



Pinellas

Vacant

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Hernando

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Letter from the Chair Fulfilling Our Core Mission

This edition of *WaterMatters Magazine* celebrates the 50th anniversary of the Southwest Florida Water Management District. Created in 1961 through legislative action to serve as the local sponsor for a series of federal flood control projects, the District's responsibilities have grown dramatically over time.

Recognizing that our water resources — our coasts, rivers, springs, lakes and wetlands — define the quality of life in Florida, the state Legislature in the 1970s created Florida's water law and established the modern-day water management districts to ensure Florida's water was protected, preserved and used in a sustainable manner. In doing so, the District's areas of responsibility expanded from flood protection to include water supply, water quality and natural systems.

Starting from scratch, the District created a water use permitting program to ensure a fair allocation of water resources while also protecting existing users and the natural systems. The early stormwater permitting program evolved into the current environmental resource permitting program, reducing the risk that new development will pollute water bodies or cause flooding to neighbors. We forged new scientific trails in the understanding of water resources and watersheds so that our decisions are based on the best available information.



H. Paul Senft Jr., Governing Board Chair

Partnering with local, state and federal governments and private entities, the District has helped to identify and develop sustainable water supplies, reduce the risks of flooding and pollution, and improve the identification of flood-prone areas, while also protecting, preserving and restoring environmentally damaged water resources. Thanks to extremely talented and dedicated staff and Board members, we have accomplished much in the last half century.

A milestone like a 50-year anniversary is not only a time to reflect on where we've been and what we've accomplished, but it also offers an opportunity to identify where we are going and what is yet to be done. Times change and each decade brings new challenges. Sometimes these challenges are driven by weather patterns such as droughts or hurricanes, and sometimes they are keyed by economic booms or busts.

With the economy currently mired in a slump, the District has seen its available financial resources significantly reduced. Despite the reduction in available funding, the District must and will meet its mission to ensure water supplies for current and future users while also protecting the water resources.

Working closely with District staff and new Executive Director Blake Guillory, we will continue to look for ways to streamline operations, using technology to become more efficient while maintaining the high level of service and collaboration for which this District is known. To effectively manage our water resources, we must efficiently plan for the future while retaining the flexibility to adapt to changing circumstances. We will continue to work with our partners and seek stakeholder input to our important resource management decisions.

I'm confident that we have talent, commitment and resources to meet the challenges of the next 50 years.

The 1960s — The District's Beginning

1960 Hurricane Donna produces hurricane-force winds in Florida, the Mid-Atlantic States and New England, and massive flooding in west-central Florida

1961

1964 The purchase of land for the Lake Tarpon Outfall Canal marks the first Four River Basins project land acquisition

1963

1961 The District is created by a special act of the Florida Legislature to be the local sponsor of the Four River Basins, Florida Project

The District's birth was prompted by a hurricane. Its initial mission was to provide flood protection; however, by the end of the decade, the fledgling agency was already maturing to address broad-based water management needs.

1960

During the 1960 hurricane season, Hurricane Donna hammered Florida with 128-mph sustained winds and massive flooding. Donna caused storm surges of up to 13 feet in the Florida Keys and 11-foot surges along the southwest coast of Florida. Portions of southern and western Florida received more than 10 inches of rainfall from the hurricane. Hurricane Donna still holds the record for retaining major hurricane status in the Atlantic Basin for the longest period of time.

"The District was formed as a result of Donna," said Dale Twachtmann, who served as the District's executive director from 1962 to 1972. "It was a real crisis. In Masaryktown, people lost their homes and their businesses. Farmland was underwater. Tens of thousands of chickens drowned during the hurricane."

On Aug. 28, 1961, the Board of Governors of the Southwest Florida Water Management District held its first meeting in Tallahassee. The Governing Board hired the District's first employee on Nov. 1, 1961: Clint Schultz, a bookkeeper, typist and overall office assistant. The second employee was Carolyn Stewart, a secretary for Joe Fuller, a Governing Board member who was also performing the duties of an executive director.

Twachtmann was the third employee to be hired in the District's early formation. When Fuller left the District in mid-1962 to become the executive director of the Florida Democratic Party, the Governing Board made Twachtmann acting executive director. He became permanent executive director on Feb. 13, 1963. "My job, as 'Employee Number Three,' was to get the word out on the Four River Basins

4

project to all the counties in the District," he said.



1962

Left to right, State Sen. James Connor, U.S. Congressman Sam Gibbons, Gov. Farris Bryant and Governing Board Chair Alfred McKethan oversee children cutting the ribbon for the grand opening of the District's Brooksville Headquarters.

Four River Basins

The District was created in 1961 by a special act of the Florida Legislature to be the local sponsor of the Four River Basins, Florida Project. This \$57 million flood control project, designed by the U.S. Army Corps of Engineers, encompassed a 6,000-square-mile area including the Hillsborough, Ocklawaha, Peace and Withlacoochee river basins. The project authorized construction of canals, flood control structures and water detention areas to provide flood protection for the region.

By March 1962, the District's 11 watershed Basin Boards were organized: Alafia River, Crystal-Homosassa River, Green Swamp, Hillsborough River, Northwest Hillsborough, Ocklawaha River, Peace River, Pinellas-Anclote River, Pithlachascotee River, Waccasassa River and Withlacoochee River.

The District's Governing Board and staff of three held monthly meetings in a rented Brooksville office. "We immediately began buying land for flood control projects," said Twachtmann. "We needed land for the Tampa Bypass Canal. We acquired large amounts of acreage for the Lower Hillsborough River Flood Detention Area."

The District quickly got to work on flood protection. Engineering and recreation

1964 Groundbreaking for main District office in Brooksville

1964

planning for the Tampa Bypass Canal began in 1963. In 1964, the Four River Basins project made its first land acquisition with the purchase of the land for the Lake Tarpon Outfall Canal. Construction broke ground on the first section of the Tampa Bypass Canal in 1966. Lake Tarpon Outfall Canal construction also began in 1966. The Tsala Apopka Outfall Canal broke ground in 1967 and was completed in mid-1968. Work on bridges for the Masaryktown Canal project began in mid-1969, and the first bridge was finished by the end of the year.

Water Supply

Memories of Donna's massive flooding quickly faded as the region slipped into drought. From

late 1962 into 1963, while Twachtmann told residents that the District was working hard on the Four River Basins project to provide flood protection, residents were struggling with a lack of rain.

"People were asking me why we were spending all this money on flood control when their problem was a lack of rain," said Twachtmann. "The problem at that time was drought, not flooding." Additionally, disputes among counties and public outcry about water supplies and pumpage impacts frequently occupied the District's agenda. In 1962, the District sought permission from the Legislature to weigh in on the potential impacts of pumpage in northern Tampa Bay and coastal counties. The District promoted legislation that allowed it to regulate water use, which was passed by the 1963 Legislature. At the same time, the District initiated water resource studies of problem areas.

Other evidence of water problems appeared. In 1966–1967, 15 new sinkholes appeared in northern Tampa Bay near pumping centers, indicating a serious drop in the water table. "People were telling me that their wells were going dry," said Twachtmann, "and they wanted to know what we were doing about it." The findings of the water resources studies along with considerable public debate on water issues resulted in the District designating itself a Regulatory District in 1968, 1966 Tampa Bypass Canal begins construction

1965

1966

1969 Passage of the Florida Governmental Reorganization Act creates the Department of Natural Resources

1966–1967 Fifteen new sinkholes appear in central Florida, indicating a serious drop in the water table

becoming the first water management district to utilize regulation in water resources management.

