIVE

In September, DEP and the District agreed to continue the Florida Springs Initiative monitoring project. DEP has supported the study of springs in the District's region through this initiative for the past eight years. The agreement provides continued monitoring of

discharge from Wakulla Spring, water quality monitoring at Merritt's Mill Pond, delineation of the ground water contribution area for springs of Holmes Creek and monitoring of water quality for the Econfina Creek basin.

## **INDEPENDENT AUDITOR'S REPORT**

In March, the independent auditor's report for the period of October 2006 through September 2007 was presented to the Governing Board. As in the past 14 years, the District received a "clean" audit once again, which is the highest level of assurance that can be given.

## **INSPECTOR GENERAL'S REPORT**

The District's Inspector General submitted an audit report for the fiscal year ending September 30, 2008. Areas reviewed included grant/contractual compliance, regulatory permitting, information technology general controls, payroll, discretionary and internal controls over cash receipts and disbursements including credit card and online payments. The Governing Board accepted the Inspector General's report in October.

The Inspector General also presented the internal audit plan for 2008-2009. The areas to be examined include: fringe benefit and overhead allocations, regulatory permitting, information technology controls (online payments), items subject to personal use (cell phones, fleet vehicles, etc.), travel, discretionary and programmatic compliance.

## **PAYMENTS IN LIEU OF TAXES**

Six counties qualified for reimbursements from ad valorem taxes lost when the District purchased lands: Bay, \$6,705.47; Holmes, \$108.13; Okaloosa, \$916.80; Santa Rosa, \$17,951.33; Walton, \$5,433.57; and Washington, \$10,760.76. The total amount paid was \$41,876.06. When the District purchases environmental lands to protect them, the county incurs a loss of tax revenue since these areas become public lands.

## **2008 FLORIDA FOREVER LAND ACQUISITION WORK PLAN**

Florida Statutes require that the District adopt, in a public hearing, a five-year work plan for land acquisition. In this work plan, the District certifies that each property under consideration for acquisition is consistent with the adopted five-year work plan. The 2008 work plan was amended to add additional potential acreages to various water management areas: Choctawhatchee River/Holmes Creek, 1,200 acres; Econfina Creek, 3,325 acres; Chipola River, 525 acres; and Ochlockonee River, 3,200 acres.

## **NEW ARCHAEOLOGICAL SITES IN NORTHWEST FLORIDA**

An archaeological survey discovered 47 new sites in Escambia, Santa Rosa and Walton counties. Nine of these sites were found in the Perdido River Water Management Area (WMA), six in the Grassy Point tract of the

Yellow River WMA and 32 in or adjacent to the Lafayette Creek tract in the Choctawhatchee River/Holmes Creek WMA. Among the findings were the vanished town of Muscogee Mills, Fundy Bayou turpentine camp and a prehistoric village. Previous surveys of District lands have shown that many historic and prehistoric sites are located near reliable sources of potable water such as springs, streams and rivers. These surveys help protect archaeological sites as the District restores public lands.

## **LANDS RESTORATION PLANNED FOR 2008-09**

Each year, several lands restoration and management activities for the more than 216,000 acres owned by the District are undertaken. In April, plans were made to purchase xeric sandhill wiregrass tubelings for habitat restoration work at the Sand Hill Lakes Mitigation Bank and on the Lafayette Creek tract in the Choctawhatchee River WMA. Additional wet prairie wiregrass tubelings will be purchased from the Florida Division of Forestry for habitat restoration on the Sacred Heart Hospital mitigation area, Devils Swamp and the Sand Hill Lakes Mitigation Bank. Plans also were made to purchase longleaf pine tubelings for restoration work in the Econfina Creek and Choctawhatchee River WMAs and the Sand Hill Lakes Mitigation Bank.

In October, the Governing Board approved these reforestation and habitat restoration activities for the 2008/2009 fiscal year. This

*(continued on page 25)*





*Canoeists enjoy Williford Spring run, Econfina Creek basin.*



*St. Marks River Rise is one of northwest Florida's largest karst springs.*



*Cypress Spring, Washington County.*

## **SPRINGS IN NORTHWEST FLORIDA**

During 2008, a new brochure, *Springs of Northwest Florida*, was developed to provide the public with information about these sensitive water resources. Most northwest Florida springs form in two large karst plains, the Woodville Karst Plain and the Dougherty Karst Plain. The Woodville Karst Plain underlies Wakulla and southern Leon counties and the Dougherty Karst Plain underlies Jackson, Washington, Holmes and northern Bay and Calhoun counties. Various aspects of springs are presented in the brochure, which opens to a large photographic image of McCormick Spring in Bay County. The brochure is available free of charge from the District's Office of Public Information.



