



TAXATION AND BUDGET REFORM COMMISSION

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Florida Water Policy Report

SUMMARY

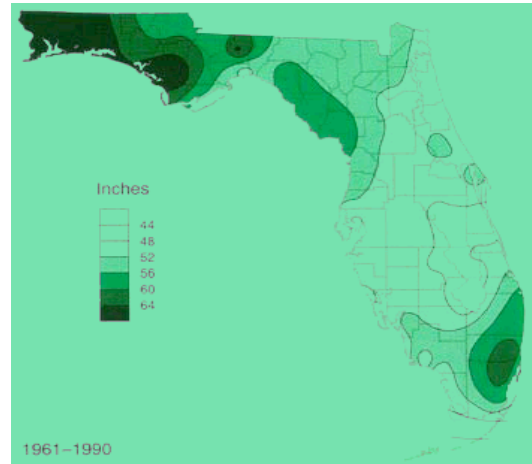
Water resources are one of the most valued assets in Florida. The state is underlain virtually everywhere by aquifers capable of yielding significant quantities of fresh groundwater to wells. Surface water resources include 1,700 streams and rivers and 7,800 lakes, providing water for natural and human needs in Florida.¹

Early in its history, Florida was anxious to modify nature – to drain its “swamp” land for farms, groves, and houses; to cut canals to facilitate drainage and to make navigation faster and safer; and to hold back flood waters with engineering works. The assimilative capacity of surface water was thought unlimited, and rivers and lakes were used as convenient receptacles for wastes. Florida was thought to have too much water.

Now the finite nature of Florida’s freshwater is clear, and attention has shifted to water supply planning and water resource development. In many parts of Florida conserving, protecting, and in some instances restoring natural systems, including aquifers, while at the same time providing enough water to meet human demands, is the greatest challenge facing water managers.²

¹ Water Resources Atlas of Florida, Richard L. Marella, 1998, Florida State University, Institute of Science and Public Affairs

² Water Resources Atlas of Florida, Purdham; Burney; Swihart, 1998, Florida State University, Institute of Science and Public Affairs



³ Avg. Rainfall in Florida

Florida’s five water management districts (WMD) are responsible for coordinating water resource usage and protection. It is the responsibility of the local WMD to coordinate with local and state governments and planning agencies, as well as large private users, such as utility plants and manufacturers, to assure a safe and available supply of water throughout the district.

Other entities, such as the Tampa Bay Water Authority, the Withlacoochee River Water Supply Authority, and the Peace River/Manasota Regional Water Supply Authority may play larger roles over time as water supply becomes a more pronounced planning issue.

³ http://www.dep.state.fl.us/water/docs/2004_Integrated_Report.pdf.

BACKGROUND

By reference, the Governmental Services Committee accepts the background and findings from the Florida Council of 100 Report, “Improving Florida’s Water Supply Management Structure,” September 2003, relative to water supply and needs through the year 2020. The work done by the Council of 100 was quite relevant to the work of this committee and the council has graciously allowed us to incorporate their research document by reference. A link to the Council of 100 Report is found in Appendix A of this report.

In 2005, the legislature passed additional water policy legislation, Committee Substitute for Senate Bill 444 by Senator Dockery. The changes in law noted below have since been incorporated into Florida’s original water policy, the 1972 Florida Water Resources Act:

- The primary provision of the 2005 legislation creates a \$500 million annual funding program entitled the “Water Protection and Sustainability Program” to assist in the implementation of many existing water protection and development programs.
- Specific programs funded by the legislation include: a total maximum daily load program, the Surface Water Improvement and Management (SWIM) Program, WMD-designated priority water bodies, the Clean Water State Revolving Fund, the Drinking Water State Revolving Fund, and the Disadvantaged Small Community Wastewater Grant Program. Documentary

stamp tax revenues were amended to provide additional funding for the state’s invasive plant control program.

- The legislation substantially amended procedures for the implementation of the total maximum daily load program.

The water policy changes that resulted from the passage of the 2005 legislation (CS/SB 444 by Dockery) are not addressed in the 2003 Council of 100 Report, but have enhanced the state’s water management capabilities over time. Implementation of these changes is ongoing.

METHODOLOGY

The Governmental Services Committee meeting held on September 20, 2007 at Jacksonville City Hall served as a primary source of data collection used in creating this report.