In 1969, the District requested Congress expand the scope of the Four River Basins project to add a "multipurpose" aspect that added water supply as a component of the project.

"That let us change the design of the Tampa Bypass Canal, and eventually it was a major help to the City of Tampa," said Twachtmann. "Tampa was running out of water, but the change to the project allowed the city to use some of the water from the canal for drinking water."

As water supply assistance developed into a core mission, the District's responsibilities expanded. Protection of the aquifer soon became an important District function through regulation of the regional wellfields serving the Tampa Bay metropolitan area.

Housing the District

Soon after the District's formation, the small rented office in downtown Brooksville was outgrown. Finding the land for the headquarters was a much different process than it is today. Alfred McKethan, the District's first Governing Board chair, got things started.

"Mr. McKethan called me and said, 'Dale, go out to the Hernando County Aviation Authority — I've told them you're coming — and pick out a nice piece of land that fronts on US 41."

McKethan, a Brooksville native, was president and chairman of Hernando

State Bank, president of the Florida Bankers Association and a former chairman of the Florida State Road Board. His newest focus became water when then-Gov. Farris Bryant appointed him to lead the District's first Governing Board.

Twachtmann paced off five acres on the Hernando Airport property and put in some stakes with red flags. Once the site was identified, construction could begin. The District built its first Brooksville Headquarters' office building in 1964; industrial buildings were added in 1966.

Natural Systems

Through the District's first decade, flood protection problems were met head-on with engineering solutions. Through the Four River Basins project, the U.S. Army Corps of Engineers designed and constructed canals, bridges and flood control structures. It was the District's job to acquire the land and agree to operate and maintain the project.

Struggling with the problem of supplying drinking water to the thirsty and growing Tampa Bay area, the commissioners of Hillsborough and Pinellas counties looked at using the northern section of Tampa Bay as a solution. Why not turn the Courtney Campbell Causeway into a dam and convert northern Tampa Bay into a freshwater reservoir? The county commissioners approached the District for help.

"We got in enormous trouble in a big hurry," said Twachtmann. "The fledgling University of South Florida objected to the idea. Other biologists started coming out of the woodwork, telling us what a bad idea this was."

The biologists pointed out that the area was the nesting grounds for the brown pelican. Scientists "began giving us lessons — in every public forum they could think of — on the biology of the bay. They said the project would create a big stinking mess," said Twachtmann. "It was a mammoth change in our early days. Most of us were engineers, but we began listening and realized they were probably right." The District Governing Board had already approved the project, and it was moving forward, but soon he and the small staff went to the Board and recommended canceling the project.

"I hated the fact that we just didn't know very much about the environmental side of the equation," said Twachtmann. "There were things to be considered about the saltwater environment, the freshwater environment, the birds and the critters; there were more matters to consider than just the engineering point of view."

This new perspective affected the District's oversight of the Four River Basins projects. The District began asking the Corps for changes to construction methods to ease environmental damage during construction. The U.S. Congress enacted the National Environmental Policy Act in 1965; and in 1968, Florida's new constitution made the protection of natural resources a state priority. The District subsequently hired its first biologist.

By the end of the 1960s, the District had grown from a fledgling agency with three employees and a singular mission of managing a U.S. Army Corps of Engineers' flood control project to an agency with more than 100 water management professionals wrestling with the issues of flood protection, water supply and understanding of the natural systems that were affected by the construction projects. The District was preparing to meet the new water management and environmental challenges of the 1970s.

The Tampa Bypass Canal's S-160 Flood Control Structure under construction in 1968. The bulk of the canal system was built in the District's first decade.

The 1970s — An Environmental Awakening

1972

1971 Aerial mapping and floodplain delineation programs begin

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1973 Governing Board members appointed to water management districts statewide

1973

1974 Rules for consumptive use permits developed

1974

1972 "Year of the Environment," including the Florida Water Resources Act

1974 Voter referendum for District taxing authority

A s the District stepped into its second decade, the hints of change that began in the late 1960s moved to the forefront.

1970

The flood protection mission that sparked the District's birth continued on schedule. By 1970, major flood protection projects were complete, or nearly so in Pinellas, Citrus, Hernando and Pasco counties. The Tampa Bypass Canal, by far the District's largest flood control project, was well under way. In 1971, aerial mapping and floodplain delineation programs began in earnest.

But dry years plagued the region, following on the heels of 1960's Hurricane Donna, returning in the mid-1960s and again in 1970. Florida's population grew from 4.9 million in 1960 to 6.8 million by 1970. New residents and more industry were increasing demands on the state's water supply.

As damage to the natural environment became more and more evident, state leaders took action. Four major pieces of legislation were enacted by the 1972 Legislature: the Water Resources Act, the Environmental Land and Water Management Act, the Comprehensive Planning Act and the Land Conservation Act. These laws are based on the philosophy that land use, growth policy and water management cannot be separated, a theme that continues to this day.

Water Resources Act

Until 1972, only two water management districts existed: the Southwest Florida Water Management District and the Central and Southern Florida Flood Control District, the predecessor to the South Florida Water Management District. The Water Resources Act established six water management districts, encompassing the entire state, and created policymaking boards for each district. The act also authorized district regulation of well construction, management and storage of surface waters, and consumptive use of waters of the state. The Legislature provided a funding mechanism for the new districts as well. Those six districts became the current five in 1975 when two were combined to

form the South Florida Water Management District. A constitutional amendment, passed by statewide referendum in 1976, granted ad valorem taxing power to the water management districts.

The Southwest Florida Water Management District was already involved in water use regulation and water supply planning, but the act formalized water management district roles in public law from strictly flood control to a more broad-based policy of resource management and service to the public.

Don Feaster was the District's executive director from 1972 to 1981, and he saw the District's growth firsthand.

"Before the Water Resources Act was passed, we had already begun regulating wellfields," said Feaster. "The act gave us statutory authority to do what we had already been doing."

Diminishing groundwater resources wasn't a new problem for the region in the 1970s. Feaster remembered talking to local people who said the water problems had started in the 1930s when St. Petersburg drilled wells in Hillsborough County.

"Although most of our budget was for flood control projects," said Feaster, "the previous executive director, Dale Twachtmann, believed regulating groundwater withdrawals was our greatest challenge." The Water Resources Act went beyond flood control and groundwater regulation, defining four areas of responsibility for the state's water management districts: flood protection, water supply, water quality and natural systems management. Following up on the new statutory direction, the District expanded its regulatory program into a consumptive use permitting program that encompassed the entire District.



The Masaryktown Canal was completed in the early 1970s.

Green Swamp Protection

The Environmental Land and Water Management Act provided for state designation of Areas of Critical State Concern. These areas are accorded greater state oversight of planning and land development regulation because of their important environmental significance. The Green Swamp is one of four such designated areas in the state.

Green Swamp lands were initially purchased to convert them into a series of flood detention areas. Later, the District took a nonstructural approach to flood protection by leaving the Green Swamp in its natural state. The Green Swamp has the ability to store surface water and slow the flow of floodwaters while sustaining rivers and streams. The makeup of the Green Swamp puts pressure onto the aquifer, helping to push water through to the Gulf of Mexico. The water flowing from the Green Swamp is generally of higher quality than other watersheds. This is due to the Green Swamp being largely undeveloped as well as its lengthy surface water detention time.