*The first magnitude Jackson Blue Spring.*

restoration work, which began in mid-December, will be undertaken for approximately 1,591 acres of disturbed longleaf pine, slash pine and wiregrass habitat in Walton and Washington counties within the Choctawhatchee River/Holmes Creek and Econfina Creek WMAs and Sand Hill Lakes Mitigation Bank. Included will be the planting of 557,500 longleaf pine tubelings, 14,520 bare root slash pine seedlings and 909,970 wiregrass plugs. This work is expected to be completed in early January 2009.

## **NEW LAND MANAGEMENT FIELD OFFICE**

In January, the Governing Board approved an agreement with the Florida Department of Management Services to manage the construction of a Western Region Land Management Field Office on a tract of District-owned land in Milton. This facility will house land management staff in the westernmost areas – Perdido, Escambia, Blackwater and Yellow river WMAs as well as Garcon Point and the Grassy Point tract. The facility will include office space and secure indoor and outdoor storage for equipment and materials.

## **SECURITY/ENFORCEMENT/ MAINTENANCE FOR DISTRICT LANDS**

Each year the District enters into a number of agreements to provide security and enforcement services for District-owned lands. In March/April, an agreement with the Bay County Sheriff's Office was approved by the Governing Board to provide these services for the

Pitt Spring "day use" recreational area, Econfina Creek Land Management Field Office and the Econfina Creek canoe launch. Because these areas receive their heaviest public use during the swimming/canoeing season, these services are only needed from April through September.

Also in March, approval was given to contract with the Florida Fish and Wildlife Conservation Commission (FWC) for enforcement and security services for the Escambia and Perdido River WMAs. In September, this agreement with FWC was renewed to provide law enforcement and security services for these same WMAs.

In August, an agreement with the Washington County Sheriff's Office for law enforcement and security services for the Choctawhatchee River/Holmes Creek and Econfina Creek WMAs was renewed. Additionally, the District initiated an agreement with the private sector for cleanup and maintenance services for recreational and office sites located in the central land management region (Econfina Creek and Choctawhatchee River/Holmes Creek WMAs) and the western land management region (Perdido, Escambia, Blackwater and Yellow rivers and Garcon Point WMAs). Agreements also were approved with a private contractor to undertake prescribed burns on District lands and with the Orange Hill Soil and Water Conservation District to conduct land management construction, maintenance, installation and repair services, primarily on the Econfina Creek and Choctawhatchee River/Holmes Creek WMAs.

## **ONLINE PERMITTING ACTIVITIES**

In April, the District made electronic funds transfer available to pay for well permit applications. This is one module of the District's ongoing move toward electronic processing of all permit applications. An online module also was added to allow water well contractors to extend existing permits and provide required notifications for the well regulation program. Work continued for online submittal of compliance data and well completion reports. The e-compliance module will allow permittees to submit pumpage, water level and water quality data as required by their permits. Well completion reports also can be submitted online rather than by mail.

## **REGULATION OF WELLS PROGRAM**

The Florida DEP, with input from the water management districts and water well contractors, has modified and updated a number of the rules that affect the Regulation of Wells program. In September, the Governing Board gave staff permission to begin formulating proposed amendments to the Regulation of Wells rule, Chapter 40A-3, Florida Administrative Code (FAC) to reflect those changes and make other needed modifications. This rule development process will be initiated in the spring of 2009.

Purposes of the program include regulating the construction, repair and abandonment of wells and the issuance, suspension and revocation of water well

contractor licenses to protect the region's water resources and to promote the health, safety and general welfare of the public.

### CONSUMPTIVE USES OF WATER

In November, approval was given by the Governing Board to initiate rule making to amend Chapter 40A-2, FAC, Consumptive Uses of Water. The

amendment will exempt shallow, small diameter nonpotable wells in Franklin and Gulf counties from the requirement of an Individual Water Use Permit. The use of the shallow sand aquifer, instead of the Floridan Aquifer, will be encouraged for nonpotable purposes such as landscape irrigation. This will reduce demands on the area's drinking water supplies. This same exemption had already been made for coastal Bay,

Santa Rosa, Okaloosa and Walton counties.

