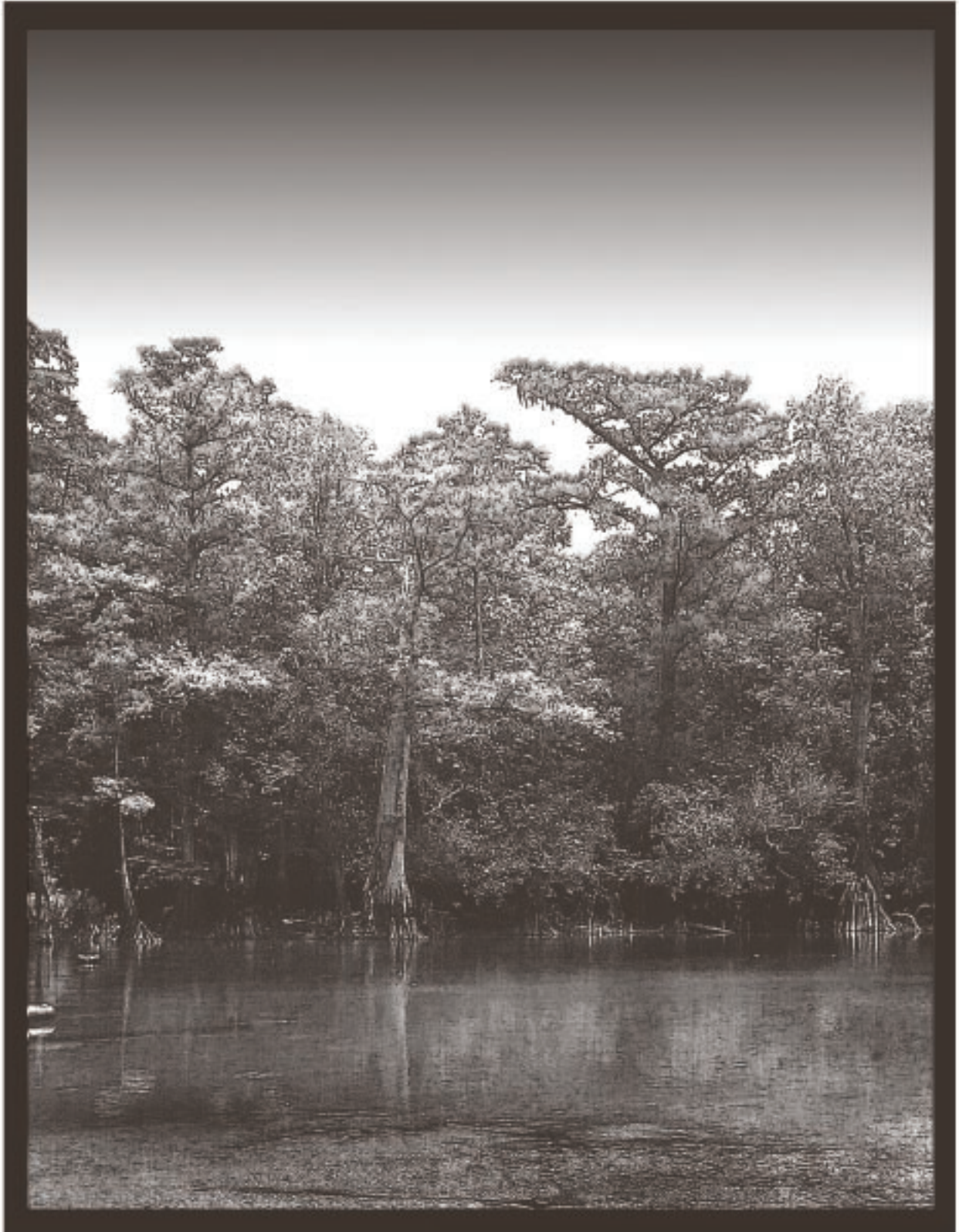


Northwest Florida Water Management District



Annual Report 2002

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

ANNUAL REPORT 2002



John Crowe

| | |
|---|----|
| MANAGING WATER EFFECTIVELY | 4 |
| THE SPRINGS OF NORTHWEST FLORIDA | 6 |
| GOVERNING BOARD MEMBERS | 12 |
| DISTRICTWIDE ACTIVITIES | 15 |
| JEFFERSON, LEON AND WAKULLA COUNTIES | 22 |
| CALHOUN, FRANKLIN, GADSDEN, GULF, JACKSON AND LIBERTY COUNTIES | 25 |
| BAY, HOLMES, OKALOOSA, WALTON AND WASHINGTON COUNTIES | 28 |
| ESCAMBIA AND SANTA ROSA COUNTIES | 32 |
| COMBINED BALANCE SHEET | 35 |
| FINANCIAL STATEMENT | 36 |
| DISTRICT ADDRESSES AND PHONE NUMBERS | 38 |

MANAGING WATER EFFECTIVELY

Cooperative projects create strong partnerships and effective water management strategies. In reviewing the District's accomplishments this past year, cooperative, coordinated, cost-sharing projects with local, regional and state governmental entities and private water utilities and suppliers predominated. These projects spanned a range of activities and included restoration, land acquisition, land management, resource protection, water supply development, monitoring and stormwater treatment facilities.

Given the cost of implementing these projects, the only way many of them can be achieved is through collaboration and establishing partnerships. Large-scale restoration projects for Bayou Chico were implemented in partnership with Escambia County. These projects have significantly improved the water quality of Bayou Chico and are resulting in a more natural and productive system. This past year, the City of Pensacola expressed an interest in establishing a partnership with the District to cooperate on restoration projects for Bayou Texar.

Perhaps one of the most widely publicized, cooperative projects within our District has been the Lake Jackson restoration project. This involved the removal of about two million cubic yards of sediment from the bottom of the lake and enlisted the assistance of many partners including Leon County, Florida Legislature, Florida Fish and Wildlife Conservation Commission and Florida Department of Environmental Protection. During this past year, the District developed a large, technical poster that summarized this restoration effort. The District continues to work with Leon County to develop a regional stormwater treatment facility for the 330-acre Okeeheepkee Basin in the southwest portion of the Lake Jackson watershed. This stormwater treatment facility will be transformed into a passive park with walking trails and interpretive signs that explain the stormwater treatment process as well as the natural setting.

A focus during this past year was assisting the City of Apalachicola in retrofitting and repairing collapsed segments of the city's existing stormwater lines. These efforts will help reduce flooding and stormwater runoff to the Apalachicola Bay, improving water quality. Another project in Franklin County, the Tates Hell swamp hydrologic restoration project, is an effort to restore the natural wetland hydrology of the swamp and is intended to improve the quantity and quality of freshwater inflows to the Apalachicola Bay. Concerns about stormwater runoff to the Choctawhatchee Bay prompted a series of cooperative projects with the City of Valparaiso and included stormwater improvements at Clearwater, Lincoln and Glen Argyle parks.

Measures taken to protect our ground water resources and to identify water supplies for our northwest communities resulted in legislative funding for Crestview for a new water supply well and in federal funding for a new, inland Sand and Gravel Aquifer wellfield in Santa Rosa County. The District helped obtain nearly \$3 million to assist with the construction of the Sand and Gravel Aquifer wellfield that will help preserve the coastal Floridan Aquifer. To protect the Floridan Aquifer in another part of our region, the District and the City of Tallahassee joined together to fund an advanced wastewater treatment and reclaimed water distribution system that will provide for approximately 200,000 gallons of reclaimed water per day for golf course and landscape irrigation rather than implementing plans that called for withdrawing this amount of water from the Floridan Aquifer.

Additionally, the District continues to be a partner in surface water, ground water and stormwater flow monitoring programs with the Florida Department of Environmental Protection as well as with local governments, such as the City of Tallahassee, Leon County and Bay County, that are designed to protect and preserve our water resources.

During 2002, the District also turned its attention to streamlining various permitting and administrative procedures to serve the public better. Farm pond, dam safety and consumptive use permit processes were streamlined this past year to shorten the time required to process more routine permits. The Governing Board delegated the authority to approve certain routine permits to the Executive Director of the District. This delegation has resulted in less paperwork and a more timely

issuance of permits because they do not have to be presented to the Governing Board. An average of 32 days for processing each farm pond permit is being saved. Permits falling into the range that can be streamlined involve about 63 percent of all applications received by the District. However, any recommendations to deny a permit must be reviewed by the Governing Board.

Another effort to improve a process called for new guidelines for small land purchases (those under \$30,000) made by the District. Approved by the Governing Board, these new guidelines reduce and minimize the closing costs normally incurred when small parcels of land are purchased.

Efforts to reach consensus on a water allocation formula for the Apalachicola-Chattahoochee-Flint river system with Alabama and Georgia continued throughout the year. There was an increase in the number of Florida Stakeholder and general informational meetings held to brief interested parties on the process. State/Federal informational meetings relating to water controls, hydropower, environmental considerations and unimpaired flows kept the public more informed on these issues. These technical issues are likely to be of importance during the review of any water allocation formula that the states do develop.