6

1975 Water Resources Act reduces six districts to five

1975

1975 Green Swamp named Florida's first Area of Critical State Concern

1976

1979 Major river corridors and flood-prone areas mapped and provided to counties and cities

1975 Consumptive use permits first initiated

1977 Tampa Service Office constructed

Conservation and Planning

The Land Conservation Act established a land acquisition program to conserve and protect environmentally endangered lands in Florida and authorized the sale of state bonds to purchase them. Florida citizens approved a constitutional amendment authorizing \$240 million in state bonds for the Department of Natural Resources to purchase environmentally sensitive lands.

The Comprehensive Planning Act asserted a state interest in state and local planning, requiring the state to prepare a state plan. The Legislature later rejected the submitted plan, but the stage was set for state oversight of development.

All the attention on environmental issues in the 1970s gave the District a higher profile than it had enjoyed in its first decade. According to Feaster, that helped keep the organization on an even keel. Before the District had taxing authority, the fight for funding was an annual chore with an uncertain end. The continuation of what was known as the "water wars" increased the District's profile even more.

The Five-Party Agreement

Long before the passing of the Water Resources Act, local governments in the Tampa Bay area — Pinellas, Hillsborough and Pasco counties and St. Petersburg — had disagreed over access to a limited water supply. Conflicts arose over water use in the 1960s and even earlier. Pinellas County's groundwater began to show signs of saltwater intrusion by the 1930s, forcing St. Petersburg to look inland to secure water from Hillsborough and Pasco counties.

"In the 1920s, the city of St. Petersburg put in wellfields, but they went salty," said Feaster, "so they kept moving north. In the 1930s, they bought property in Hillsborough County, and in the years ensuing pumped more and more."

Pinellas County and St. Petersburg populations continued to grow rapidly. To meet the growing demand, St. Petersburg and Pinellas simply increased the amount of water they pumped from Pasco and Hillsborough. But wetlands that had



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One of the District's largest flood control systems, the Tampa Bypass Canal and its flood control structures, became fully operational in the 1970s.

existed for years were vanishing. Lake levels were dropping and sinkholes were developing. Concentrated wellfields and increasing withdrawals were having clear environmental consequences. Pinellas and St. Petersburg wanted to use the water resources that they bought and developed, while the District, Hillsborough and Pasco counties, and environmentalists wanted to protect the environment. The fight went on for years, but no cooperative efforts were undertaken to resolve the water supply and resource issues. The five parties who were in disagreement needed to come together.

The District brought the three counties and the city together in what became known as the "five-party agreement."

The five-party agreement led to the creation in 1974 of the West Coast Regional Water Supply Authority. The water supply authority was formed as a way for Tampa Bay's leaders to cooperatively develop new water supplies. The Legislature believed that creating the authority would eliminate the competition for regional water supplies.

Development of new wellfields in the area allowed groundwater cutbacks at the older wellfields in the late 1970s, which helped the environment to recover somewhat in these areas. But the first round of conflict and resolution was just a preview of what was to come.

Florida grew from 6.8 million people in 1970 to 9.7 million in 1980, while the District grew in scope and responsibility with the passage of the Water Resources Act and went from 116 employees to 269. In the 1970s, there was a growing recognition that the integration of water supply, flood protection, water quality and natural systems management is essential to effective planning and management of the resource. The struggle to manage increasing demands for water against long-term sustainability would continue well beyond the 1970s.

The 1980s — Water Quality and Natural Systems

1982 The constitutionality of the District's taxing power is affirmed by the Florida Supreme Court

1984 Warren S. Henderson Wetlands Protection Act passes

1984

1981 The creation of the "Save Our Rivers" program allows the District to acquire and manage public lands

1981

1983 The state Legislature passes the Water Quality Assurance Act

1983

The 1980s was a decade of added responsibility for the District. A number of environmental programs were created by the Legislature during these years and, as a result, staff realigned priorities to accomplish multiple significant undertakings.

Save Our Rivers

1980

The decade began with the creation of a statewide program in 1981 that helped guide the District's future land management activities. The Water Management Lands Trust Fund, commonly referred to as the "Save Our Rivers" program, allowed the District to acquire lands for the purposes of water management, supply and protection. Prior to this program, the District focused mainly on the flood control benefits of lands.

District staff began to evaluate potential land purchases for a number of important factors, including the preservation and/or restoration of natural systems, water quality enhancement, structural flood control, recharge potential, potable water supply, water conveyance, natural flood control and recreation. Through the Save Our Rivers program, the District was able to acquire approximately 112,600 acres in fee simple and 6,266 acres of less-than-fee lands. Fee simple is the purchase of lands outright. Lessthan-fee is the purchase of limited property rights, allowing the District to acquire only the right to conserve and protect resources on a property, while

still keeping the land under private ownership.

The first major land acquisition using Save Our Rivers funding was the Green Swamp West property. The protection of this vital river corridor has been essential to the District's water management activities over the years. The land's ability to slow the flow of floodwaters, sustain rivers and streams, and store surface water makes it a valuable acquisition of the Save Our Rivers program.



Through the Save Our Rivers program, the District acquired Green Swamp West to assist in protecting the region's water resources.

This program was one of many handed to the state's water management districts during the decade. "It was a compliment to the District that our Legislature had the confidence to give us so many programs," said Gary Kuhl, the District's executive director from 1983 to 1988. "Our staff saw the logic behind these initiatives and worked hard to get everything implemented in a timely manner while being good stewards of taxpayer dollars."

District Changes

In addition to programmatic changes, the District underwent some significant structural changes in the 1980s. During this time, 16 permanent and mobile buildings were added to the Brooksville Headquarters, including Buildings 3 and 6. In 1987, the District also opened the current Bartow Service Office to serve local residents.



Construction on Brooksville's Building 4 began in 1989.

Water Quality Act

The District's mission to protect water quality was strengthened in 1983 with the passing of the state's Water Quality Assurance Act. This act came shortly after the Task Force on Water Issues reported that the threat of groundwater and surface water contamination had become a major problem. To combat this situation, the act established a fund for cleaning up pollution. As a result, one task passed on to the water management districts was the mandatory plugging of all known abandoned artesian wells.

This new responsibility had a major impact on the water quality of our state. Before this act, abandoned artesian wells could be left unplugged. In that condition, the wells became a source of water contamination by allowing poor quality water from lower aquifers to invade the drinking water of the Upper Floridan aquifer. The mandatory plugging of these wells led to cleaner drinking water for District residents. **1987** The current Bartow Service Office opens in May to provide assistance to local residents

1986

1989 Stormwater research is initiated in response to new laws requiring the District to initiate nonpoint-source pollution control technology

989

988

1986 Isolated wetlands legislation is approved by the Governor

1987 Legislature passes the Surface Water Improvement and Management Act

987

Wetlands Protection Act

1985

The next year, as a result of an increasing loss of wetlands, the state passed the Warren S. Henderson Wetlands Protection Act of 1984. This legislation addressed the decrease in and damage to Florida's wetlands due to construction, forestry, mining, drainage and other previously unregulated activities. The act formally recognized the value that these wetlands have in protecting water quality and preserving the state's natural habitat.

As a result of the Henderson Act, District staff began to regulate activities that impact our wetlands. The protection required by this act eventually helped to develop the District's current Environmental Resource Permitting program.

"At the time, we were just beginning to realize the importance of these small wetlands to birds and other wildlife," said Kuhl.