### WELL PERMITTING REQUIREMENTS

Since 1991, the District has had an agreement with DEP to implement the well permitting requirements of Chapter 62-524, FAC. The program addresses potable (drinking water) well construction to protect public

### PERMITS ISSUED BY COUNTY (OCTOBER 2007 THROUGH SEPTEMBER 2008)

County	Well Construction Repair and Abandonment	Consumptive Use (new/renewal/modifications)	Surface Water Management (general/individual)	Agricultural and Forestry Surface Water Management (general/individual)
Bay	976	15	1	-
Calhoun	157	4	-	-
Escambia	1,286	3	-	-
Franklin	67	1	-	-
Gadsden	219	6	1	5
Gulf	118	2	-	-
Holmes	213	-	-	1
Jackson	576	24	-	-
Jefferson	134	3	-	1
Leon	634	5	2	2
Liberty	65	2	-	1
Okaloosa	872	9	8	1
Santa Rosa	891	3	-	-
Wakulla	103	3	-	-
Walton	753	8	2	5
Washington	384	2	-	-
<b>Total</b>	<b>7,448</b>	<b>90</b>	<b>14</b>	<b>16</b>

health in areas delineated under the FAC and includes portions of Escambia, Santa Rosa, Jackson and Leon counties.

Accurate well location data

are added to the District's data base and maps give water well contractors, other agencies and the public access to reliable data and information.



*Douglas E. Barr, Executive Director of the Northwest Florida Water Management District, receives his 30-year award from Governing Board Chair, George Roberts.*

## **EMPLOYEE SERVICE AWARDS AND RECOGNITIONS**

Employees who have achieved 5, 10, 15, 20, 25, 30 or more years of service are recognized each year by the Governing Board. Those presented awards in 2008 included:

*For 30 years of service:* Douglas E. Barr, Executive Director

*For 20 years of service:* W. Guy Gowens, Director, Division of Resource Regulation; Mark Ihlefeld, Assistant Field Representative; Lance Laird, Chief, Bureau of Surface Water Regulation; Elaine C. McKinnon, Administrative Assistant II; and John Michael Snowden, Senior Systems Analyst

*For 10 years of service:* Alva Houston Kemp, Forest Technician/ Equipment Operator and Haines J. Layfield, GIS Analyst

*For 5 years of service:* Steven Costa, Field Representative Specialist; Dorothy R. Cotton, Accountant; Ragina Flenniken, Senior Accountant; Grace A. Kimball, Human Resources Administrator; Curtis King, Facilities Superintendent; and Sarah Martin, Administrative Assistant



# Jefferson, Leon and Wakulla Counties



28

## NEW WASTEWATER TREATMENT, REUSE FACILITIES

In May, the District approved funding up to \$500,000 to help Tallahassee construct advanced wastewater treatment and water reuse facilities at its Lake Bradford wastewater facility. Greater water use efficiency and reduced nutrient loading will result. In addition to relieving the burden on the drinking water supply, these projects are expected to reduce nutrients that reach the aquifer and eventually Wakulla Spring.

The Lake Bradford facility will provide up to 4.5 million gallons a day of highly treated reuse water for irrigation of public access areas at Florida State University, Florida Agricultural and Mechanical University and Capital Cascades Park. These improvements are part of the city's multi-million dollar effort to protect and restore important ground water resources and springsheds.

These new facilities are separate from the recently completed Tram Road Public Access Reuse facility, for which the District also provided grant funding from the state's Water Protection and Sustainability Trust Fund.

## FLOOD WARNING WEB SITE

Rainfall accumulations and flood warnings are available "live" through the Capital Area Flood Warning Network ([www.cafwn.org](http://www.cafwn.org)). The network continuously reports rainfall amounts and warns of impending floods. The 14-station interactive CAFWN was developed by Leon County, City of Tallahassee, National Weather Service and the District to guide emergency responses, evacuations and road closings.

Those visiting the web site can view flood warnings or select "current conditions" to see a map of rainfall measurements countywide. A rain gauge shows a

bar graph with readings, updating every 15 minutes.

The District has operated a stormwater monitoring network for Leon County and the City of Tallahassee for several years with CAFWN operating for the past four years.

## LEON COUNTY STORMWATER MONITORING

In September, the City of Tallahassee, Leon County and the District agreed to continue operating a stormwater flow monitoring program for another year. This stormwater monitoring network has been in existence for the past 17 years. The program includes 51 surface water and rainfall data collection stations. Storm event and base flow discharge data for the major drainage basins are provided. Data provide continuous records of rainfall and surface water discharges and are used to design and implement improvements in the stormwater

drainage system, help reduce flooding and improve water quality.