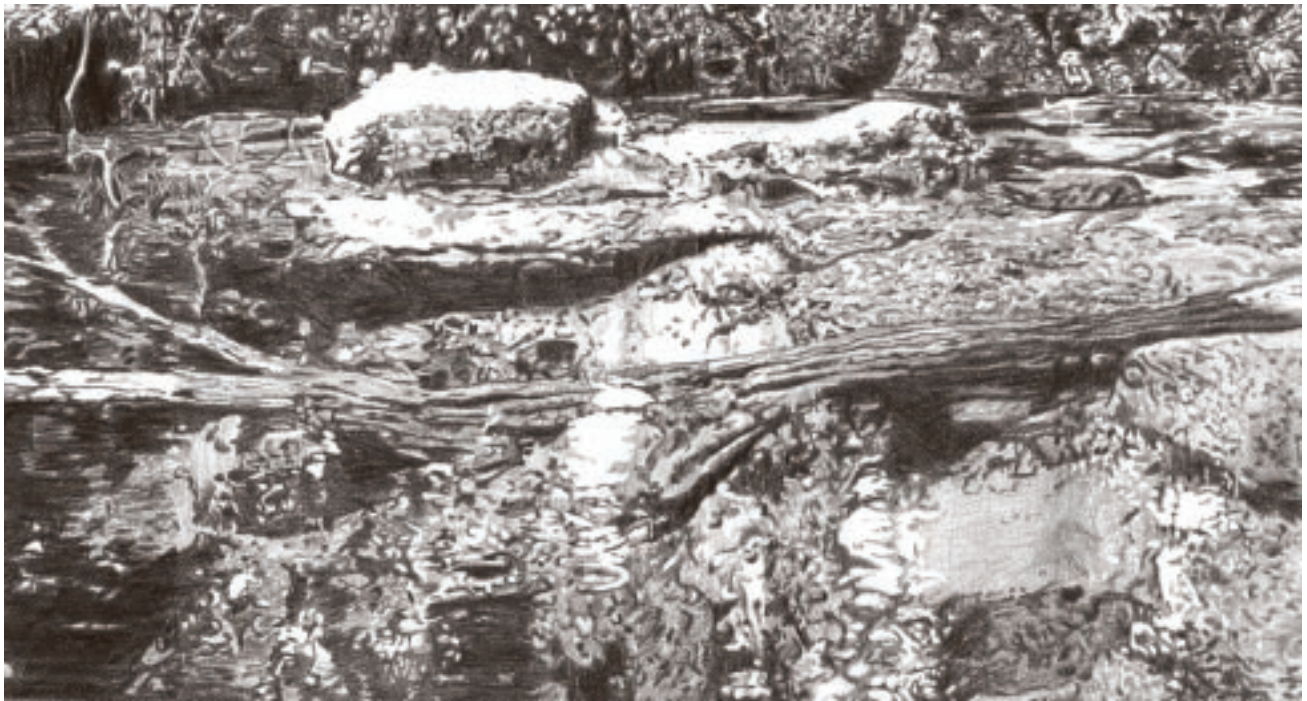
Issues and concerns relating to water management continue to be paramount throughout the northwest, the state and across state lines. Many of these issues are complex. Concerns relating to our springs is another example of a rather complex situation because activities and practices that occur miles away on the land may impact the health of these important vital water resources. Many of these issues and concerns are not easily or readily resolved, but those that are resolved, will likely be done through cooperation, coordination and the development of a common, shared understanding.



J. Russell Price
Chair, Governing Board



Douglas E. Barr
Executive Director



THE SPRINGS OF NORTHWEST FLORIDA



John Crowe

Confluence of Pitt Spring Run and Econfinia Creek

Florida springs have captivated observers for centuries with their vivid, gem-like shades of blue and blue-green. Numerous springs throughout the state have been named “blue” due to these features. The number of freshwater springs in Florida are estimated to be over 700. The most authoritative reference on springs, *Springs of Florida*, printed in 1977, names approximately 300 of them. In north-west Florida, about 45 were identified in *Springs of Florida*, although it is believed that there may be more than 130 springs of varying magnitudes.

A spring has been defined as a “point of focused discharge of ground water from underground flow systems.” The discharging of ground water can take several forms – spring, seep, lake or stream. The geology of Florida is conducive to the formation of springs. The Floridan Aquifer, which underlies all of Florida, is formed of porous limestone and lies very near the surface of the land in many areas. This is known as “karst” topography. The fact that these karst formations are so near the surface of the land makes ground water very susceptible to contaminants, which can then emerge in springs.

Ground water and surface water interactions (or connections) are receiving increased attention. Springs are the transition between ground waters and surface waters. Springs deliver ground water to surface waters and surface water streams can flow underground to become part of the ground water again. Ground water is recharged by precipitation falling onto the surface of the land. What occurs on land affects the quality of our ground water and our springs.

In recent years, it has become apparent that our springs are in danger. Flows have decreased and are a significant concern. Decreased flows can result from an increased use of ground water, which lowers ground water levels affecting spring flows. Florida's continuing growth has demanded increased amounts of water, most of which come from ground water sources. Long-term drought conditions also can result in lower ground water levels and decreased flows.

Another serious concern is water quality. Several contaminants have been found in spring water and, in particular, levels of nitrates have been increasing. Increased nutrients in the water can cause a corresponding increase in nuisance plants such as hydrilla and algae that choke out normal plant growth. It has been said that "springs serve as windows into the quality of our ground water."

...Each is a little ecologic jewel in which geology and biology have created a masterwork of natural art.

Archie Carr

About Northwest Florida's First Magnitude Springs

Florida has about 33 first magnitude springs, nearly half the number found throughout the United States. Springs are classified as first magnitude if they have a flow greater than 100 cfs (cubic feet per second) or 65 million gallons per day; second magnitude if the flow is between 10 and 100 cfs or between 6.5 and 65 million gallons per day and third magnitude if the flow is between 1 and 10 cfs or between .65 and 6.5 millions gallons per day. Others are classified as fourth magnitude (less than 1 cfs), fifth, sixth, seventh and eighth. Additionally, there are a number of springs with an unknown magnitude because they have not been measured. One cfs is equal to .646 million gallons per day.

Five first magnitude springs are located within the Northwest Florida Water Management District in Bay, Jackson, Leon and Wakulla counties and two of the five are located in Wakulla County.

Gainer Springs Group, in Bay County, discharges about 160 cfs. This group consists of springs numbered 1 through 4. Springs numbered 2 (Emerald), 3 and 4 are privately owned. Three interconnected springs on the east side of the Econfina Creek comprise spring number 1 (McCormick Springs) and are now owned by the Northwest Florida Water Management District. While the Gainer Springs Group does not have the largest discharge of the first magnitude springs in northwest Florida, it is a significant water resource. Gainer Springs flow into Econfina Creek, one of only a few Class I water bodies (drinking water sources). Econfina Creek flows into the Deer Point Lake Reservoir, the source of drinking water for Panama City and the surrounding area.



Angela Chellette

Gainer Spring Number 4

To preserve this important water resource, the District has made it a priority to acquire lands within the Econfina Creek recharge area. Over 9,300 acres along the creek and 31,600 acres of the uplands surrounding the creek have been purchased to protect this crucial water resource. These lands were acquired through the Save Our Rivers, Preservation 2000 and Florida Forever land acquisition programs. The District's acquisition of the Econfina Creek recharge area has been identified as a highly effective strategy for protecting these springs.

Blue Spring, in Jackson County, discharges about 190 cfs and flows into Merritts Mill Pond and then to the Chipola River. Historically, this spring has had high recreational use by area residents. It now is showing elevated nitrate concentrations largely stemming from agricultural practices.

Wakulla Springs, in Wakulla County, discharge about 390 cfs to the Wakulla River. It is one of the largest first magnitude springs in Florida. The District helped the state buy Wakulla Springs in 1986 and it is managed as a state park attracting thousands of visitors yearly. Exploration by cave divers revealed that it has one of the longest underwater cave systems in the United States and one of the deepest.

Levels of nitrates measured in Wakulla Springs are increasing and have been associated with the proliferation of nonnative, exotic plants such as hydrilla, first found in Wakulla Springs in 1997. Hydrilla is a submerged

rooted plant that grows rapidly, requiring little sunlight. It has spread throughout the river and the spring in just a few years. It has been found growing at depths of more than 60 feet and has reached lengths of more than 40 feet. Hydrilla was initially used in aquariums in the 1950s when it was first introduced in the United States. Attempts to remove this exotic plant from Wakulla Springs have proven costly. The sources of these nitrates are being researched and water quality is being monitored.

St. Marks Rise, in Leon County, has been measured at 519 cfs and is the source for the St. Marks River. It is just south of Tallahassee. St. Marks Rise can be seen during low flows but after a heavy rainfall, it can become inundated. A "rise" is river water that has descended underground through a sinkhole some distance away and then reemerges, bringing aquifer water with it.

Spring Creek Group, in Wakulla County, discharges approximately 300 cfs. About 13 submarine springs, found at the mouth of Spring Creek and Stuart Cove, make up this group. The Spring Creek Group is the largest group of submarine springs found in Florida and their discharge of ground water offshore can be located through surface boils or surface turbulence.



Georgann Penson

Wakulla Springs

Protecting Our Springs

Our springs receive some protection through various land acquisitions. The District now owns Mystic Springs in Escambia County, McCormick Springs and Pitt Spring in Bay County and Blue, Walsingham and Williford springs in Washington County. Coordinated land use planning and corresponding ordinances that protect springs and their recharge areas also are effective as are best management practices applied to landscape fertilization, agriculture, silviculture, stormwater management and golf course design and management. Protecting the spring flow (discharge) from further significant reductions due to withdrawals for public and private water supply is another practice that can be implemented. Some springs within the state have greatly reduced flows or have stopped flowing due to withdrawals and drought conditions. Other protective measures undertaken for our springs include water quality and discharge monitoring programs.

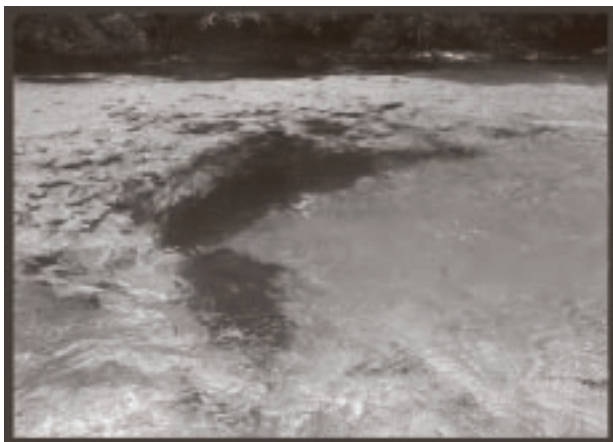


John Crowe

Morrison Spring

Taking the “Temperature” of Our Springs

Monitoring the waters of our springs is somewhat like taking a person’s temperature. Elevated readings may reflect an illness or, in the case of our springs, a problem.