SWIM Program

In 1987, the District's role in preserving natural systems was enhanced when the Florida Legislature passed the Surface Water Improvement and Management (SWIM) Act to protect, restore and maintain Florida's highly threatened surface water bodies. Under this act, the state's five water management districts identified a list of priority water bodies within their authority and implemented plans to improve them.

SWIM projects restore degraded or destroyed natural systems, enhance existing habitats and promote the preservation of natural habitats. There are currently 10 priority water bodies protected by the District's program, which,

since 1987, has restored more than 6,000 acres of freshwater, estuarine and upland habitat. In addition, SWIM projects have provided water quality treatment to more than 50,000 acres of watershed.



Sarasota Bay is one of the District's 10 SWIM priority water bodies.

When looking back, Kuhl is proud of the progress made by staff during his tenure.

"We recognized a number of environmental challenges and brought

them to the table for discussion," said Kuhl. "Our ability to manage all of the programs handed to us by the Legislature was a great accomplishment. During the 1980s, the District changed from a small local agency to the beginning of a major positive player in water management."

Cockroach Bay is located in Tampa Bay, the District's highest priority SWIM water body, and is one of the largest, most complex ecosystem restoration projects ever developed for the Tampa Bay estuarine ecosystem.



The 1990s — Protecting Florida's Water

1990 The state Legislature passes the Preservation 2000 Act

1991

1992 The Southern Water Use Caution Area is established by the Governing Board

1993

1992 Construction of Building 4 at the District's Brooksville Headquarters is complete

1992

uring the 1990s, the District identified, planned and executed a number of programs and partnerships to implement changes necessary to protect our precious natural resources for future generations. It was a decade of proactive measures to promote the sustainability and growth of our area.

Preservation 2000

1990

The 1990s began with the Florida Legislature passing the Preservation 2000 (P2000) Act. This act allowed the District to acquire and protect environmentally sensitive lands that were in imminent danger of being developed. The lands protected by P2000 have provided our District with groundwater protection as well as endangered and threatened species habitat for the past 20 years.

SWUCA Established

The Southern Water Use Caution Area (SWUCA) was established by the District's Governing Board in 1992. A water use caution area is designated when water resources are or will become critical for a certain area in the next 20 years.

The SWUCA encompasses approximately 5,100 square miles and includes all of DeSoto, Hardee, Manatee and Sarasota counties as well as portions of Charlotte, Highlands, Hillsborough and Polk

counties. It was established to address abnormally low flows in the upper Peace River, declining lake levels in the Ridge area along Polk and Highlands counties and advancing coastal saltwater intrusion in the Floridan aquifer system due to decades of groundwater overpumping.

District staff identified the challenges of the SWUCA and spent more than a decade working on the creation and implementation of a recovery strategy for the area. The result of this commitment to water resources planning was a much brighter outlook for the future of water resources in the southern portion of our District.

Minimum Flows and Levels

During the 1990s, it was determined that Florida's surface and groundwater systems were being threatened by groundwater overpumping. In 1996 and 1997, the state Legislature made significant amendments to a statute that required water management districts to set minimum flows and levels on priority water bodies.

A minimum flow or level, commonly referred to as an MFL, is the limit at which further withdrawals will cause significant harm to the water resources or ecology of the area.



10

Abnormally low flows of the Peace River were one of the main catalysts for the development of the Southern Water Use Caution Area.



1994

The District is in the process of raising the levels of La upper Peace River.

Since the District's MFL program began in 1996, it has protected more than 180 water bodies with MFLs.

"We expect by 2015 to have set more than 250 MFLs," said Marty Kelly, District minimum flows and levels program director. "This includes MFLs on all of the first-magnitude spring systems, major river systems and estuaries in our District."

If actual flows or levels are currently below, or are expected to fall below within the next 20 years, established MFLs, the District is required by state law to develop and implement a recovery or prevention strategy. "The refocusing of the state Legislature during the 1990s prompted the District to aggressively set MFLs to protect our water bodies from harm," said Kelly.

Partnership Agreement

May 27, 1998, was a historic day for the District and major water suppliers in the Tampa Bay area. This was the day that the Partnership Agreement was signed, marking the beginning of the end to the area's decades-long "water wars." 1996 The completion of the Northern Tampa Bay Water Resource Assessment Project 1996

1999 The establishment of the Florida Forever Program

1995 Environmental resource permitting is created through a decision by the Legislature that calls for consolidated permitting

1995

ke Hancock to meet the minimum flows for the

Disagreements between local governments over access to the area's limited water supply began decades before but were amplified in the mid-1990s due to increased demand and decreased rainfall.

At this point, the District determined that water supply pumping was creating environmental damage to local lakes and wetlands and saltwater intrusion was beginning to threaten major water supply sources. The District concluded that pumping decreases from the wellfields located in Pasco, Pinellas and Hillsborough counties were necessary to fix the situation. This resulted in legal and regulatory conflicts that made little headway and led to a decision that another approach may be more effective.

The District decided to try a partnership. In 1997, staff began working with the then-West Coast Regional Water Supply Authority and its member governments to find a mutually acceptable resolution. The resulting agreement created a partnership between the two agencies

that transformed the Authority into Tampa Bay Water and created a plan to construct new alternative water supplies to resolve the area's water supply problems.

1997

As part of the agreement, pumping in the area's central wellfield system would be reduced by more than 40 percent over the next 10 years. Additionally, Tampa Bay Water committed to producing at least 85 million gallons per day in new water supplies. More than half of the new supply went toward reducing groundwater pumping in the wellfield system.

The District also provided \$300 million in funding for the development of alternative water sources and conservation projects to reduce demand for water and increase efficient uses. The result was more than a billion dollars worth of new water supply facilities needed for sustainability. The District funds were available because of the foresight of the Governing Board and its Basin Boards in 1993. At that time, the Governing Board dedicated funds to developing new water sources, making it possible for the District to offer the Partnership Agreement in 1998.

"This agreement will have positive effects for decades, if not centuries," said Sonny Vergara, the District's executive director from 1997 to 2003. "It has and will continue to help provide an adequate, environmentally sensitive and healthy supply of water so badly needed for the future of the Bay area."

Florida Forever

The decade ended much as it began — with the protection of crucial lands in our District. In 1999, the state established the Florida Forever

1998 The signing of the Partnership Agreement helps lead to the creation of Tampa Bay Water

998

Program to succeed P2000. Florida Forever provided funds to purchase lands to build and promote water resources and water supply development. In addition, lands were able to be purchased for restoration, Surface Water Improvement and Management projects, conservation and recreation.

Through this program, District staff was able to proactively plan for future water resources protection by acquiring environmentally significant lands.

Planning became a primary focus of the District during the 1990s. In one decade, staff implemented two major land protection programs, planned the recovery of the southern portion of the District, protected water bodies with the development of MFLs and ensured water supplies for the Tampa Bay area with the signing of the Partnership Agreement. It was a decade of unprecedented long-term planning and extraordinary foresight. The determined commitment and hard work of staff ensured the ability to provide a sustainable future for the District's water resources and its residents.



Local governments signed the Partnership Agreement in 1998 to resolve the area's water supply problems.