This agreement also includes CAFWN, a real-time radio telemetry flood warning network in the Leon County area. It is a cooperative program involving the District, city, county and the National Weather Service. Included in the network are 14 stream and rainfall stations providing real-time rainfall and water level data which help identify developing flood conditions.

### EFFECTS OF FRESHWATER DISCHARGE

The District entered into an agreement with the Florida State University College of Engineering to model and analyze freshwater needs of the St. Marks River estuary.

It is anticipated that this analysis will enhance the understanding of how freshwater flows emanating from Wakulla Spring and the St. Marks River

affect the downstream salinity distribution. Cumulative effects of increased future withdrawals on this estuarine system also will be evaluated.



St. Marks River. (James Valentine)



Fisher Creek sink, St. Marks River basin. (James Valentine)



## Calhoun, Franklin, Gadsden, Gulf, Jackson and Liberty Counties



30

### WATER SUPPLY FOR FRANKLIN COUNTY

In 2008, an additional test well was constructed for the aquifer testing and ground water modeling assessment underway for Franklin County. The District's Region V Water Supply Plan for Franklin and Gulf counties identified an inland wellfield as a preferred alternative water supply source. This additional test well will provide water quality data to characterize the quality of the ground water in the aquifer below the anticipated production level.

### WEWAHITCHKA WATER SUPPLY

In May, the District's Governing Board approved additional grant funds to the City of Wewahitchka for water supply system improvements. These funds will ultimately result in two new 12-inch municipal water supply wells, potable water lines and other associated infrastructure

improvements. Specifically, these additional funds will be used for test wells that are needed before permitting and construction can take place. The District is providing up to \$400,000 and the city will have until December of 2009 to complete the project.

### BIG PICTURE BROCHURE FOR APALACHICOLA

In 2008, a new brochure, *Looking at the Big Picture: Apalachicola River and Bay*, was developed and made available to the public to provide information about this significant resource. This basin is one of the nation's most ecologically diverse and significant natural areas. The Apalachicola River basin covers about 2,400 square miles within Florida. Habitats vary from rare steephead ravines with the only native *torreya* range remaining to limestone bluffs, the state's largest forested floodplain, a productive estuary and many miles of barrier islands. The

brochure opens to a large poster providing a chronology of major events. Printed copies may be obtained from the Office of Public Information free of charge.

### LAND ACQUISITIONS

Approximately 1,573.66 acres were approved for acquisition as a conservation easement in April. Located in Liberty County, the tract is bordered by the Ochlockonee River, the Apalachicola National Forest and by another conservation easement acquired by the District in 2007. About three miles front the western bank of the Ochlockonee River.

### EASTPOINT STORMWATER TREATMENT SYSTEM

Water quality and aquatic habitat are expected to benefit from a new stormwater treatment system completed in July. Stormwater that once

discharged untreated directly to the bay will now flow through eight baffle boxes placed along U.S. Highway 98 in Eastpoint. Although Eastpoint is a small community with slightly more than 2,000 residents, studies by the District revealed the impact of coastal development on water quality. The system will reduce

debris, suspended solids, heavy metals and other contaminants from a 1,049-acre drainage area bounded by Avenue A, Old Ferry Road and 10<sup>th</sup> Street.

In September and October, brochures, posters and cards were distributed and metal plaques were placed on the stormwater drains. All will

help educate area residents about the system. The retrofit project was funded through the Surface Water Improvement and Management program (\$294,000) and Environmental Protection Agency 319 grant funds (\$251,000).



Stormwater plaques (Dump No Waste – Drains to the Bay) were placed on drains in Eastpoint and later Apalachicola.



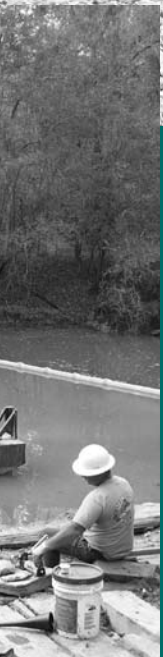


## L. E. MCMULLIAN, JR. MEMORIAL BRIDGE

A newly constructed bridge at Florida River Island was dedicated and named the L. E. McMullian, Jr. Memorial Bridge on June 6, 2008. Mr. McMullian was recognized for his exemplary service in protecting the water resources of northwest Florida while he served as a District Governing Board member representing the Apalachicola and Chipola river basins.