John Crowe

The Vent at Williford Spring

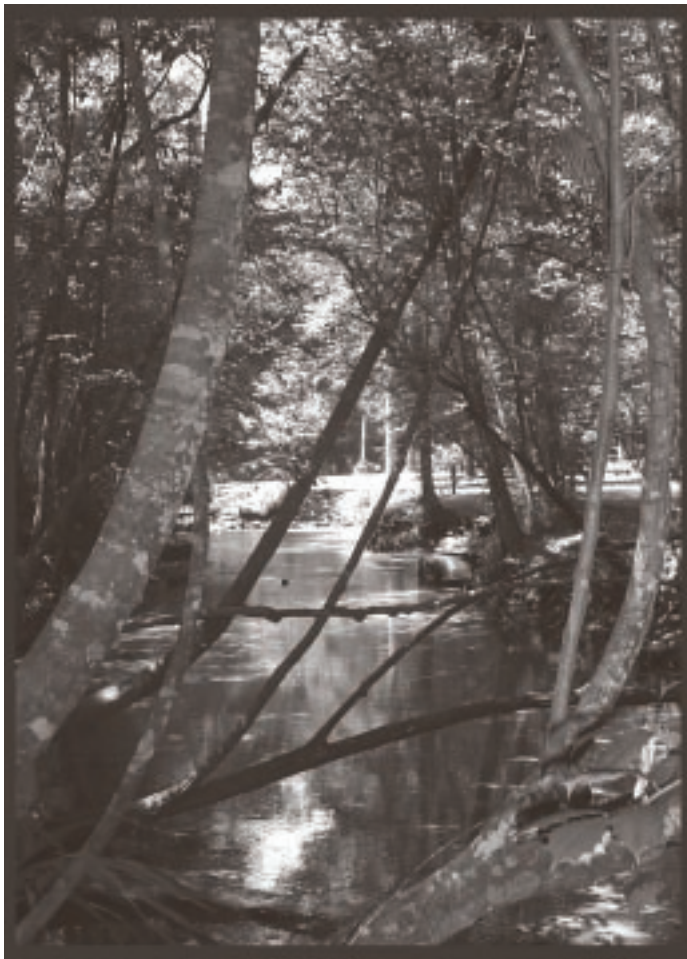
Springs are vulnerable, not only to the increased use of their waters, but also, to the activities that occur around them. Stormwater runoff from roads, lawns and farms carries oil, fertilizer, pesticide and bacteria. Erosion results in deposits of sediment. Faulty septic systems, waste disposal and development also are potential threats to the health of our springs. These increased nutrients and contaminants, found in our springs, have been linked to the proliferation of nonnative plants which can completely disrupt the natural ecological functions of these systems.

Regular monitoring is essential for determining the sources of nitrogen found in our springs. There are both organic and inorganic nitrates. Inorganic fertilizers can be found in stormwater runoff and examples of organic include sewage effluent disposal, effluent from septic systems and sewage sludge. Computer models and computer simulations can be used to assess the impacts of development and land use decisions. These models can predict “loads” or how much of these nutrients will be delivered to the springs through anticipated flows. Models, such as these, help water managers achieve an understanding of ground water and surface water interactions.



John Crowe

Exposed Cypress Knees at Morrison Spring



John Crowe

Ponce de Leon Springs

The Northwest Florida Water Management District is participating in the statewide Springs Initiative, administered by the Florida Department of Environmental Protection. This initiative calls for activities such as collecting and analyzing samples, delineating recharge areas, developing a ground water monitoring network and landowner education projects to reduce nutrient loading in spring recharge areas. The District continues to place an emphasis on land acquisition to protect these vulnerable water resources.

Other sources of information on springs include *Protecting Florida's Springs*, a publication by the Department of Community Affairs and Department of Environmental Protection, published in November 2002. It presents a comprehensive approach for preserving this important resource and is available on-line at: www.dca.state.fl.us/fdcp/DCP/publications. The 1977 version of *Springs of Florida*, Geological Bulletin No. 36, is being updated. *First Magnitude Springs of Florida*, Florida Geological Survey Open File Report No. 85, published in 2002, is the initial step in revising the *Springs of Florida* bulletin.

Where they are...

Bay County

Gainer Springs Group
Pitt Spring*

1st Magnitude
3rd Magnitude

Jackson County (continued)

Webbville Spring
Daniel Springs

(cfs not available)
(cfs not available)

Escambia County

Mystic Springs*

5th Magnitude

Leon County

St. Marks Rise
Rhodes Springs
Horn Spring

1st Magnitude
2nd Magnitude
2nd Magnitude

Gadsden County

Indian Springs
Glen Julia Springs
Chattahoochee Spring

4th Magnitude
4th Magnitude
5th Magnitude

Liberty County

White Springs

3rd Magnitude

Gulf County

Dalkeith Springs

(cfs not available)

Santa Rosa County

Chumuckla Springs

5th Magnitude

Holmes County

Ponce de Leon Springs
Vortex Blue Springs
Jackson Spring
Blue Spring

2nd Magnitude
3rd Magnitude
3rd Magnitude
(cfs not available)

Wakulla County

Spring Creek Group
Wakulla Springs
Newport Springs
Indian Springs
Panacea Mineral Springs

1st Magnitude
1st Magnitude
3rd Magnitude
5th Magnitude
5th Magnitude

Jackson County

(Jackson) Blue Spring
Black Spring (Black Hole)
Bosel Spring
Blue Hole Spring
Double Spring
Mill Pond Spring
Hays Spring
Gadsen Spring
Springboard Spring
Sand Bag Spring
Waddells Mill Pond
Tanner Springs

1st Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
(cfs not available)
(cfs not available)
(cfs not available)

Walton County

Morrison Spring
Euchee Springs

2nd Magnitude
3rd Magnitude

Washington County

Cypress Spring
Beckton Spring
Blue Springs (Holmes Creek)
Williford Spring*
Blue Spring (Econfina Creek)*
Walsingham Spring*

2nd Magnitude
2nd Magnitude
2nd Magnitude
2nd Magnitude
*2nd Magnitude
(cfs not available)

*These springs are owned and managed by the Northwest Florida Water Management District.

GOVERNING BOARD MEMBERS



J. Russell Price
Chair
Tallahassee
Represents Basin V
Appointed: March 5, 1999
Reappointed: March 2, 2000
Term Expires: March 1, 2004



Joyce Estes
Vice Chair
Eastpoint
Serves at Large
Appointed: March 5, 1999
Reappointed: March 2, 2003
Term Expires: March 1, 2007



NancyAnn M. Stuparich
Secretary/Treasurer
Pensacola
Represents Basin I
Appointed: April 10, 2000
Reappointed: March 2, 2001
Term Expires: March 1, 2005



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



Wayne Bodie
DeFuniak Springs
Represents Basin II
Appointed: March 5, 1999
Reappointed: March 2, 2003
Term Expires: March 1, 2007



Hulan Carter
Chipley
Represents Basin III
Appointed: March 2, 2001
Reappointed: March 2, 2002
Term Expires: March 1, 2006

-
- 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



Sharon T. Gaskin
 Wewahitchka
 Serves at Large
 Appointed: March 5, 1999
 Reappointed: March 2, 2000
 Term Expires: March 1, 2004



L. E. McMullian, Jr.
 Sneads
 Represents Basin IV
 Appointed: July 2, 1987
 Reappointed: March 5, 1999
 Reappointed: March 2, 2003
 Term Expires: March 1, 2007



Richard P. Petermann
 Fort Walton Beach
 Serves at Large
 Appointed: March 2, 2001
 Term Expires: March 1, 2005