The 2000s — Regional Cooperation

2001 District becomes FEMA cooperating technical partner

2004 Hurricanes Charley, Frances, Ivan and Jeanne crisscross the state

2003

2004

2000-2001 Drought of the Century

2000

2002 Wysong-Coogler Water Conservation Structure completed

2002

While much of the 1990s was characterized by the contentious "water wars" and the signing of the historic Partnership Agreement, the 2000s ushered in a decade of regional cooperation focused on solving the area's greatest water supply challenges through the development of large-scale alternative water supply projects.

As a result of decades of groundwater overpumping, the District focused its efforts on restoring water resources in the Northern Tampa Bay area and the Southern Water (Jse Caution Area.

Water Supply Development

The first piece in the Tampa Bay water supply puzzle was put into place in 2002 with the completion of the 66 million gallon per day (mgd) surface water treatment plant and interconnecting pipelines, followed by the completion of the \$146 million C.W. "Bill" Young Regional Reservoir in 2005. Located in southern Hillsborough County, the 15-billion-gallon reservoir can provide 25 percent of the region's drinking water for more than six months and helped Tampa Bay Water begin reducing the amount of water pumped from the regional wellfields. The District contributed \$26 million in Florida Forever funding toward the purchase of 5,515 acres, in cooperation with Tampa Bay Water, to build the 1,100-acre reservoir. The property is now the District's Chito Branch Reserve.

In 2008, Tampa Bay Water's Tampa Bay Seawater Desalination Plant in Apollo Beach became fully operational, with the ability to provide up to 25 mgd of



The C.W. "Bill" Young Regional Reservoir is the result of the historic Partnership Agreement, which sought to reduce groundwater pumping in the regional wellfields by developing alternative water supplies.

drinking water. As the largest seawater desalination plant in North America, the plant can provide up to 10 percent of the Tampa Bay region's drinking water supply. In accordance with the Partnership Agreement, the District contributed \$85 million plus \$10.34 million in interest once all of the plant's milestones were met.

In 2011, Tampa Bay Water is scheduled to complete an expansion of the surface water system that will add an additional 25 mgd of supply. This expansion will enable additional water to be withdrawn from the Hillsborough River and Tampa Bypass Canal during high-flow periods by increasing pumping capacity at existing pump stations, adding two new pump stations and increasing the surface water treatment capacity to 99 mgd. The Dis-

trict provided \$105 million of cooperative funding toward the expansion in addition to \$22 million in state funding.

"With the reservoir, desal plant and surface water treatment plant in place, the Tampa Bay area now has one of the most diverse water supply systems in the world," said Ken Herd, water supply program director. "By utilizing traditional groundwater with a mix of alternative sources such as reclaimed, surface and desalinated water, we now have enough water supplies to meet the needs of the region's residents for 20 years while achieving much needed environmental recovery."

The Peace River Manasota Regional Water Supply Authority also completed its sixbillion-gallon reservoir and expanded its treatment facilities in 2009 at the District's RV Griffin Reserve in DeSoto County. The reservoir, which captures excess flows from the Peace River, serves the residents of Charlotte, Sarasota and DeSoto counties. The District contributed more than \$28 million toward the project as well as nearly \$16 million from the state Water Protection and Sustainability Trust Fund.

The first phase of the Northern Tampa Bay recovery was completed in 2010 when Tampa Bay Water successfully reduced regional wellfield pumping to 90 mgd. Later that year, the Governing Board adopted the Phase 2 Recovery Rules. The second phase of the recovery will encompass 10 years, during which the effect of wellfield withdrawals at 90 mgd will be evaluated.

"Our legacy is that we substantially solved the water supply problem," said David Moore, District executive director from 2003 to 2011. "We've got adequate water supplies through 2030 and laid the groundwork to get out to 2050 while restoring the natural systems."



12

Tampa Bay Water's Tampa Bay Seawater Desalination Plant remains the largest seawater desalination plant in North America. **2005** Tampa Bay Water's C.W. "Bill" Young Regional Reservoir completed

SWUCA Recovery Strategy

resource analyses, and policy debates culminated with the Governing Board

Nearly a decade of public workshops, water

approving the Southern Water Use Caution

Area (SWUCA) Recovery Strategy in 2006,

ensuring that adequate water supplies will

which outlined the District's strategy for

be available to meet growing demands,

while at the same time protecting and

restoring the water and related natural

Throughout the decade, the District embarked on a number of projects and

initiatives to help meet the goals of the

establishing the Facilitating Agricultural

Program, restoring lakes along the Lake

Hancock Lake Level Modification Project to meet the minimum flows in the upper

"Although we've laid the groundwork for the

SWUCA recovery, this is still a long-term

focusing our attention on," said Richard

counties, saltwater entering the aquifer

Conservation Programs

will still present a long-term water supply

Another way the District sought to solve

the region's water supply challenges was

to develop a number of core conservation

In September 2002, The District launched

project in the Pinellas-Anclote River Basin

to encourage hotels and motels along the

beaches to conserve water. The linen and towel reuse program quickly expanded

the Water Conservation Hotel and Motel

Program (Water CHAMPSM) as a pilot

Owen, District Regulation Division interim

director. "While we've been able to reduce

the rate of saltwater intrusion in the coastal

problem that we will need to continue

Wales Ridge and developing the Lake

Resource Management Systems (FARMS)

recovery strategy by 2025, including

resources of the area.

Peace River.

challenge."

programs.

2005

2008 Tampa Bay Water desalination plant fully operational

2007

2006 Governing Board approves SWUCA Recovery Strategy

2006

2008 Lake Panasoffkee restoration completed

Districtwide and the corresponding Water Program for Restaurant Outreach (Water PROSM) was added in 2008.

In order to finally shed the "rocks and cactus" perception that was associated with "Xeriscape," the District partnered with the University of Florida's Institute of Food and Agricultural Sciences in 2004 to promote Florida-Friendly Landscaping[™]. The program emphasizes nine easy-to-accomplish principles that, when practiced, can conserve water and reduce pollution in our water bodies.

In 2009, Florida Water StarSM was launched as a voluntary certification program for builders, developers and homeowners to encourage water efficiency in appliances, plumbing fixtures, irrigation systems and landscapes.

Northern District Projects

Two major projects were completed in the northern portion of the District: the Wysong-Coogler Water Conservation Structure and the Lake Panasoffkee restoration project.

The original Wysong structure was built in 1965 to help conserve water in Lake Panasoffkee, the Withlacoochee River and the Tsala Apopka Chain of Lakes during the dry season. The structure was in place until 1988 when it became irreparable. In 1999, the Withlacoochee River Basin Board directed staff to replace the structure. The new structure was completed in 2002 and was renamed the Wysong-Coogler Water Conservation Structure in honor of Monroe "Al" Coogler, a former Governing Board member who was instrumental in getting the replacement structure built.

In 2008, the District completed the largest construction project ever undertaken by the agency. The \$26.9 million, 10-year

2010 Tampa Bay Water successfully reduces regional wellfield pumping to 90 mgd

2009



2009 Peace River Manasota Regional Water

Supply Authority Reservoir completed

2008

The District encourages outdoor water conservation by partnering with the University of Florida's Institute of Food and Agricultural Sciences to promote Florida-Friendly Landscaping[™].

Lake Panasoffkee project restored the lake's shoreline and historic fish bedding areas by removing approximately 8.3 million cubic yards of sediment from more than 1,744 acres of lake area. The project also improved navigation of the third largest lake in west-central Florida.

According to Mike Holtkamp, Operations, Maintenance & Construction Division director, the two projects have helped regulate water levels and improve the ecological health of the lake.