“Mr. McMullian was dedicated to protecting this vitally important interstate river system and its natural resources,” said Douglas E. Barr, Executive Director of the District during the dedication ceremony. “He also was dedicated to ensuring that District lands were open to the public and offered recreational opportunities. The bridge will provide public access to nearly 6,000 acres of some of the best hunting and fishing lands available to the residents of Liberty County and the State of Florida,” he continued. “Without Mr. McMullian’s vision and leadership, this significant project might not have been undertaken.”

Mr. McMullian served on the Governing Board from 1987 to 1991 and was reappointed in 1999 and again in 2003. His tenure spanned more than 10 years. He was a lifelong resident of Jackson County, a veteran of the U.S. Navy, a retired farmer and manager of Dellwood Wildlife Farms. He was an active member of the Florida Farm Bureau for nearly 50 years and a member of their board for more than 25 years. Mr. McMullian passed away on December 8, 2005, while he was serving his third term on the District Governing Board.





## Bay, Holmes, Okaloosa, Walton and Washington Counties



34

### FUTURE WATER SUPPLY

In February, the District's Governing Board designated Bay County (Region III) to receive a Regional Water Supply plan. Demand for public water supply is projected to increase by 78 million gallons a day between 2010 and 2030. This designation allows the District to assist local governments and utilities fund water supply projects through the legislated Water Protection and Sustainability Program Trust Fund.

Bay County relies on surface water from Deer Point Lake Reservoir. Developing additional sources of water will help the region and minimize vulnerability from potential salt water surge into the reservoir during major hurricane events. Three categories of alternative water supply have been identified: (1) inland ground water source development, (2) reuse of reclaimed water and (3) utility interconnections and infrastructure enhancements.

A public workshop to obtain input on the plan was held in Panama City in May. In August, the Governing Board approved the final Regional Water Supply Plan for Bay County.

### \$5.2 MILLION GRANT TO BAY COUNTY

In November, the Governing Board approved a \$5.2 million grant to Bay County to assist with the development of an inland ground water source. The county will use the grant funds to construct an inland water supply system that is interconnected with its current system. To be constructed under this agreement are Floridan Aquifer wells along with associated pumping, treatment and transmission components. Funding is provided through the Water Protection and Sustainability Program Trust Fund. The development of this alternative water supply source will improve the long-term resiliency of the county's

water supply. In December, the Governing Board approved an additional \$270,000 in grant funds toward this project.

### \$1 MILLION GRANT FOR WATER SUPPLY DEVELOPMENT

In October, a \$1 million grant was approved for the Florida Community Services Corporation of Walton County (Regional Utilities) to expand an alternative water supply system serving southern Walton County. The funding source for the grant is a legislative special appropriation for Phase II of the county's Regional Water Supply plan. Development of the inland Floridan Aquifer is a preferred alternative water supply source.

### EROSION CONTROL FOR LAFAYETTE CREEK

Portions of the 3,160-acre Walton County Lafayette Creek

tract, purchased in 2005, needed some restoration work due to previous uses of the land. In April, the Governing Board approved an agreement with the Orange Hill Soil and Water Conservation District to undertake erosion control and other earthwork projects. Stabilizing erosion and establishing native vegetation at designated sites will prevent further deterioration and protect downstream receiving waters.

## **COLOR INFRARED PHOTOGRAPHY**

Previously, the District and the Florida Department of Environmental Protection (DEP) purchased color infrared photography for northwest Florida with the exception of Walton County. In June, the Governing Board approved adding this remaining county, which will complete imagery for the entire District.

## **GRANT FUNDS FOR BEST**

For several years, the District has maintained a cooperative relationship with BEST (Friends of St. Andrew Bay) through the St. Andrew Bay Watershed Surface Water Improvement and Management (SWIM) plan and the Ecosystem Management plan. Currently, BEST is using SWIM funds, appropriated by the legislature, to develop a basinwide stormwater

assessment. This effort will result in better planning of stormwater retrofits. Other important cooperative efforts in the past included restoration of ecosystem resources, functions within the estuary, Econfina Recharge Area and public outreach and education. A grant of \$50,000, approved in February, will help BEST continue its efforts for the next fiscal year.