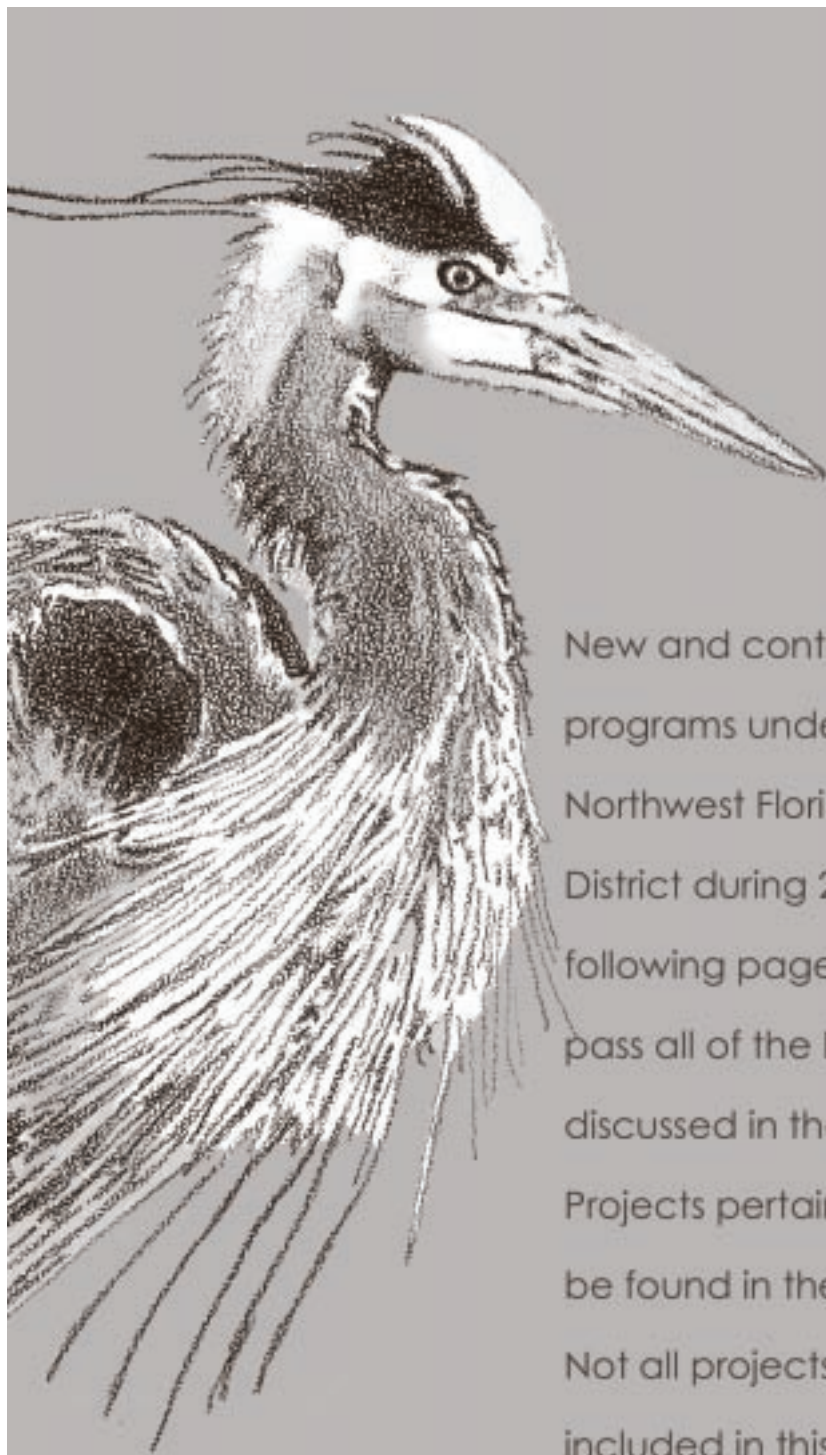


Douglas E. Barr
Executive Director
 Northwest Florida Water Management District
 Appointed: February 1992

Governing Board Meetings for 2003

| | |
|---|---|
| <p>January 23 February 27 March 27 April 24 May 22* June 26 July 24</p> | <p>August 28 September 17* September 25* October 23 November 20 December 1</p> |
|---|---|

All meetings will be held at the District Headquarters except for those marked with an asterisk (*). The May 22 meeting will be held in Pensacola, September 17 (Public Hearing on the 2003-04 Fiscal Year Budget) will be held in DeFuniak Springs and the September 25 meeting will be held in Panama City.



New and continuing projects and programs undertaken by the Northwest Florida Water Management District during 2002 are described on the following pages. Projects that encompass all of the District's 16 counties are discussed in the districtwide section. Projects pertaining to one county can be found in the county specific sections. Not all projects or programs are included in this Annual Report. The District engages in many others to protect and preserve the water resources of northwest Florida.

DISTRICTWIDE ACTIVITIES



John Crowe

The Mouth of Mary Slough at Lake Iamonia

Land Use and Water Supply Planning

In March of 2002, the Florida Legislature passed a growth management bill (Senate Bill 1906) that addressed a number of issues, including coordination between local government comprehensive plans and the regional water supply plans prepared by the water management districts. The bill was signed into law in May.

Each local government is now required to integrate the local comprehensive plan with the District's regional water supply plan or District Water Management Plan, if applicable. Most local governments in northwest Florida are not located within an area for which a regional water supply plan has been prepared. The District has prepared one regional water supply plan, *Regional Water Supply Plan for Santa Rosa, Okaloosa and Walton Counties*. Local governments outside this three-county area will, instead, prepare a work plan to illustrate how government-owned water utilities will provide service for their projected 10-year water needs.

According to the Department of Community Affairs (DCA), local governments in Santa Rosa, Okaloosa and Walton counties will need to complete their work plans by January 1, 2005, and all other local governments will need to address the new requirements when they update their comprehensive plans. To assist local governments and various agencies involved, training workshops will be held. Workshops in northwest Florida are anticipated during the summer of 2003. Additional information about the planning requirements can be found on DCA's website: www.dca.state.fl.us/fdcp/DCP/WaterSupplyPlanning/water_supply_planning.htm.

District's 2002-2003 Fiscal Year Budget Adopted

The District's 2002-2003 Fiscal Year Budget was presented at a public hearing held on September 11 at DeFuniak Springs. A second public hearing was held on September 26 in Panama City in conjunction with a regularly scheduled Governing Board meeting. The proposed budget received final approval on September 26. The District will continue to levy .05 mills in ad valorem taxing in northwest

Florida, which equates to five cents for every \$1,000 of property value. (This is the millage rate the District has been authorized to levy by the Florida Constitution since the District's inception in 1972.) The other four water management districts in Florida can levy up to one mill (or one dollar for every \$1,000 of property value). Ad valorem taxes represent only about 14 percent of District's annual revenues.

Inspector General's Audit Report

The District's Inspector General's Audit Report, which covered October 2001 to September 2002, was presented and approved by the Governing Board this past year. The Inspector General found the District to be in compliance on cash, travel, payroll, fringe benefit and overhead allocations as well as items subject to personal use and regulatory permitting.

A proposed audit plan for 2002-2003 also was presented to the Governing Board for approval. The Inspector General will review planning, information technologies, regulatory and lands permitting, acquisition/disposal of real property and equipment, payroll and procurement.

Independent Auditors Report

In February, the District's independent auditors, Bob Powell, James Moore and Company, completed an independent financial audit of the District's 2001-2002 fiscal year. The District was given the highest opinion possible and the auditors did not find any instances of noncompliance. It was classified as a clean audit.

Five-Year Plans for Acquisitions Approved

In January, the Governing Board adopted the 2002 Five-Year Work Plan for land acquisition with only slight modifications to the 2001 version that was incorporated into the Florida Forever Work Plan. Approximately 8,345 acres were acquired during 2001 and of those, 1,839 acres were acquired as "less-than-fee" (conservation easement) purchases.

In November, the Governing Board adopted the 2003 Five-Year Work Plan for land acquisition. The 2003 plan also contained slight modifications. This past year, 2,378 acres were purchased under “fee simple” (all rights) and 362.5 acres were purchased through conservation easements (“less-than-fee”). Several minor additions were made to the Greenway Connection corridors between St. Andrew Bay and the Choctawhatchee River. The District now owns and manages almost 200,000 acres throughout its 16 counties.

Florida Forever Grant Program

During the fall of 2002, the District made plans to initiate an annual Florida Forever Competitive Grants program. It is anticipated that grant applications will be available by the summer of 2003. The District plans to solicit proposals for cooperative or cost-sharing capital improvement projects within the Northwest Florida Water Management District.

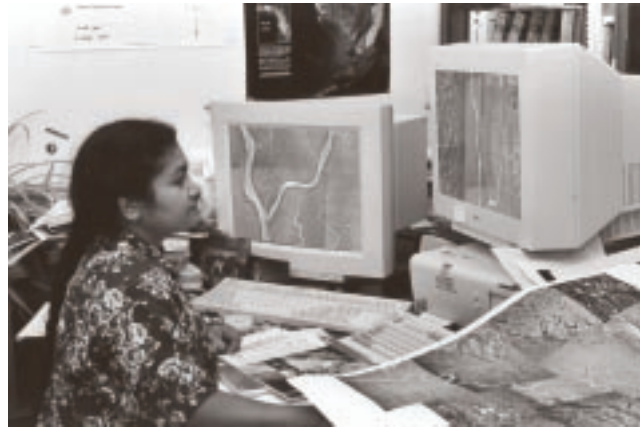
The goal of the program is to support management efforts that improve water quality, in particular, but also projects that demonstrate Best Management Practices (BMPs), implement stormwater plans or water reuse or restore natural systems with water resources value. Applicants may be governmental agencies, municipalities, counties, special districts and other public entities. Private utilities and private not-for-profit corporations may participate in these capital improvement projects with a qualified public entity. Successful projects will receive funding from the District but will be expected to have additional funding or in-kind services from sources other than the District. Announcements of the opening of a grant funding cycle will be mailed to cities and counties in northwest Florida and posted on the District’s website: www.state.fl.us/nwfwmd.

Seagrass Aerial Photography and Mapping

In September, the U.S. Department of the Interior, U.S. Fish and Wildlife Service and the District initiated a cooperative agreement to conduct seagrass aerial photography and mapping of bays in northwest Florida. The project will be implemented by the U.S. Geological Survey,

National Wetlands Resource Center.

Seagrasses are a vital component of Florida’s coastal ecology and economy. They provide nutrition and shelter to animals important to marine fisheries, provide critical habitat for many other species and help improve water quality.



Maps developed by the District are undertaken by the Geographic Information System section.

Periodic measurement of the decreased (or increased) area covered by seagrass beds is an important ecological tool for determining the success of coastal preservation and restoration efforts.

Cooperative Floodplain Mapping

An agreement between the District and the Region IV Federal Emergency Management Agency (FEMA) to develop a cooperative floodplain mapping program in northwest Florida was approved in October. The agreement allows the District to participate as a Cooperating Technical Partner and receive funding from FEMA to initiate flood mapping projects under the federal government’s map modernization program. FEMA’s program is intended to provide accurate digital overlays of elevation data, floodplain and flood hazard delineations, aerial photography and hydrology and hydraulic information, all combined within a Geographic Information System (GIS) data base. This effort will provide a significant contribution to our understanding and knowledge of the surface water resources of the District.

Florida Springs Initiative

In August, the District received approval for the second year of an agreement with the Florida Department of Environmental Protection (DEP) to implement the Florida Springs Initiative. This statewide effort sponsors data collection, sampling, flow monitoring and research into the conditions of first magnitude Floridan Aquifer springs. The District will assist in surface water sampling, flow monitoring and ground water basin delineation for Wakulla Springs, St. Marks Rise, Spring Creek, Jackson Blue Spring and the Gainer Springs group.

Ground and Surface Water Monitoring

In June, the District approved the continuation of an agreement with DEP for the ground and surface water sampling network of sites throughout the District. This agreement marks the 19th year of this cooperative project. Through the agreement, the District will continue to assist with collecting and interpreting water quality data from confined and unconfined aquifers, rivers, streams and lakes as part of a statewide integrated water resources monitoring network.