The committee heard presentations from a panel of experts, including Ernie Barnett, Director of Policy and Legislation for the South Florida Water Management District; Peter Dunbar, former State Representative and spokesperson for the Tampa Bay Water Authority; Dave Moore, Executive Director of Southwest Florida Water Management District; Janet Llewellyn Director of the Division of Water Resource Management, Department of Environmental Protection (DEP); Preston Robertson, General Counsel and Vice President of the Florida Wildlife Federation; and Andy McLeod, spokesperson for the Trust for Public Land.

Other individuals who were helpful with research and analysis, as well as in preparing committee report, were: State Senator Paula Dockery; Chuck Littlejohn, managing partner of Littlejohn, Mann, & Associates; Philip Parsons, water and agriculture policy attorney; Martha Edenfield, representative of the Tampa Bay Water Authority; Jennifer Fitzwater, Assistant Secretary of Policy and Planning for DEP; Janet Bowman, Associate Director of Governmental Relations for the The Nature Conservancy; Sue Mullins, Executive Director of Vanguard Partnership; Garrett Wallace, Director of Legislation and Operations for the South Florida Water Management District; Diane Salz, representative of the Northwest Florida Water Management District; David Still, Deputy Executive Director of the Suwannee River Water Management District; David Moore, Executive Director of the Southwest Florida Water Management District; Allison DeFoor, State Coordinator of EarthBalance; and Chuck Aller, Director of Water Policy for the Department of Agriculture & Consumer Services.

The Florida Council of 100 was very helpful to staff during the preparation of this report. The Council of 100's report, "Improving Florida's Water Supply Management Structure," from September 2007, reviews many of the areas which the Governmental Services Committee had been directed to research.⁴

⁴ Because of the many areas of common interest, staff contacted Steven Birnholz, Director of Issues & Research for the Florida Council of 100 to seek permission to release their water supply report with our own. Mr. Birnholz approved our staff's request, and was gracious and helpful throughout the reporting process.

Other sources of information used in creating the report were: "Total Maximum Daily Loads – Guidance for Local Officials," produced by the Florida Stormwater Association and DEP; "Tapping New Sources – Meeting 2025 Water Supply Needs," by DEP; "Florida's Agricultural Water Policy," by DOACS; 2005 Legislature's CS/SB 444, by Senator Paula Dockery; Tampa Bay Water Authority's Interlocal agreement; "Integrated Regional Water Supply Master Plan," produced by the Peace River/Manasota Regional Water Supply Authority; "OPPAGA Sunset Review of Water Management Districts" from April 2007; "Water Resources Atlas of Florida," by Edward Fernald and Elizabeth Purdum; and "The Florida Handbook," 30th Edition, by Allen and Joan Perry Morris.

Meeting minutes, audio recordings, presentations, and documents presented to the committee are available on the web at www.floridatbrc.org

FINDINGS

On Thursday, September 20, 2007 the Governmental Services Committee of the Taxation and Budget Reform Commission held a public meeting on water policy issues at Jacksonville City Hall in Jacksonville, Florida. Many of the agencies, organizations, and interested parties relating to water policy were invited and were in attendance. Ernie Barnett, District Director of Policy and Legislation for the South Florida Water Management District (SFWMD), was the first to deliver a presentation. He gave a brief history of Florida's water policy issues and current concerns in water management.

Mr. Barnett opened his presentation by remarking that the SFWMD contains over 1000 miles of canals and 800 miles of levees which are the product of Florida's old policies. These old policies mandated the draining and ditching of over half of the Everglades for flood control and to allow for development.

He indicated that the state's water policies have changed drastically over the years, and that in 1972 the Legislature passed what would become Chapter 373 of the Florida Statutes. Chapter 373 created the regional model for water management in Florida. These statutes generated a mandate to oversee water and land-related resources by providing for: water quality, flood protection and floodplain management, natural systems, and water supply.

Responsibilities were divided among five regional districts, each with its own governing board. The five water management districts of Florida are: Northwest Florida Water Management District (NFWMD), Suwannee River Water Management District (SRWMD), St. Johns River Water Management District (SJRWMD), Southwest Florida Water Management District (SWFWMD), and South Florida Water Management District (SFWMD). Each of the five districts has its own unique landscape, environment, ecology, and history. Despite their differences, the water management districts all have common goals and activities. Some examples of these activities are: planning, regulation, research, data collection, technical and planning