## **AGREEMENT RENEWED WITH FWC**

The District's cooperative agreement with the Florida Fish and Wildlife Conservation Commission (FWC) to assist with the protection and management of the Sand Hill Lakes Mitigation Bank began in 2005. In May, approval was given to continue that agreement for an additional year. FWC provides assessments of the area's fish and wildlife resources as they relate to managing the property's allowable public recreational opportunities. In 2007, the property was opened to special opportunity fishing, hunting under a limited quota hunt permit system and other passive uses (birding, hiking, etc.). Nearly 1,200 hunters and fishermen have visited the property since then.

## **LAND ACQUISITIONS**

In January, approval was given to purchase slightly more

than 30 acres, including a 40 foot wide access, in Washington County contiguous to District lands. This purchase will provide public access to about 500 acres of District lands along Holmes Creek as well as provide a second land management access point. The parcel consists of open pasture and mesic pine and hardwood upland habitat. It is in the Choctawhatchee River basin.

Twenty acres (Live Oak Point) in Walton County were approved for acquisition in May. The tract is primarily forested wetlands with some estuarine marsh. It is located north of Hogtown Bayou and south of Choctawhatchee Bay.

## **LAND DONATION FOR WASHINGTON COUNTY SCHOOLS**

A donation of approximately 96.2 acres of District-owned land to the Washington County District School Board for the proposed construction of future kindergarten through 12<sup>th</sup> grade schools was approved by the Governing Board. The property lies in the extreme northwest corner of the Econfina Creek Water Management Area (WMA), adjacent to Duma Jack Road. The agreement contains a number of restrictive covenants to protect the water resources. Over 41,000 acres in the Econfina Creek area are owned by the District.



# Escambia and Santa Rosa Counties



36

## BAYOU CHICO RESTORATION

A dredging project to remove sediment from Bayou Chico to improve water quality was undertaken by Escambia County, U.S. Army Corps of Engineers and the District. The Corps undertook the dredging, placing an estimated 180,000 cubic yards of material on county property (Clark Sand Pit), which the District helped Escambia County purchase. Water quality monitoring of the site has indicated no problems with the use of the site. Twelve monitoring wells and two surface water sites are involved in monitoring work.

## LAND MANAGEMENT POSTERS

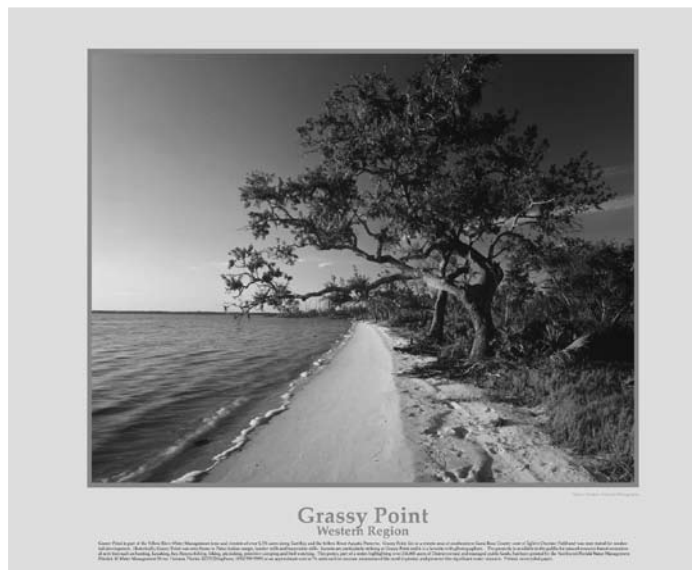
Four educational posters featuring the District's western land management region were

released in September. The full-color posters feature the Yellow River, Grassy Point, Escambia River and Perdido River. Copies may be obtained by calling the Land Management and Acquisition Division at District headquarters.

## PERDIDO RIVER WMA

In 2006, the District acquired the 5,455-acre Perdido River Water Management Area (WMA). The

tracts acquired include a number of popular recreational sites for launching canoes and kayaks, picnicking, sunbathing, fishing and swimming. Since acquiring the property, the District has improved and opened two new sites – The Pipes Landing and Sand Landing. Efforts are currently being made to improve and open Fillingim Landing as well as other new sites. Because some of these recreational sites are in remote locations, the District needed year-round law enforcement and security services. In September, the District initiated an agreement with the Florida Fish and Wildlife Conservation Commission to provide law enforcement/security services for this area as well as for the Escambia River WMA.