Ambient Monitoring of Surface Water Quality

An agreement with DEP to continue the ambient monitoring of the surface water quality program was renewed in September. For 11 years, the District has participated in this program with DEP. The program provides surface water quality data to use for the assessment of long-term water quality trends as well as impacts from specific activities or land uses in watersheds. These data allow the District and DEP to develop management strategies to improve surface water quality and minimize negative impacts on surface water resources. Funding for the program is provided by a grant to DEP from the U.S. Environmental Protection Agency.

Reforestation of Lands

During 2002-2003, the District plans to restore approximately 853 acres of cutover or disturbed longleaf pine, slash pine, mixed bottomland hardwood and wiregrass habitat within the Yellow River, Choctawhatchee River and Econfina Creek water management areas and a portion of Elinor-Klapp Phipps Park in Tallahassee. Approval was given to purchase about 398,000 longleaf pine tubelings for the restoration activities that will take place in Bay, Leon, Okaloosa, Santa Rosa, Walton and Washington counties. Before the longleaf trees can be planted, upland oak and scrub vegetation have to be reduced, since they compete with the new tubelings. Each year, similar restoration or reforestation activities are undertaken on District lands.



Restoration activities undertaken by the District require site preparation. To ensure that the restoration effort is successful, the removal of competing trees and other vegetation is necessary before longleaf pine tubelings can be planted.

Prescribed Fire for District Lands

Prescribed fire is one of the most cost effective and efficient tools available to land managers for restoring and maintaining fire-dependent and fire-maintained habitats. An excellent example of a fire-dependent habitat is the over 3,000 acres of wet prairie habitat within the Garcon Point Water Management Area. An example of a fire-maintained habitat is the 30,000 acres of xeric sandhill vegetation community (longleaf pine/wiregrass habitat) within the Econfina Creek Water Management Area. Pre-

scribed fire is essential to reduce fuel loads in longleaf, slash and loblolly pine forests and other habitats, reduce wildfire threats and enhance wildlife habitats.

Plans to conduct contract prescribed burning on 7,219 acres of District land were made for late 2002 and during 2003. These activities will take place within the Yellow River, Choctawhatchee River, Holmes Creek and Econfina Creek water management areas.



Burning is one site preparation activity that is frequently undertaken to remove the competing vegetation before planting longleaf pine tubelings or wiregrass. Existing vegetation competes with the young plants.

Payments in Lieu of Taxes

Payments in lieu of taxes are made by the District to each qualifying county in which the District has acquired lands. These payments are allowed because lands that fall under public ownership are removed from the tax rolls. Since approval of the program in 1992 by the Florida Legislature, the criteria that establish eligibility have changed several times. During 2002, eight counties qualified for these payments: Bay \$4,453.76; Holmes \$1,997.13; Jackson \$8,373.69; Liberty \$6,560.03; Okaloosa \$916.80; Santa Rosa \$15,337.66; Walton \$15,560.60; and Washington \$35,475.83. The

total amount paid to these counties this year was \$88,675.50.

Type II Hunting Permits to Change

During 2002, the Florida Fish and Wildlife Conservation Commission (FWC) initiated changes in its Type II Wildlife Management Area program. District-owned lands will now fall under their Type I Wildlife Management Area program. Under the Type I program, the FWC will become responsible for hunting permits, rather than the District, and will print and distribute hunting maps as well as respond to all hunting inquiries. The District will continue to work closely with FWC on law enforcement, hunting seasons, protecting special use areas and enhancing the overall quality of hunting on District lands. It is anticipated the Type I program will go into effect on July 1, 2003.

Archaeological and Historical Surveys

District lands contain many archaeological sites that have not been recorded or surveyed. Over the past three years, the District has cooperated with qualified entities in applying for grant funds from the State of Florida's Division of Historical Resources to conduct archaeological or historical surveys on District lands.

In 1999, \$5,000 was received for work in the lower Yellow River area; in 2000, \$18,450 for Econfina Creek; and in 2001, \$20,500 for the Choctawhatchee River. In November of 2002, the District requested proposals for similar work to take place during 2003.

Environmental Resource Permitting

In 1993, the Florida Legislature approved legislation that required DEP and the water management districts to implement an Environmental Resource Permitting (ERP) program to provide for consistency throughout the state. ERP is a combination of dredge and fill and stormwater permits that incorporates sovereign lands determinations and authorizations. The Northwest Florida Water Management District was exempted from implementing such a program until July 1, 2003, because of funding constraints and other issues. All other water management

districts developed the ERP program by 1995.

Since millage limitations still do not provide the funding necessary to implement an ERP program in the northwest, DEP will undertake the implementation of the ERP for the northwest, subject to necessary approvals.

Permit Streamlining

Farm pond, dam safety and consumptive use permit processes were streamlined this past year to shorten the time required to process more routine permits. The Governing Board delegated the authority to approve certain routine permits to the Executive Director. This delegation has resulted in less paperwork and a quicker issuance of permits because they do not have to be presented to the Governing Board. An analysis of the delegation reflected that an average of 32 days

for processing each farm pond permit was being saved. Permits falling into the range that can be streamlined involve about 63 percent of all permits received by the District. All recommendations for denial of a permit must be reviewed by the Governing Board.

Well Permitting Requirements

Potable well construction (and abandonment) in areas of delineated ground water contamination in Jackson, Leon, Santa Rosa and Escambia counties will continue to be addressed through an agreement between the District and DEP. This program is described in the well permitting requirements of Chapter 62-524, Florida Administrative Code.

Permits Issued by County

(October 2001 to September 2002)

| County | Well Construction Repair and Abandonment | Consumptive use (new/renewal/ modifications) | Surface Water Management (standard/general) | Agricultural and Forestry Surface Water Management (standard/general) |
|--------------|--|--|---|---|
| Bay | 1,385 | 20 | - | - |
| Calhoun | 260 | 3 | - | 1 |
| Escambia | 1,701 | 14 | - | 4 |
| Franklin | 121 | 6 | - | - |
| Gadsden | 320 | 30 | - | 7 |
| Gulf | 256 | 6 | - | - |
| Holmes | 355 | 4 | - | 2 |
| Jackson | 1,030 | 37 | - | 3 |
| Jefferson | 161 | 2 | - | - |
| Leon | 887 | 3 | - | - |
| Liberty | 32 | 3 | - | - |
| Okaloosa | 1,395 | 11 | 4 | 11 |
| Santa Rosa | 1,209 | 5 | - | 4 |
| Wakulla | 254 | 3 | - | - |
| Walton | 794 | 13 | 2 | 12 |
| Washington | 460 | 8 | 1 | - |
| Total | 10,620 | 168 | 7 | 44 |

Contributions to Springs Recognized

In March, William Shirling, a former resident of Vernon, was recognized by the District and DEP for his contributions to protecting Florida springs. Shirling located, inventoried and photographed over 40 Floridan Aquifer springs that discharge into Holmes Creek between Vernon and Millers Ferry. Only a few local residents knew of the existence of these springs which range from seeps to second magnitude springs. The most authoritative reference on Florida springs, *Springs of Florida*, listed only three springs contributing to Holmes Creek.

Volunteer of the Year Awards

The 2001 Volunteer of the Year Award for assisting with District lands was presented to Larry Stotler of the Florida Trail Riders Association in January. He helped create an equestrian trailhead, camp and some 15 miles of well-marked and habitat-friendly horse trails on the District's Econfina Creek tract.

In October, the 2002 Volunteer of the Year Award was presented to Vernon Compton and the Western Gate Chapter of the Florida Trail Association. He organized volunteers from the trail group to design and develop the Garcon Point Hiking Trail. The trail meanders about three miles through scrub, flatwood and wet prairie habitats.

Employee Service Awards

As customary, each year employees who have achieved 5, 10, 15, 20 and 25 years of service are recognized by the Governing Board. For the first time, a 25-year award was presented during 2002. Employees recognized for their dedication to the District during 2002 included:

For 25 years of service: Gary Miller, Assistant Cartographer.

For 20 years of service: Sandra L. Barrett, Permitting Specialist; David L. Barton, Chief, Information Systems Bureau; Thomas R. Pratt, Chief, Ground Water Bureau; and Fernando E. Recio, Director, Resource Regulation Division.

For 15 years of service: William O. Cleckley, Director, Land Management and Acquisition Division; Terrall A. Peterson, Staff Assistant I; and Nicholas D. R. Wooten, Director, Field Services Section.

For 10 years of service: Larry R. Wright, Deputy Executive Director and Director, Administration Division.

For 5 years of service: Roger A. Countryman, Associate Hydrogeologist; Judith K. Duvall, Associate Hydrologist; V. Mark Herndon, Associate Lands Manager; Michael S. Lane, Forest Technician and Equipment Operator; Haynes J. Layfield, GIS Analyst; Robert F. Lide, Environmental Scientist; and Grady L. Marchman, Chief, Surface Water Bureau.

JEFFERSON, LEON AND WAKULLA
COUNTIES



John Crowe

Wakulla River

Nonpoint Pollution in St. Marks and Wakulla Rivers Watersheds

During the past year, the District completed a report on a multi-year investigation into the sources of nitrogen applied to the landscape in Leon and Wakulla counties, *Nutrient Loading as an Indicator of Nonpoint Source Pollution in the Watershed of the Lower St. Marks and Wakulla Rivers*. This study was funded in part by a U.S. Environmental Protection Agency (EPA) 319(h) grant administered by the Florida Department of Environment Protection (DEP) and the District's Surface Water Improvement and Management (SWIM) program.

This effort was precipitated by the observed increase in nitrate concentrations at Wakulla Springs between the 1970s and 1990s. While the level observed is well below the maximum allowed for drinking water, the increase seems to be fueling invasive plant growth in the spring and river. Inventoried nitrogen sources included atmospheric deposition, wastewater treatment facilities, on-site disposal systems (septic tanks), commercial fertilizer, livestock and sinking streams.