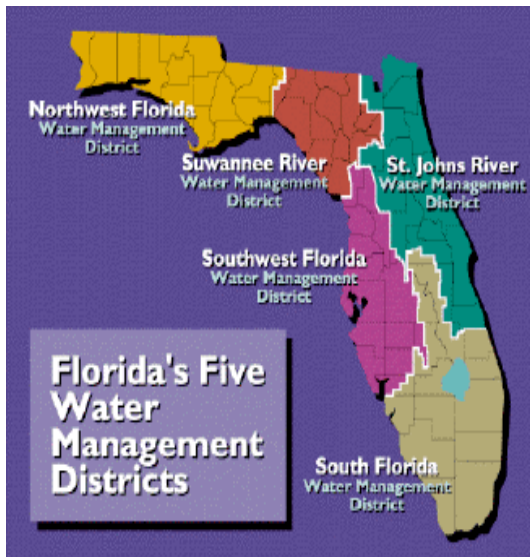
assistance, education, restoration, land acquisition, and land management.⁵

Water Management District activities are organized among six major programs:

- District Management and Administration – executive direction, ombudsman services, budgeting, inspector general, and governing board support.
- Outreach – environmental and water conservation education; governmental affairs; and public relations activities, such as public service announcements.
- Regulation – water use permitting; water well permitting and contractor licensing; environmental resource and surface water management permitting; and permit administration and enforcement.
- Acquisition, Restoration, and Public Works – developing and constructing capital projects; land acquisition; and restoring lands and water bodies.
- Operation and Maintenance of Lands and Works – operating and maintaining facilities, flood control and water supply structures, lands, and other works.⁶

⁵ Presentation by Ernie Barnett, Director of Policy and Legislation for the South Florida Water Management District to the Governmental Services Committee on September 20, 2007

⁶ OPPAGA Sunset Review of Water Management Districts, April 2007



Mr. Barnett pointed out that the main function of the Water Resources Act of 1972 was to ensure that Florida would have an adequate water supply. Chapter 373 of Florida Statutes governs the consumptive uses of water. Pursuant to statute, WMDs have exclusive authority over the regulation of the consumptive use of water in Florida. (373.223 Florida Statutes) The Water Resource Act of 1972 is the blending of “eastern”⁷ and “western”⁸ water law; the act holds that ownership of land does not mean ownership of water, and that water is held in trust for the people of Florida.

Good management practices of people, businesses, utilities, and governments are a vitally important part of

maintaining a healthy water supply, in terms of both quantity and quality. One example of good management practices, according to Mr. Barnett, is the Florida Ranchland Environmental Services Project. This project combines resources from the United States Department of Agriculture (USDA), the Florida Department of Agriculture and Consumer Services (DACS), the South Florida Water Management District (SFWMD), and the World Wildlife Federation (WWF) to partner with landowners for storage and treatment of water on private lands. There are currently four projects successfully implemented and four more projects planned. The agricultural area located between Lake Okeechobee and the Everglades is an area of critical concern. Florida farmers in that area have shown great responsibility and cooperation in the Florida Ranchland Environmental Services Project and others like it.⁹

Mr. Barnett indicated that agricultural source controls or Best Management Practices (BMP) and regional wetland Stormwater Treatment Areas (STA) are key factors in achieving water quality compliance in the Florida Everglades. BMPs and STAs often employ nutrient-absorbing plants like cattails in order to infuse phosphates and nitrates out of the water and into the plant.

According to Mr. Barnett, DACS, DEP, DCA, WMDs, and local governments should work together to incorporate Best Management Practices as an alternative to traditional regulatory programs. Water resource partnerships should be

⁷ Eastern states limit water use rights to the owners of riparian land, each of whom has a right to make reasonable use of the available supply. Conflicts are decided by reference to a set of social, economic, and environmental factors defining reasonableness.

⁸ The law of the West was developed from the customs of gold mining, which required the diversion of water for mining operations. To resolve the inevitable disputes, the miners recognized rights by priority of appropriation. Whoever first appropriated rights by diverting it, had superior rights to junior appropriators.

⁹ Presentation by Ernie Barnett, Director of Policy and Legislation for the South Florida Water Management District to the Governmental Services Committee on September 20, 2007

established at both the local and regional levels among the agricultural community, public water suppliers, and environmental interests should assist with these efforts.¹⁰

Mr. Barnett indicated that stormwater management is a very important component of water management. Stormwater management systems create and provide updated Digital Flood Insurance Maps (DFIRMs). Cost-share assistance may be available for stormwater management facilities and utilities. The State of Florida has made recent land acquisitions to support stormwater management systems.