# Combined Balance Sheet

September 30, 2008

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

## Assets

### Current Assets:

Cash and Cash Equivalents	\$	241,768
Investments		58,436,781
Accounts Receivable		40,456
Due From Other Governments		8,745,035
Due From Other Funds		8,163,698
Deposits		7,713
Prepaid Items		1,458
<b>Total Current Assets</b>	<b>\$</b>	<b>75,636,909</b>

### General Capital Assets (Net of Applicable Depreciation):

Land and Improvements	\$	158,033,221
Buildings and Improvements		1,689,140
Machinery and Equipment		1,451,845
<b>Total General Fixed Assets</b>	<b>\$</b>	<b>161,174,206</b>

### Other Debits:

Amount to be Provided for Retirement of General Long-Term Debt	\$	670,765
<b>Total Other Debits</b>	<b>\$</b>	<b>670,765</b>

### Total Assets and Other Debits

**\$ 237,481,880**

## Liabilities and Fund Equity

### Liabilities:

Refundable Deposits	\$	74,793
Accounts Payable and Accruals		2,089,514
Deferred Revenue		17,857,921
Due to Other Funds		8,163,698
Liability for Compensated Absences		670,765
<b>Total Liabilities</b>	<b>\$</b>	<b>28,856,691</b>

### Fund Equity:

Investment in General Capital Assets	\$	161,174,206
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### Fund Balances:

#### Reserved:

Prepaid Items	\$	1,458
Land Acquisition		3,822,059
Land Management/Acquisition		5,992,634
Mitigation		991,353
<b>Total Reserved</b>	<b>\$</b>	<b>10,807,504</b>

#### Unreserved:

Undesignated	\$	432,714
Designated		36,210,765
<b>Total Unreserved</b>	<b>\$</b>	<b>36,643,479</b>

### Total Fund Balance

**\$ 47,450,983**

### Total Liabilities and Fund Equity

**\$ 237,481,880**

# Financial Statement

For Fiscal Year ended September 30, 2008

## Revenue and Other Receipts

Federal Sources:

US DOT/FDOT-Efficient Transportation Decision Making	\$ 54,624
DEP/EPA Surface Water Sampling Grant Awards	129,397
DEP-Ambient Monitoring	190,138
DEP-Eastpoint Regional Stormwater Grant	251,000
FEMA-Map Modernization	1,085,885
USAF - LiDAR	39,987
<b>Total Federal Sources</b>	<b>\$ 1,751,031</b>

State and Local Government Sources:

DEP-Statewide Surface Water Restoration Projects	\$ 1,407,571
DEP-Chapter 62-524 F.A.C. Program Implementation	60,000
DEP-General Appropriations	1,044,926
DEP-Florida Forever Trust Fund	10,791,048
DEP-Water Management Lands Trust Fund	5,607,438
DEP-Payment in Lieu of Taxes (WMLTF)	41,876
DEP-Surface Water Management Permitting Program (Wetlands)	300,000
DEP-Florida Springs Initiative	102,658
DEP-Water Protection and Sustainability Trust Fund	1,642,025
DEP-Environmental Resource Permitting	5,095,847
DOS-Division of Historical Resources	20,198
DOT-Mitigation Plan and Restoration Projects	5,769,620
Leon County Stormwater Monitoring	125,200
Bay County Stormwater Monitoring	9,700
Bay County Deer Point Watershed Monitoring	29,616
SRWMD - Jefferson County LiDAR	33,345
Other Funding	142
<b>Total State and Local Government Sources</b>	<b>\$ 32,081,210</b>

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Agency Sources:

Ad Valorem Taxes (.045 mill)	\$ 4,701,800
Permit and Inspection Fees	506,584
Regulatory Penalties	73,995
Interest	735,301
Timber Sales	54,142
Miscellaneous	74,087
<b>Total Agency Sources</b>	<b>\$ 6,145,909</b>
<b>Total Revenues</b>	<b>\$ 39,978,150</b>

Other Sources:

Sale of General Fixed Assets	\$ 19,952
<b>Total Other Sources</b>	<b>\$19,952</b>
<b>Balance Brought Forward from Prior Fiscal Year</b>	<b>\$ 41,109,252</b>
<b>Total Revenue, Other Sources and Cash Balance</b>	<b>\$ 81,107,354</b>

**Expenditures**

Salaries and Benefits	\$ 7,773,239
Contractual Services-Consultants	5,280,760
Operating Expenses	2,538,282
Grants and Aids	7,480,885
Operating Capital Outlay	10,583,205
<b>Total Expenditures</b>	<b>\$ 33,656,371</b>