In April, Northwest Florida Water Management District Governing Board members were briefed on ground water and surface water interactions and the potential effects of increased nitrates in Wakulla Springs.

Fuller Road Stormwater Treatment Facility

The District continued working with Leon County to develop a regional stormwater treatment facility for the 330-acre Okeeheepke



Cherokee Sink

Basin in the southwestern portion of the Lake Jackson watershed adjacent to Fuller Road. In addition to its use as a stormwater treatment facility, the site also will be developed into a passive park with walking trails, interpretive signs that explain the stormwater treatment process and, possibly, a wildlife observation platform overlooking Meginniss Arm.

In 2002, preliminary designs were completed, information was gathered on additional environmental resources, an on-site public workshop was held, permit applications were developed, pre-permitting meetings were held and detailed designs were developed. District staff also secured a \$200,000 grant from EPA to assist with constructing site amenities, developing educational signs and improving the parking area to demonstrate stormwater-minimizing construction techniques. The project design will be completed in 2003.

Lake Jackson Restoration

A full color poster was developed and printed in 2002 that provides an overview of the Lake Jackson restoration project. The poster depicts the large-scale lake restoration project that took place from late 1999 through early 2001. Low lake levels, due to the drought and sinkhole activity, provided nearly perfect conditions for sediment removal from the lake bottom. About two million cubic yards of sediment were removed. Funding for the project was obtained incrementally, eventually exceeding \$8.2 million, and came from a number of contributing partners: Leon County, Florida Legislature, Florida Fish and Wildlife Conservation Commission, Florida Department of Environmental Protection

as well as the Northwest Florida Water Management District. The poster can be requested from the District's Public Information Office and is free of charge. Funding for this poster was provided through the District's SWIM program.

Additionally, a feature article about the Lake Jackson restoration project was printed in the September/October issue of *Land and Water* magazine. It presents a more detailed overview of this restoration effort.



Stormwater Flow Monitoring Program

The City of Tallahassee and Leon County requested that the District continue to operate a stormwater flow monitoring program that includes 31 surface water and rainfall data collection stations. An agreement to continue this program was approved in September with four additional stream monitoring stations being added for Leon County. The District has operated this stormwater monitoring network for 12 years. The program provides dry weather and storm event discharge data for major drainage basins in the city and the county. Data collected also provide continuous records of precipitation and surface water discharges. These data are used to design and implement improvements in the stormwater drainage system.

District Recognized by Commission

In February, the Tallahassee City Commission recognized the District for committing \$300,000 to construct an advanced wastewater treatment and reclaimed water distribution system for the Southwood development complex. This system will provide approximately 200,000 gallons of reclaimed water per day for golf course and landscape irrigation. It is an alternative to using Floridan Aquifer wells, as had originally been planned, and will help preserve ground water resources. This facility also will provide an additional 100,000 gallons of water for irrigation of state facilities in the area.

Land Acquisitions

In January, approval was given to purchase a 362.46-acre conservation easement in Wakulla County. The property is in the Spring Creek and St. Marks River basins and consists of upland and wetland habitats associated with the headwaters of Spring Creek. This conservation easement will help protect and recharge ground water, preserve other valuable natural resources and provide wildlife habitat and natural community protection. The District closed on the property in April. The "less-than-fee" land purchase was made with Preservation 2000 funds.

CALHOUN, FRANKLIN, GADSDEN,
GULF, JACKSON AND LIBERTY

COUNTIES



John Crowe

Scotts Ferry on the Chipola River

ACF Compact Negotiations

The Apalachicola-Chattahoochee-Flint (ACF) River Basin Compact Agreement was extended several times during 2002 to allow Florida, Georgia and Alabama more time to reach a consensus on the allocation of water from the ACF river system. Extensions occurred on January 15, March 18, June 17 and July 15. In early January, the deadline for the three states to reach an agreement was extended from January 31, 2003, to July 31, 2003. Throughout 2002, several meetings with Florida stakeholders were held as well as several Federal/State informational meetings in Florida, Alabama and Georgia.

Apalachicola to Receive Funds for Stormwater Repairs

In November, the Governing Board approved a cooperative agreement between the District and the City of Apalachicola that will provide the city with \$430,000 for repairs and improvements to its stormwater conveyance systems. Apalachicola will use the funds to retrofit and repair collapsed segments of the city's existing stormwater lines. These repairs will reduce flooding through the proper conveyance of stormwater. Nonpoint source pollution, which results from stormwater runoff, represents one of the primary water quality concerns for Apalachicola Bay. The District previously examined the impact of stormwater runoff on the bay by monitoring and characterizing the quality and quantity of runoff to evaluate existing stormwater effects and to assist the city with future stormwater management requirements.

Through the agreement, several sections of failed or degraded stormwater pipes will be replaced and water quality retrofits will be implemented. Two problem areas, in particular, will be addressed with these funds: the Battery Park area, which is adjacent to the bay, and collapsed pipe at Market Street and Avenue G. Funds provided through the District will be used for engineering services and the construction of drainage improvements and water quality treatment systems.

Tates Hell Restoration

The first phase of planned hydrologic restoration for Tates Hell State Forest began in January with approval of a cooperative agreement between the District and the State Division of Forestry (DOF). DOF assisted with the removal of invasive vegetation (by chopping and burning) that resulted from previous silvicultural activities in the Gator Creek and Gully Branch basins. The project will help reestablish native plant communities, restore natural wetland hydrology and is intended to improve the quantity and quality of freshwater inflows to the Apalachicola Bay.

Objectives of the 4,200-acre project include restoring hydrologic functions, reducing nonpoint source pollution, demonstrating locally-appropriate silviculture management practices that best protect the estuarine and coastal environment and improving habitat for terrestrial and aquatic life.



Tates Hell

The area is expected to return to the natural hydrology that existed prior to its being ditched and drained in the 1960s and 1970s. Historic streams and wetlands will be reconnected, returning sheet flow across former wet savannahs and generally rehydrating wetlands. These efforts are expected to return the area to more natural, native species, reduce nonpoint source pollution, improve water quality and deliver a more natural flow of fresh water that sustains aquatic habitat and healthy fisheries in the Apalachicola Bay.

An overview of the hydrologic restoration of Tate's Hell Swamp was featured in the November/December 2002 issue of *Tallahassee Magazine*. The article contained a number of maps and photographs.

Jackson Blue Spring Ground Water Basin Delineation Completed

As part of the Florida Springs Initiative, a delineation of the ground water basin for Jackson Blue Spring was completed. Jackson Blue is one of 33 first magnitude springs in Florida. First magnitude denotes a spring that discharges more

than 64 million gallons per day (100 cubic feet per second). Jackson Blue also suffers from elevated nitrate concentrations. Delineation of the basin will facilitate measures to protect and enhance the quality of water discharged from the spring.

Apalachicola River and Bay Oral History

Approximately 30 interviews were obtained and transcribed for the Apalachicola River and Bay Oral History project during 2002. The goal of the Oral History is to capture the story of the river and bay as they were in earlier decades. Those whose lives depended on the Apalachicola River and Bay related and described changes that occurred over many decades. The interviews addressed earlier settlements and predevelopment; transportation and development; oystering, shrimping, fishing and sponging; timbering, turpentine and Tate's Hell; flora and fauna; agriculture and husbandry; and trade and commerce. Work on this project will continue during 2003.

BAY, HOLMES, OKALOOSA, WALTON
AND WASHINGTON
COUNTIES



John Crowe

Pitt Spring

CBA Receives Assistance

The Choctawhatchee Basin Alliance (CBA) was granted \$200,000 in January to conduct an evaluation of water quality in the Choctawhatchee Bay watershed. CBA, which is associated with Okaloosa-Walton Community College, compiled existing water quality data and collected new data as part of this comprehensive assessment funded through a special legislative appropriation. This should lead to an understanding of water quality problems that may have led to fish kills and other adverse impacts.

Recent declines in the overall quality of the bay's water have increased concerns for the general health of this estuarine ecosystem. Observed changes include extensive algal blooms, fish kills and an unprecedented number of dolphin deaths. Comparisons of historic and present day water quality indicators suggest that increased nutrient and sediment loading (nonpoint and point sources of pollution) are the primary reasons for these deteriorating conditions. Sources of nonpoint pollution consist of urban stormwater runoff as well as sedimentation and agricultural runoff in the Choctawhatchee River basin.

To help protect the river and bay, the District has acquired more than 58,311 acres of environmentally sensitive land along the Choctawhatchee River and Bay through such land acquisition programs as Save Our Rivers, Preservation 2000, Florida Forever and Florida Department of Transportation mitigation.

Funds Provided to Valparaiso for Stormwater Facilities

In February, \$270,000 was approved to construct stormwater treatment facilities within the City of Valparaiso, pending agreement on final project designs and costs. Valparaiso began construction of stormwater treatment facilities that involve both detention ponds and wetland treatment systems. Best management practices for controlling nonpoint source pollution (stormwater runoff) also were planned. Throughout the development phase of the project, District staff designed and permitted the facilities through its Surface Water Improvement and Management (SWIM) program.

The stormwater treatment facility at Clearwater Park in Valparaiso has been completed and work was initiated on two additional facilities at the city's Lincoln and Glen Argyle parks. Work on this project also includes water quality and biological monitoring.



Clearwater Park

Part of the funding (\$90,000) is being provided by a grant from the U.S. Environmental Protection Agency's (EPA) 319(h) Nonpoint Program, which is administered by the Florida Department of Environmental Protection (DEP). Additional funding is being provided through a special appropriation from the Florida Legislature through the District. This stormwater project is part of the SWIM program being funded by the Florida Legislature to implement stormwater treatment and habitat restoration projects in the Choctawhatchee River and Bay watershed.

Sand Hill Lakes Project

Working with the Orange Hill Soil and Water Conservation District, the District completed erosion control and habitat restoration projects at seven sites on District lands in Washington County. These sites are located at Hammock, Hamlin and Rattlesnake lakes and at a steephead ravine north of Rattlesnake Lake. Work on this project also has included water quality and vegetation monitoring. Funding for construction and monitoring of these projects was provided by a \$300,000 grant from EPA's 319(h) program.