"The construction of the Wysong-Coogler structure has allowed the District to more reliably divert flows from the Withlacoochee River into the Tsala Apopka Chain of Lakes and to exercise control over water levels on Lake Panasoffkee," said Holtkamp. "And all indications to date are that the restoration project has been a tremendous success: the water is clearer, eelgrass is thicker and fisheries are richer."

The Future

Although the current economic climate and budget reductions will likely play a major role in shaping the immediate future of the agency, long-term water supply development, resource restoration and emerging water quality issues will continue to present challenges for the District to solve.

The Lake Panasoffkee restoration project removed 8.3 million cubic yards of sediment from the lake.

Technology Changes Play Significant Role in Daily Operations

dvanced technology has reached nearly every single aspect of the District in one way or another throughout the organization's history, most notably in the past two decades.

"The technological changes during my tenure alone were like going from horse and buggy to putting a man on the moon in a very short period of time," said Pete Hubbell, District executive director from 1988 to 1997.

Information Resources

In the early 2000s, the District's operating system consisted of an IBM mainframe that was used primarily for regulatory, permitting, financial systems and human resources. The geographic information system (GIS), networked desktop computers, email system and website were separate components.

"Compared to where we are today, the system was very basic and disconnected," said Terry Redman, former Information Resources director.

By 2003, the District began working on an initiative that integrated several different data sources into one application. Users are now able to access information such as regulatory permit information or water management hydrologic data and view it spatially. This system allows permit applicants to apply for or manage their requests online as well as search for permitrelated information based on various criteria.

Office operations also changed significantly with the introduction of electronic support. Over time, tasks involving mail, timecards, leave requests, pay stubs, conference room reservations and even performance appraisal processes became computer-based.

In addition, video teleconferencing has allowed staff to connect for meetings and share information via video rather than traveling to different locations. The District launched this feature in 2002 with four stations and currently has 14.

Mapping and GIS

Technology advances in mapping paired with the introduction of GIS software have enabled the District



to collect, store and publish



Gary Kuhl, District executive director from 1983 to 1988, manually operates the Bryant Slough Water Conservation Structure before it was set up for remote operation.

the most accurate and detailed map information available.

In 1987, the District implemented its first GIS software. Along with the ability to create maps, this new software allowed the District to analyze and store location-based information.

"The real advantage GIS had over the District's original computer mapping software was that not only could you show where something was located but you could describe it," said Steve Dicks, former District Mapping & GIS program director who recently became the District's Information Resources Department director.

In addition, GIS software enabled staff to create location-based queries, such as finding all the permits within a specific watershed or identifying wells in groundwater contamination zones.

Around 2000, new user-friendly software was introduced that made accessing mapping and GIS information much easier.

"Currently, more than 400 staff use GIS, and almost all data are available to the public from the District's Internet site," said Dicks.

Over recent years, GIS staff has focused on integrating GIS data with District scientific, permitting and project management information into a central location. The section has been able to meet the District's internal needs for information while

making it accessible both internally and externally, according to Dicks.

"Currently, we have been able to move from fulfilling requests for information to providing technical support on how to access data," said Dicks. "Staff are doing their own analyses, and that is a sign of success."

Structure Operations

Structure operations have made vast advancements in technology over the past decade, resulting in the remote operation of many of the District's structures.

According to Mike Bartlett, District structure controls analyst, in the past, crews were sent out to live in the control houses on the structures during extreme weather events.

"We used two-way radios, when we had reception, to communicate with crews and tell them where to set the gates to control water flow," said Bartlett.

In the early 1990s, the District implemented the Supervisory Control and Data Acquisition (SCADA) system. The system enabled the District to automatically collect hourly water level and rainfall data from more than 250 sites. By 2005, the District was able to integrate this automated data collection with remote structure control into one application.

Today, staff monitors 81 water control structures and remotely operates 35 of those from a laptop with just a few mouse clicks.

"Through the use of technology, we can anticipate high water events by



Steve Camp, left, District professional geologist/ engineer, and Mark Barcelo, District Hydrologic Evaluation Program director, use a computer to run a groundwater model in the late 1980s.



Bob Evans, former District Mapping & GIS employee, hand traces a map from aerial photography.

monitoring water levels, rainfall and current weather conditions," said Bartlett. "We can begin lowering lake levels where needed prior to the event, giving us a head start on our ability to aid in flood control."

In addition, 15 of the 35 mission-critical automated structures have real-time video. This feature allows staff to monitor the structure, confirm it is working correctly and address any issues.

Floodplain Mapping

New data collection methods have enhanced the process to evaluate the risk of flooding in areas throughout the District.

Staff gathers terrain and conveyance data to develop watershed models that show where water will flood the land surface. For years, these model results were hand-drawn on maps that displayed the flood inundation areas.

By 2003, LiDAR (light detection and ranging) was implemented at the District and is considered to be a major advancement in floodplain mapping technology. LiDAR technology uses a laser to determine the ground elevation and stores it digitally.

"LiDAR has substantially enhanced the ability to do floodplain mapping," said Harry Downing, District senior professional engineer. "Using LiDAR and GIS software, we can produce a threedimensional (3-D) digital terrain model." Today, LiDAR data is used in the simulation of the watershed's response to a rainfall event. With this data and new techniques, staff is now able to produce more accurate, highly detailed and complex models that include features that could not be easily represented previously.

Groundwater Modeling

Today's advanced software applications allow staff to include much more detail about the hydrologic system in groundwater models.

Groundwater models are computer models of groundwater flow systems. District scientists use models to predict what will happen to water levels in response to future groundwater demands.

The advancements in technology help to better predict the effect of withdrawals on natural systems such as rivers, lakes, wetlands and springs.

In addition, staff can now analyze more than just groundwater systems. The integrated hydrologic model simulates detail about both groundwater and surface water systems.

"In the past, we had to make simplifying assumptions about surface water systems," said Mark Barcelo, District Hydrologic Evaluation Program director. "New advancements allow us to simulate the effects of groundwater pumping on water levels in lakes and wetlands as well as flows in rivers and springs."

Groundwater models are used to determine groundwater availability in both the permitting and the regional water supply planning processes. District staff is working with other water management districts to develop models that can be used in the long-term water supply planning process in areas where they share common boundaries.

Desktop Publishing

The Visual Communications Section welcomed new technology as the production of materials moved from pen and paper to photographic processes and eventually desktop publishing.

In the early 1970s, staff produced projects by hand, such as illustrations, maps and the District newsletter. For Governing Board presentations, the illustrations were either photographed or presented as slides or hand-drawn on poster board and displayed on easels.

By the late 1980s, the majority of the artwork created by the visual arts section had transitioned from freehand to computer design, known as desktop publishing. Industry positions such as specialized camera operators, typists and plate preparation staff became obsolete.

"It was a time of rapid change," said Dean Rusk, Visual Communications manager. "The advent of desktop publishing allowed us to flex our creative muscles."

In addition to computer-based design, graphic software became even more sophisticated. Artists were soon able to take information from other District data sources, such as GIS, and export it to create 3-D maps, charts and graphs.

By the late 1990s, web publishing software allowed the creation of the District's first website.

Technology has revolutionized both the District's day-to-day operations and long-term planning ability. Over the past few decades, staff has embraced the benefits of the electronic world by expanding their own skills while enhancing the District's customer service and shaping its future.