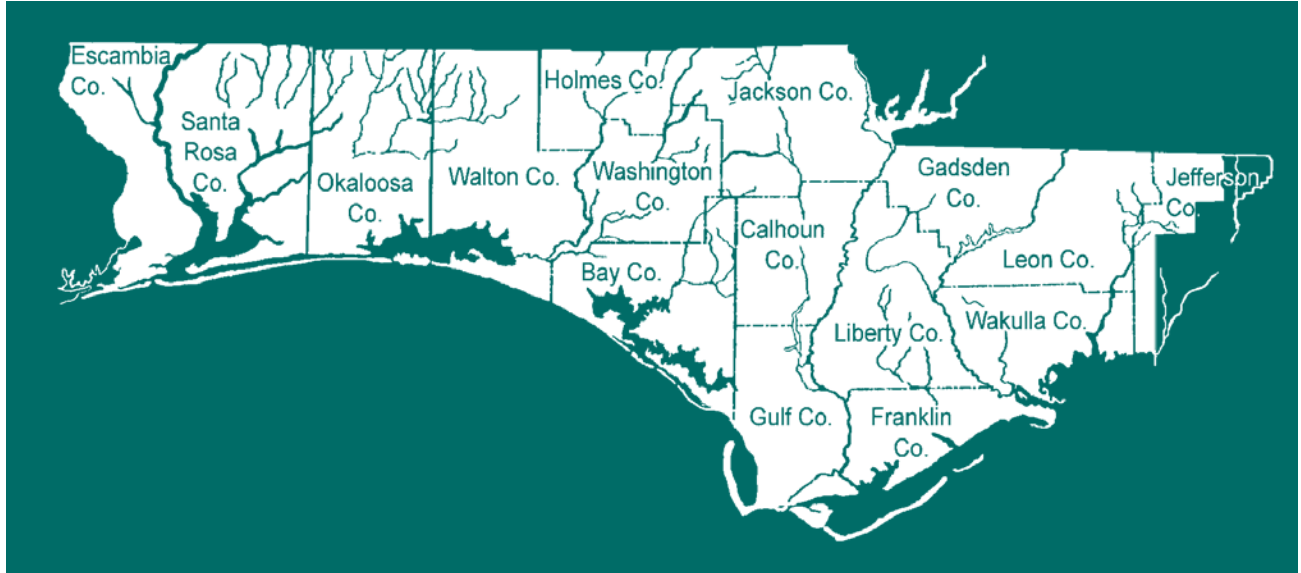
**Fund Balance**

Reserved:	
Prepaid Items	\$ 1,458
Land Acquisition	3,822,059
Land Management/Acquisition	5,992,634
Mitigation	991,353
<b>Total Reserved</b>	<b>\$ 10,807,504</b>
Unreserved:	
Undesignated	\$ 432,714
Designated	36,210,765
<b>Total Unreserved</b>	<b>\$ 36,643,479</b>
<b>Total Expenditures and Fund Balance</b>	<b>\$ 81,107,354</b>





# Northwest Florida Water Management District



## DISTRICT OFFICES

**Headquarters**  
81 Water Management Drive  
Havana, Florida 32333-4712  
Tel. (850) 539-5999  
Fax. (850) 539-2777

**Environmental Resource and Permitting Offices**  
2252 Killearn Center Boulevard, Suite 2D  
Tallahassee, Florida 32309  
Tel. (850) 921-2986  
Fax. (850) 921-3082

800 Hospital Drive  
Crestview, Florida 32539  
Tel. (850) 683-5044  
Fax. (850) 683-5050

**Marianna Office**  
4765 Pelt Street  
Marianna, Florida 32446  
Tel. (850) 482-9522  
Fax. (850) 482-1376

Web Site: [www.nwfwmd.state.fl.us](http://www.nwfwmd.state.fl.us)

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**Concept and Text:** Georgann Penson

**Graphic Design:** Graphic Edge

**Editing and Other Contributions:** Douglas Barr, Kristopher Barrios, Ron Bartel, Carol Bert, Amanda Bedenbaugh (Financial Statements), Duncan Cairns, Angela Chelette, David Clayton, William Cleckley, John Crowe, Faith Eidse, Guy Gowens, Grace Kimball, Lance Laird, Anne Lester, Graham Lewis, Robert Lide, Lee Marchman, Tyler Macmillan, Chris Richards, George Roberts, Lucinda Scott, Paul Thorpe, Robin Tucker, Thelma Whitfield, Nick Wooten, Larry Wright

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