Martin Lake Restoration Assistance

Funding in the amount of \$25,000 for developing the restoration of Martin Lake was approved for the City of Springfield in March. The city will use the funds provided by the District to analyze degraded sediments. This study will help develop specific strategies to restore this highly impacted urban lake in Bay County. Approximately 30 sediment samples are planned.

Repair and Replacement of Water Supply Well

In August, the District approved the transfer of \$750,000 to the City of Crestview to help with repairs of a water supply well and the construction of a new one. This funding was appropriated by the Florida Legislature to assist the City of Crestview since this expenditure would have placed a tremendous burden on the city. Crestview is to assume the responsibility of bidding the project and will be responsible for obtaining all permits required.

Wetlands Mitigation Bank

A Wetlands Mitigation Bank in the Sand Hill Lakes region of Washington County is being developed by the District with the purchase of 2,155 acres in south-central Washington County.

To develop the bank, the District is required to obtain a Mitigation Bank Permit from DEP and the U.S. Army Corps of Engineers. Permit requirements include a detailed plan for the mitigation bank site and the establishment of mitigation bank credits. As mitigation bank credits are established, they become available for sale and purchase by private and public entities that require mitigation for wetland impacts. Funds derived from the sale of mitigation bank credits may be used to implement the bank or to initiate other banks, District land acquisitions or restoration projects that improve ecological conditions.

Each water management district has been encouraged to establish at least two wetland mitigation banks in accordance with a DEP rule and with Florida statutory requirements. The

bank primarily is intended to offset wetland impacts due to roadway improvements.

Monitoring in the Deer Point Lake Reservoir Watershed

In September, the District and Bay County renewed an agreement to continue operating a streamflow and rainfall monitoring program in the Deer Point Lake Reservoir watershed. This monitoring network includes six discharge stations and three rainfall stations and has been operated and maintained for the county by the District since 1998. These monitoring stations are intended to measure dry weather and storm event discharge, rainfall and stage levels in the watershed. Data measured provide information to quantify streamflow discharges in the basin during wet and dry weather conditions and can be used to manage water resources and identify areas that may require acquisition or additional protection.

Deer Point Lake Reservoir is the primary drinking water supply for Bay County and Panama City. Protection and management of this vital resource are priorities for the District.

Stormwater Flow Monitoring

In June, the District and Bay County agreed to continue stormwater monitoring. The District will continue operating two stormwater monitoring stations and two rainfall monitoring stations for an additional year. The monitoring stations are located near the City of Lynn Haven on drainage channels that flow into North Bay. The District will validate and archive the data in the District's surface water data base and provide the county with stage, discharge and rainfall data. These monitoring stations provide continuous records of precipitation and surface water discharges that will be used to assist the county with calculating stormwater runoff into North Bay and designing improvements to the stormwater drainage system.

Choctawhatchee Bay Big Picture Brochure

A Choctawhatchee Bay Big Picture brochure and a poster, developed through the District's SWIM program, was begun during 2002. To be printed in early 2003, these materials will be made available to the public free of charge. The brochure defines the Choctawhatchee River and Bay watershed and its



floodplain. Various habitats are discussed as are various species. Development in the watershed is reviewed along with potential pollution problems such as point (specific sources) and nonpoint (stormwater runoff) sources of pollution. The

brochure opens to a large, full-color satellite image of the Choctawhatchee River and Bay. Copies of the brochure may be obtained from the Public Information Office.

Florida National Scenic Trail

Approval was given for a segment of the Florida National Scenic Trail to pass through District lands within the Econfina Creek Water Management Area in Bay, Jackson and Washington counties. Approximately 18 miles of hiking trail, extending from the western boundary of the Econfina Creek Water Management Area at the State Road 20 trailhead to the northeast corner at the Scott Bridge Road trailhead, will be included. This segment of the trail is unique because of the high flora and fauna species diversity. When complete, the trail will be 1,300 miles long and will form one continuous trail from south Florida to the Gulf Island National Seashore. The Florida National Scenic Trail is one of eight national scenic trails in the United States and is part of the National Trails System designated by Congress.

Security and Maintenance for District Lands

The District entered into agreements with Bay and Washington County Sheriffs' Departments to provide law enforcement and security services for Pitt Spring, Econfina Creek canoe launch and the Choctawhatchee River, Holmes Creek and Econfina Creek water management areas. The District also entered into an agreement with a private entity for maintenance and site clean up services for 26 recreational sites in the Econfina and Choctawhatchee water management areas. These recreational sites receive a high volume of use by the public.

Additionally, another agreement with the Orange Hill Soil and Water Conservation District will provide the District with a public works inmate crew to undertake construction, installation, repair and maintenance of these same water management areas.

Land Acquisitions

In January, approval was given to acquire a five-acre inholding within the Econfina Creek Water Management Area. This acquisition enhances the District's water resource protection efforts for this important recharge area. The property is primarily xeric sand hill uplands associated with Hammock Lake in Washington County.

In July, the Governing Board approved the purchase of 2,155 acres, near Greenhead, Florida, in south-central Washington County for a mitigation bank. The property is located along the headwaters of Pine Log Creek, a tributary of the Choctawhatchee River. A diverse wetland property, it contains a large portion of the upper watershed of Pine Log Creek, a blackwater stream system, and many sand hill and swamp lakes. Pine Log Creek flows through southern Washington County's sand hill karst regions that overlay the Floridan Aquifer and continues southwest for approximately 15 miles until it empties into the lower Choctawhatchee River. The District closed on this parcel in October.

ESCAMBIA AND SANTA ROSA
COUNTIES



John Crowe

Escambia River

\$100,000 for Project GreenShores

In June, \$100,000 was approved for Project GreenShores, a shoreline restoration project to construct a salt marsh. The one-mile-long shoreline restoration project, located on the north shore of Pensacola Bay, is between the Pensacola Bay Bridge (Highway 98 bridge) and Pitt Slip Marina. Seagrass beds once grew along this area but they disappeared sometime between 1958 and 1961, probably because of dredging activities. Approximately 32 acres of combined seagrass and salt marsh habitat will be recreated along this stretch of shoreline.

The objective of Project GreenShores is to create a highly visible shoreline habitat restoration project to educate local residents about the value of natural shorelines and to serve as a model for other disturbed areas of estuarine shoreline along the Pensacola Bay. Restoring the shoreline will help improve water quality because erosion will be minimized and stormwater filtered before entering the bay.

\$90,000 Earmarked for Bayou Texar

Water quality and sedimentation problems in Bayou Texar will be addressed with a \$90,000 grant from the District to the City of Pensacola. Approved in July, these funds will be used to construct a stormwater retrofit facility at 17th Avenue. The facility will remove suspended sediment, nitrogen and phosphorus and reduce the amount of untreated stormwater runoff discharged to the bayou. Untreated stormwater discharges to Bayou Texar have resulted in water quality and sedimentation problems that date back to the 1980s. They also have resulted in periodic fish kills.

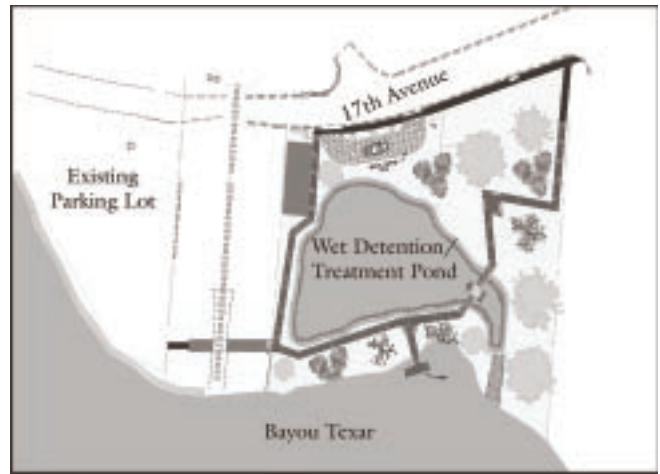
The 17th Avenue stormwater retrofit project will involve an innovative design that not only treats stormwater but creates an attractive waterfront park setting. Located close to a heavily used boat ramp and existing city parks, it will provide unique opportunities for environmental education for area residents.

The grant from the District will be used to acquire land for the facility or for actual construction. The total cost of the facility is estimated to be \$1 million. Remaining funds are being provided by the City of Pensacola, U.S. Environmen-

tal Protection Agency (EPA), Department of Environmental Protection (DEP) and Department of Community Affairs (DCA).

“L” Street Stormwater Facility

The objective of this project is to construct a pilot alum injection stormwater treatment facility to pretreat storm flows entering the upper portion of the Palafox drainage system. It will reduce total nitrogen, phosphorus and suspended solids loading to Pensacola Bay by chemically treating discharges to the “L” Street pond with aluminum sulfate. Secondary objectives of the project are to demonstrate an innovative stormwater treatment technology to local governments and to educate the public about the significance of nonpoint source pollution.



Alum treatment of stormwater consistently achieves an 85-95 percent reduction in total phosphorus, 65-75 percent reduction in total nitrogen, 95-99 percent reduction in turbidity and TSS (Total Suspended Solids) and 96-99 percent reduction in fecal coliform bacteria. Removal efficiencies of 50-90 percent are also achieved for heavy metals. Based on storm flow sampling values obtained by the District, it is estimated that pollutant loads reduced by this pilot project will be 25,617 pounds of BOD₅ (Biochemical Oxygen Demand), 415,932 pounds of solids, 6,031 pounds of nitrogen and 2,885 pounds of phosphorus. During this year, Environmental Research and Design, Inc., the consulting firm retained by the District to design the alum injection system under the District's general supervision, completed the conceptual, preliminary design of the system.