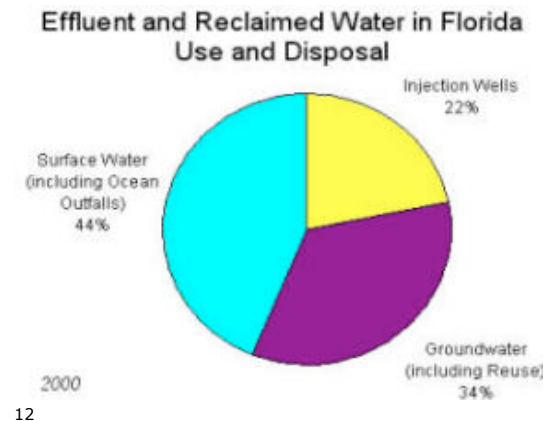
Commissioner McKee asked if the water is first come, first serve. Mr. Barnett responded that the permits are not first come, first serve; are time limited; and are re-evaluated as they expire.

There are two sources of water in Florida; the current natural system and the development of alternative water supplies as determined against environmental concerns.

Mr. Barnett noted that, as of the year 2000, agriculture used roughly half of Florida's water supply. Demographics and population trends indicate that growth in the state will cause public water supply needs to increase, and will surpass agriculture by the year 2025.

He also indicated that irrigation needs may be met through re-use programs. For example, Lee and Collier counties

operate at 80 to 90 percent reuse for irrigation. However, Dade County, the greatest consumer of water, only reuses 5 percent; with Palm Beach County up to 30 percent reuse.¹¹



Commissioner Randy Miller asked what the original reason was for dredging and building ditches and dikes around the state's waterways. Mr. Barnett replied that legislation passed in 1949 for flood control mandated construction projects. What was considered good policy at the time is not considered to be good policy now. Water is a public resource owned by all citizens of the state. To protect water resources, Florida must protect the environment and the natural systems of the state. Statewide standards are needed for water resource policies with governance "close to the people" through water management systems.¹³

Commissioner Barney Barnett asked about actual ownership of the Everglades. Ernie Barnett replied that

¹⁰ Presentation by Ernie Barnett, Director of Policy and Legislation for the South Florida Water Management District to the Governmental Services Committee on September 20, 2007

¹¹ Ibid

¹² <http://www.dep.state.fl.us/water/wastewater/facts.htm>.

¹³ Presentation by Ernie Barnett, Director of Policy and Legislation for the South Florida Water Management District to the Governmental Services Committee on September 20, 2007

the State of Florida owns 2.4 million acres, some parcels are owned by WMDs, some by private in-holdings, and the remaining land in the National Park is owned by the federal government.

Peter Dunbar, former State Representative and spokesperson for the Tampa Bay Regional Water Supply Authority, addressed the committee. Mr. Dunbar began by indicating that Florida is entering a new era in water policy, particularly in water supply, regardless of public or private source delivery. This issue has been over three decades in the making in the Tampa area alone, and there are other regions in the state that have faced water supply shortages, as well.

Mr. Dunbar reported that the main issue for the Tampa Bay area is the transport and withdrawal of water. There have been massive expense and permitting problems, which caused a stalemate in the 1990's, often referred to as the Tampa Water Wars, and impeded local economic growth. In 1998, the Tampa Bay Water Authority was created to supply the needs of the region at a unitary rate. This board created a local water supply master plan in which all costs are paid by rate payers.

One of the groundbreaking features of the Tampa Bay Water Authority is its desalinization plant. The authority uses diatomaceous earth (DE) filters which remove salt and other water particles before osmosis. Desalinization is a cutting edge alternative water supply production method which has

experienced some difficulties in its early stages of implementation.¹⁴

Desalination processes include:

- Reverse osmosis, which involves seawater being pushed through a semi-permeable membrane that traps the salt and other impurities on one side and allows water to be filtered through a microscopic strainer.
- Thermal distillation, which involves boiling saline water and collecting the purified vapor.
- Electrodialysis, which involves the removal of salts by separating and collecting their chemical components through electrolysis, and which is more suited to salty groundwater than seawater.¹⁵

Reverse Osmosis is a process of desalination in which seawater diffuses through a membrane under high pressure, removing salts and impurities to ensure the water is suitable for drinking. It is used on most ocean-going vessels (including cruise ships and navy vessels) and by industries that require very pure water. The seawater is pre-treated to remove particles, such as sand, shells or seaweed, which would clog the membranes. The quality of the water produced depends on the pressure, the concentration of salts in the seawater, and the size of the membranes. Water quality can be improved by adding a second pass of membranes, whereby