Weather Plays Crucial Role in Shaping District's 50-Year History

From devastating flooding caused by hurricanes to severe droughts to an unprecedented freeze, major weather events have played an important role in shaping the District's policies and procedures during the last 50 years.

Flooding and Hurricanes

The District was founded in response to a major weather event. In March 1960, a 27-inch, four-day rainfall event, followed by Hurricane Donna in September, caused massive flooding and damage to west-central Florida, especially to a small, relatively unknown community south of Brooksville.

The District's first executive director, Dale Twachtmann, recalled how local Hernando County banker Alfred McKethan responded to the event.

"Mr. McKethan pushed for a District partly because of the crisis that happened in Masaryktown," said Twachtmann. "Tens of thousands of chickens drowned in the Flood of 1960, and he saw firsthand the immediate financial burdens of those farmers."

After the District was formed in 1961, plans quickly got under way for the massive Four River Basins, Florida Project to alleviate future flooding events. However, by late 1962, residents had stopped worrying about flooding and were beginning to focus their attention on the lack of rainfall.

"I'd be out talking about the Four River Basins project and people would ask why



The drowning of thousands of chickens at several Masaryktown chicken farms was one of the catalysts for the creation of the District.

we were spending all this money on flood control when our big problem is it's not raining?" recalls Twachtmann. "The public was right in asking those questions. The problem then was drought, not flood."

After Hurricane Donna, it was more than 40 years before a major hurricane would hit the region again. In 2005, not one, but four hurricanes crisscrossed the state causing massive flooding and devastation. This time, the District responded by helping the local communities that were hit hardest by the four storms.

According to former District executive director Gary Kuhl, who was Operations director in 2004, the four hurricanes changed how the District responds to an emergency as well as the public's perception of the agency.

> "Dave Moore (District executive director from 2003–2011) sent people out into the field to assist cities and counties for the first time ever," recalls Kuhl. "I remember we worked 21 straight days during the '04

The District responded to the 2004 hurricanes by sending out staff to clear debris and man distribution centers.



hurricane season. I was so impressed with the quality of our people. Everyone had a dedicated, get-it-done attitude, and I think it improved the public's opinion of the District as well."

From August 2004 through January 2005, more than 100 staff members logged nearly 22,000 hours on hurricane-related activities. These included operating structures for flood control, clearing debris and roadways, assisting local governments with cleanups, transporting water and supplies, securing generators, and managing distribution centers.

Droughts and Shortages

While hurricanes and flooding have helped shape the District's history, it's droughts that have had the most impact, according to District Hydrologic Data Manager Granville Kinsman, who has been monitoring weather for more than 25 years.

"Flooding problems tend to be more localized, whereas droughts are usually regional in nature and have the most impact on our water supply," said Kinsman.

The District has experienced numerous periods of drought throughout its 50-year history, including two major droughts during the last decade alone: the Drought of the Century and the Four-Year Drought. Thanks to the lessons learned

1980



960

1960 Hurricane Donna causes massive flooding in west-central Florida

1977 Three-day freeze event creates rare conditions for snow to stick to the ground



1970–1971 Severe drought leads to the creation of a statewide water management system

1970

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during the Drought of the Century, the District, along with local governments in the Tampa Bay area and the southern region, were better prepared for the Four-Year Drought.

"The city of Tampa was days away from running out of water during the Drought of the Century," recalls Kinsman. "That drove changes to develop alternative water supplies and enhance conservation. The two reservoirs that were developed as a result made a huge difference during the last drought."

As for the future, Kinsman suspects we could be seeing more droughts and other extreme weather events.

"Weather patterns are really poorly understood," said Kinsman. "But extremes are becoming more common, which is typical of climate change. The challenge is to ensure that our water supplies will withstand these extremes."

Freezes

Perhaps one of the most extreme weather events in the District's 50-year history was the unprecedented 11-day January 2010 Freeze Event.

Cold snaps that last one to three days have been relatively common during the District's history. The crop protection withdrawals associated with such short-term cold snaps generally have had limited effects on nearby wells and produced few sinkholes. The previous record cold snap of six days in a row had only occurred three times in the last 80 years of data.

However, during the record 11-day freeze event, farmers in the Dover/Plant City area pumped nearly one billion gallons of groundwater per day to protect their crops, dropping the aquifer 60 feet and resulting in more than 750 dry wells and more than 140 sinkholes.

"On the fifth or sixth day, I called into the office to see how we were doing. They said there were no sinkholes and just a



The District imposed its tightest Phase IV water restrictions in the Tampa Bay area after the C.W. "Bill" Young Regional Reservoir went dry in March 2009.

few well complaints, and I thought we were in the clear," recalls Moore, "And then the bottom fell out."

During the crisis, the Tampa Service Office set up a call center. Up to 35 District employees took calls, investigated complaints and contacted permit holders. Well construction staff in Brooksville tracked sinkholes and worked closely with homeowners to keep them informed about their well repairs and what it would take to get them working.

As a result of the 11-day event, the District examined all of its freeze policies and procedures and revised its rules, including designating a new water use caution area, to reduce the potential for impacts from groundwater pumping during future freeze events.

"I thought the organization couldn't have performed any better," said Moore. "We set up meetings with the community, we met monthly with all stakeholders and by July we had a management plan that would effectively solve the problem."

Looking ahead, it's extremely likely that major weather events and climate change will continue to shape the District's future. However, thanks to the lessons learned over the past 50 years, the District is much more prepared to meet these challenges.

The Facts About El Niño and La Niña

El Niño and La Niña can have a major impact on weather patterns in west-central Florida and across the globe. But what do they really mean?

El Niño means "The Little Boy" in Spanish, which refers to the Christ child. This name was used by fishermen off the coast of South America for the tendency of the phenomenon to arrive around Christmas. El Niño is an oscillation of the oceanatmosphere system in the Pacific Ocean and is characterized by unusually warm water temperatures in the eastern Pacific, which can result in above-normal rainfall in the southern United States. El Niño can also reduce the number and strength of hurricanes.

Meanwhile, the opposite weather phenomenon is La Niña, which means "The Little Girl." La Niña is characterized by unusually cool water temperatures in the eastern Pacific Ocean, usually resulting in drier-than-normal conditions in Florida.

El Niño and La Niña conditions occur on an irregular three- to five-year cycle and can vary in strength. One of the strongest El Niño events in the District occurred in 1998, causing flooding and spawning deadly tornadoes in central Florida.

1998 Major El Niño event causes flooding and spawns deadly tornadoes in central Florida



2004 Hurricanes Charley, Frances, Ivan and Jeanne crisscross the state

2000

2010 Unprecedented 11-day freeze event causes more than 750 dry wells and more than 140 sinkholes in the Dover/Plant City area



2000–2001 The Drought of the Century causes major water shortage in the Tampa Bay area

2009 Four-year drought peaks with C.W. "Bill" Young Regional Reservoir going dry

Managing and Protecting Lands Through the Years

H undreds of thousands of acres of conservation lands have been protected and restored by the District during the past 50 years.

These lands are managed to protect vital water functions and natural systems, which include Florida's unique plant and wildlife communities. This is done by mimicking the natural fire cycle that historically shaped Florida's landscape and restoring areas that have been altered by previous activities.

Staff administers prescribed burns, mechanically mows vegetation and oversees seeding and planting activities. These management techniques are important to the survival of most of Florida's threatened and endangered species. Lands are also managed to provide flood protection and sources of recreation for the public. A number of projects and programs throughout the years have guided the District on the acquisition and management of these important conservation lands.