Inland Sand and Gravel Aquifer Water Resources Development Project

Work continued on implementing the Sand and Gravel Aquifer water resource development project in Santa Rosa and Okaloosa counties. This effort includes development of a ground water flow model in the area between the Blackwater and Yellow rivers. Activities completed during the year include a monitor well construction program and data collection quantifying ground water discharge from the Sand and Gravel Aquifer. Work continues on computer model development.

Inland Wellfield Progressing

Work on an inland Sand and Gravel Aquifer wellfield to provide the water needs for coastal Santa Rosa County progressed rapidly during 2002. Much of the transmission line from the wellfield to the coastal area has been installed and utilities are continuing to construct the new wells. The new wellfield is expected to begin operation early in 2003. The District helped secure nearly \$3 million in federal funding to assist with construction of the wellfield.

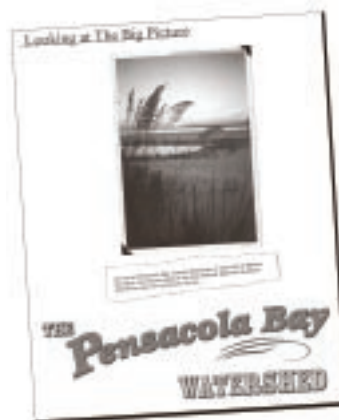
Floridan Aquifer Sustainability Model Analysis

The District continued work on a three-dimensional solute transport model of the Floridan Aquifer in coastal Santa Rosa, Okaloosa and Walton counties. The model is the first of two scheduled for development. The model, referred to as the western sub-regional model, is designed to simulate solute transport within the Floridan Aquifer system in Santa Rosa and Okaloosa counties. Activities completed during the year include calibration of the model to predevelopment conditions.

Pensacola Bay Big Picture Brochure

The Pensacola Bay Watershed Big Picture brochure was developed and printed during 2002. The brochure opens to a full-color satellite image of the Pensacola Bay. Topics discussed in

the brochure include development, stormwater runoff (or nonpoint source pollution) and point source pollution that can be traced to a single source. Other topics include industrial superfund plumes, ground water contamination, story of



Bayou Chico, preservation efforts, environmental protection and ecosystem health. The brochure is available free of charge from the District's Public Information Office. Funding for this brochure was provided through the District's Surface Water Improvement and Management (SWIM) program.

Land Acquisitions

In May, the District closed on a key tract of land within Jones Swamp. The 57-acre tract, which will be owned by Escambia County, was acquired with Florida Department of Transportation mitigation funds provided through the District. Escambia County has already acquired nearly 800 acres in Jones Swamp to help protect Bayou Chico and its water quality. This is an excellent example of local, regional and state governmental entities working together to bring a sensitive wetland area into public ownership. Acquisition of Jones Swamp will provide protection and preservation measures for both Bayou Chico and the Pensacola Bay System.

In November, 14 acres along the Blackwater River in Santa Rosa County were approved as a donation to the District from the Zarrow Investment Company. This donation is being made in cooperation with The Nature Conservancy. The donation will enhance the District's water resource protection efforts on the Blackwater River. It consists primarily of floodplain habitat with several acres of uplands to the west.

Northwest Florida Water Management District

Combined Balance Sheet

September 30, 2002

Assets

| | |
|---|-----------------------|
| Current Assets: | |
| Cash With Fiscal Agent | \$ 2,584,656 |
| Investments | 23,266,135 |
| Due From Other Governments | 1,704,851 |
| Due From Other Funds | 1,408,249 |
| Deposits | 205 |
| Prepaid items | 6,222 |
| Total Current Assets | \$ 28,970,318 |
| General Capital Assets (Net of Applicable Depreciation): | |
| Land and Improvements | 114,310,760 |
| Buildings and Improvements | 545,176 |
| Machinery and Equipment | 818,533 |
| Total General Fixed Assets | \$ 115,674,469 |
| Other Debits: | |
| Amount Available in Debt Service Fund | 5,004,156 |
| Amount to be Provided for Retirement of General Long-Term Debt | 2,577,213 |
| Total Other Debits | \$ 7,581,369 |
| Total Assets and Other Debits | \$ 152,226,156 |

Liabilities and Fund Equity

| | |
|--|-----------------------|
| Liabilities: | |
| Refundable Deposits | 19,363 |
| Accounts Payable and Accruals | 535,862 |
| Deferred Revenue | 1,646,651 |
| Due to Other Funds | 1,408,249 |
| Revenue Bonds Payable | 7,130,000 |
| Capital Lease Payable | 5,006 |
| Liability for Compensated Absences | 446,363 |
| Total Liabilities | \$ 11,191,494 |
| Fund Equity: | |
| Investment in General Capital Assets | \$ 115,674,469 |
| Fund Balances: | |
| Reserved: | |
| Prepaid Items | 6,222 |
| Debt Service | 5,004,156 |
| Land Acquisition | 1,149,238 |
| Land Management/Acquisition | 3,847,178 |
| Total Reserved | \$ 10,006,794 |
| Unreserved: | |
| Undesignated | 506,712 |
| Designated | 14,846,687 |
| Total Unreserved | \$ 15,353,399 |
| Total Liabilities and Fund Equity | \$ 152,226,156 |

Northwest Florida Water Management District

Financial Statement

For the Fiscal Year Ended September 30, 2002

Revenue and Other Receipts

Federal Sources:

| | |
|---|-----------|
| DEP/EPA-Ambient Monitoring of Surface Water | \$ 87,175 |
| DEP/EPA-Best Management Practice Application-Sand Hills Lakes | 130,185 |
| DEP/EPA-Nonpoint Source Implementation Grant | 94,321 |
| DEP/EPA-Nonpoint Source Nitrate Analysis | 10,357 |
| DEP/EPA-Nonpoint Source Implementation Grant- "L" Street Pond | 18,718 |
| DEP - Ambient Monitoring | 43,953 |
| DEP - Ambient Ground Water Monitoring | 115,926 |
| EPA - Choctawhatchee Watershed Mitigation | 25,819 |
| EPA - Fairpoint Utilities | 606,911 |
| DOS - Upper Choctawhatchee River Archaeological Survey | 20,500 |

Total Federal Sources **\$ 1,153,865**

State and Local Government Sources:

| | |
|--|------------|
| DEP - Apalachicola Freshwater Needs Assessment | \$ 213,781 |
| DEP - Statewide Surface Water Restoration Projects | 900,722 |
| DEP - Chapter 62-524 F. A. C. Program Implementation | 60,000 |
| DEP - General Appropriations | 1,282,426 |
| DEP - Florida Forever Trust Fund | 8,100 |
| DEP - Preservation 2000 Trust Fund | 415,866 |
| DEP - Water Management Lands Trust Fund | 6,079,028 |
| DEP - Surface Water Management Permitting Program (Wetlands) | 300,000 |
| DEP - Florida Springs Initiative | 69,860 |
| DOT - Mitigation Plan and Restoration Projects | 681,404 |
| DOT - Roadside Beautification Assistance | 136,357 |
| DOT - Mitigation Plan | 3,695,220 |
| DEP - Apalachicola-Chattahoochee-Flint Interstate Compact | 151,822 |
| City of Quincy Stream Flow and Rainfall Monitoring | 2,700 |
| Leon County Stormwater Monitoring | 107,901 |
| Bay County Stormwater Monitoring | 14,450 |
| Bay County Deer Point Watershed Monitoring | 28,788 |
| Other Funding | 7,909 |

Total State and Local Government Sources **\$ 14,156,334**

| | |
|---|----------------------|
| Agency Sources: | |
| Ad Valorem Taxes (.05 mill) | \$ 2,277,223 |
| Permit and Inspection Fees | 576,572 |
| Regulatory Penalties | 2,175 |
| Interest | 584,757 |
| Timber Sales | 8,930 |
| Miscellaneous | <u>19,306</u> |
| Total Agency Sources | \$ 3,468,963 |
| Total Revenues | \$ 18,779,162 |
| Other Sources: | |
| Sale of General Fixed Assets | 11,555 |
| Total Other Sources | \$ 11,555 |
| Balance Brought Forward from Prior Fiscal Year | \$ 22,495,644 |
| Total Revenue, Other Sources and Cash Balance | \$ 41,286,361 |
| <i>Expenditures</i> | |
| Salaries and Benefits | 4,836,773 |
| Contractual Services - Consultants | 1,537,027 |
| Operating Expenses | 1,244,618 |
| Grants and Aids | 975,771 |
| Operating Capital Outlay | 4,726,809 |
| Debt Service | <u>2,605,170</u> |
| Total Expenditures | \$ 15,926,168 |
| <i>Fund Balance</i> | |
| Reserved: | |
| Prepaid Items | 6,222 |
| Debt Service | 5,004,156 |
| Land Acquisition | 1,149,238 |
| Land Management/Acquisitions | <u>3,847,178</u> |
| Total Reserved | \$ 10,006,794 |
| Unreserved: | |
| Undesignated | 506,712 |
| Designated | <u>14,846,687</u> |
| Total Unreserved | \$ 15,353,399 |
| Total Expenditures and Fund Balance | \$ 41,286,361 |



District Offices

Headquarters

81 Water Management Drive
Havana, Florida 32333-4712
Tel. (850) 539-5999
Fax (850) 539-4380
Suncom 771-2080
(10 miles west of Tallahassee
on U. S. Highway 90)

Marianna Office

4765 Pelt Street
Marianna, Florida 32446
Tel. (850) 482-9522
Fax (850) 482-1376
Suncom 789-9522

Pensacola Office

2261 W. Nine Mile Road
Pensacola, Florida 32534-9416
Tel. (850) 484-5125
Fax (850) 484-5133
Suncom 690-5125



Annual Report 2002

Produced by the Northwest Florida Water Management District's Office of Public Information

Tracy Hunt

Design Artwork and Layout

Georgann Penson

Concept and Text

Photography and Editing

District Staff

*This document was printed at a cost of \$1.62 per copy to inform the public of the District's activities.
Printed on recycled paper. Annual Report 2003-1.*