Four River Basins

The District was created in 1961 to be the local sponsor of the Four River Basins project. This was a major flood control project sponsored by the U.S. Army Corps of Engineers after Hurricane Donna caused massive damage to southwest Florida in 1960. The project, which encompassed a 6,000-square-mile area, included flood control structures and water detention areas.

Through Four River Basins, the District was able to acquire and manage the land necessary for the Tampa Bypass Canal, Lower Hillsborough Flood Detention Area (FDA), Green Swamp FDA, Lake Tarpon Outfall Canal and other projects.

Save Our Rivers

The Save Our Rivers program, or Water Management Lands Trust Fund, of 1981 helped to guide the District's future land management activities. It stepped away from the flood-controlstructure-focused Four River Basins project and allowed the District to acquire lands for the purposes of water management, supply and protection.

District staff began to evaluate potential land purchases for a number of important factors, including the preservation and/ or restoration of natural systems, water quality enhancement, recharge potential and potable water supply.

"Around this time, people began to realize that protecting ecosystems makes the most business sense for the taxpayers," said Eric Sutton, former District Land Resources director.



Originally purchased as part of the Four River Basins project, the Green Swamp is the headwaters of the Withlacoochee, Ocklawaha, Hillsborough and Peace rivers. Protecting the Green Swamp is vital to protecting the quality and quantity of Florida's water supply. Resources director. "Ecosystems are the best-engineered systems for water resources and protecting them in their natural state is more cost-effective than investing in massive restoration efforts."

Preservation 2000

In 1990, the Florida Legislature passed the Preservation 2000 (P2000) Act to broaden the scope of land acquisitions in the state. It allowed the District to purchase lands that would not have been covered under either of the previous two land protection programs. P2000 provided \$3 billion over 10 years, of which the District received approximately \$225 million.

P2000 allowed the District to acquire and protect significant intact ecosystems that protect water resources, including groundwater, surface waters and other important hydrologic features. An additional benefit of these efforts included the protection of endangered and threatened species habitat and the preservation of archaeological sites.

In total, P2000 helped the District protect more than 150,000 acres of conservation lands.



Florida Forever

The Florida Forever Program was established by the state in 1999 to succeed P2000. Through this program, the District used funds to build and promote water resource and water supply development, restoration, Surface Water Improvement and Management projects, conservation and recreation.

Florida Forever funding allowed the District to acquire and protect more than 55,000 acres of conservation land to help preserve residents' quality of life.

Looking ahead, the District is focused on continuing to prioritize land protection.

"Given the uncertain economic conditions in Florida, it is difficult to tell exactly what the future holds for conservation land acquisition," said Sutton. "But we do know that if the people of our state continue to support the protection of lands, when financial conditions improve we will be able to invest in those lands that provide the largest benefit for our water resources."

Long-Term Employees Reflect on Their Time at the District





Kevin Stover, 33 years Field Technician Supervisor, Resource Data & Restoration Richard Gant, 34 years Field Technician Supervisor, Resource Projects



Kevin Love, 35 years Manager, Land Resources



Mike Holtkamp, 35 years Director, Operations, Maintenance & Construction Division



Grady Vance, 42 years Aquatic Plant Management Supervisor, Operations

Five Staff Members Share Memories at a Roundtable Interview

How would you describe the District when you first started working here?

Vance: It was like a family. My original department director would call our staff together to give us a pep talk and say a prayer before we started a large project. If there were ever any issues, he'd call me into his office and speak to me as if I were his son. I had a lot of respect for him.

Stover: It was very personal. Since I was still in high school when I was offered a full-time position, the Governing Board used to monitor my report card.

Gant: When I was hired, they took me around the campus and introduced me to every single employee.

How did day-to-day business differ from today?

Gant: There were no computers and no copy machines. Maps were drawn by hand with paper and colored pencils.

Love: Field trucks didn't have air conditioning and very few had two-way radios. If you got in trouble, you were on your own.

Stover: Our only communication from the field to the office was by using a calling card on a pay phone.

Talk about the opportunities you have had at the District.

Holtkamp: In my early years at the District, I was extremely fortunate to be mentored by an ex-construction engineer. His guidance on project management, contracts and construction documents has been invaluable to me while working here.

Love: I feel like I fell into the best job in the world. I've gotten paid to go out on some of the finest, last remaining natural habitats left in Florida.

Stover: After Hurricane Charlie, our entire department was called to help run the

distribution center in Arcadia. It was very gratifying to work alongside law enforcement and the National Guard to help people.

What is one of your fondest memories at the District?

Gant: My fondest memory is all the friendships that I made throughout the years. A lot of good people have worked at the District and that's probably why I collect so many photographs.

Love: Back in the '80s, I brought a group of Florida artists to Orange Lake in the Green Swamp to show them some beautiful places to paint. I remember standing there by the lake as everyone stood in awe of the scenery and snapped photographs. Afterward, one of the artists gave me a painting of exactly how it looked the day we went out. It's still on my wall today.

Holtkamp: My fondest memory is meeting and falling in love with my wife, Loretta, who was a new hydrologist in the District's Planning Department. Thirty years ago I encouraged her to attend an American Society of Civil Engineers meeting at the University of South Florida. Afterward, we ran off to a pub, and the rest is history.

What are some of the District's biggest changes or accomplishments while you have worked here?

Vance: One big change that I'm proud of is how the District has moved from being just a flood control agency to focusing on the protection and conservation of our waterways.

Holtkamp: When I look over the 35 years that I've been here, I think it's fantastic that we've been able to protect so much land by putting it into public ownership through programs such as Save Our Rivers, P2000 and Florida Forever. The preservation of that land is our version of Central Park in New York City.

Grady Vance: The District's Longest-Serving Employee

In the summer of 1968, sixteen-year-old Grady Vance was offered a temporary job with the District's fencing crew making \$1.25 an hour. The interview consisted of demonstrating his skills at driving a staple with a ball-peen hammer. After receiving an "OK" from his father and school, he was hired and later secured a full-time position. Throughout more than 40 years, Vance has done a variety of tasks from landscaping to gathering fish for the District's once-famous fish fries. Most recently, he was the aquatic plant management supervisor and oversaw the crews that treat invasive aquatic plants in the District's water bodies. Vance retired in September 2011.



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Employee Committee Marks 30-Year Milestone

A s the District reaches its 50th anniversary this year, the Employee Committee is also celebrating a 30-year milestone.

The District's Employee Committee was created in 1981 to promote a positive work environment.

"Having an Employee Committee is very important to the employees and the organization, as well as the communities in which we belong," said Lisa Cartwright, secretary of the Employee Committee.

Since 2003, the Committee has raised more than \$75,000 through bake sales, plant sales and raffles. About two-thirds of the amount is attributed to an annual fundraising raffle and auction in which senior staff donate items ranging from food items to various gifts and monetary amounts. These funds are applied toward a variety of benevolent activities such as assisting needy families, foster children, employees in need, food banks and animal shelters. In addition, the Committee supports employee appreciation activities and the United States Armed Services.

"Thanks to the amount of support we receive from fellow employees, we are able to reach a variety of different groups in need," said Cartwright.

The Committee has also supported Big Brothers Big Sisters, the American Heart Association and the American Cancer Society.





Staff has contributed to the community through events such as the American Cancer Society's Relay for Life and holiday gift-giving to families in need.