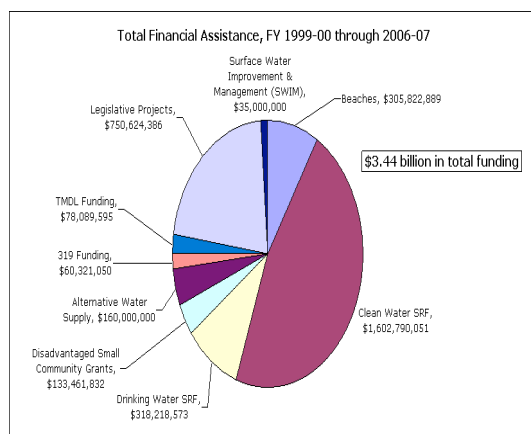
¹⁴ Presentation by Pete Dunbar, former State Representative and spokesperson for the Tampa Bay Water Authority to the Governmental Services Committee on September 20, 2007

¹⁵ http://www.goldcoast.qld.gov.au/attachment/goldcoastwater/EBWS_FS4.pdf.

product water from the first pass is fed to the second pass.¹⁶

Mr. Dunbar asserted that the Tampa Bay Water Authority is an innovative regional government entity that transcends political boundaries. To accomplish such goals would be difficult without the “carrots and sticks” of a proactive solution like a regional water supply authority. Other areas have tried, but the Tampa Bay Water Authority is unique due to incentives that have made their success possible.

Dave Moore, Executive Director of the Southwest Florida Water Management District, joined Mr. Dunbar at the podium. Mr. Moore indicated that SWFWMD views the Tampa Bay Water Authority as a model for Florida’s future. Nearly all of the alternative water supply projects funded through SWFWMD are allocated through a regional water supply authority.



17

Commissioner Randy Miller asked what caused the initial failures experienced by the desalinization plant. Mr. Dunbar

replied that the Tampa Bay Water Authority Board owns the largest desalinization plant in the Western Hemisphere, but the tropical environment adds levels of complexities not experienced in other climates. Particles and sediment brought in from ships contributed to the filters increased workload.

Commissioner Barney Barnett asked where the desalinization plant is located. Mr. Dunbar answered that it is co-located next to the Tampa Electric Company (TECO) Big Bend Plant. The co-location helps because of normal daily intakes at the TECO Plant.

Commissioner Randy Miller asked how the authority was funded. Mr. Dunbar replied that Tampa Bay Water operates like other utilities by charging user fees and rate changes to help fill the funding gaps. Commissioner Miller asked if the authority is considered a government agency. Mr. Dunbar responded that the courts have held that they are, but a case is currently under appeal.

Commissioner Moore asked why the WMDs cannot do what the Tampa Bay Water Authority Board is doing. One reason, according to Mr. Dunbar, is that the WMDs already have a lot of responsibilities, and creating an organization of local governments to agree on any issue is quite challenging. This was a policy issue because WMDs would become both the supply and control agency. The Legislature likely never considered giving control to the WMDs; their responsibilities have grown well beyond those for which they were created.

¹⁶<http://www.sydneycoastalcouncils.com.au/documents/WhatIsDesalination-factsheet.pdf>.

¹⁷<http://www.dep.state.fl.us/water/waterprojectfunding/index.htm>.

Mr. Dunbar offered in closing that of all the water agencies in the State of Florida, the Tampa Bay Water Authority is one of the most accountable to the citizens because its board members are elected officials and must answer for performance during re-election.

Janet Llewellyn, Director of the Division of Water Resource Management with DEP, made a presentation following Mr. Dunbar's remarks. Ms. Llewellyn began her presentation by outlining the demographic information relating to Florida's water policy. Population trends for the State of Florida show a steady increase of people moving into the state, creating a large upturn in demand for services. Among these highly demanded services is water.

DEP's Office of Water Policy functions include:

- Working in close coordination with Florida's five regional WMDs and other agencies to resolve statewide water planning and management issues.
- Developing policies on water management issues.
- Working with WMDs to ensure that regional water supply plans and programs are consistent with provisions of the Florida Water Resources Act, the Florida Water Plan, and other applicable guidance.
- Producing the Florida Water Plan Annual Progress Report; updating the Water Resource Implementation Rule (Chapter 62-40, F.A.C.); and preparing the Annual Status Report on Regional Water Supply Planning

and Five-Year Water Resource Development Work Programs.¹⁸

In her remarks, Ms. Llewellyn addressed the issue of ocean outfalls. Florida's ocean outfalls are spillways where 300 million gallons of minimally treated wastewater are discharged via ocean outfalls every day. Ms. Llewellyn suggested that Florida should look into ways to recapture outfall.¹⁹

Commissioner Randy Miller asked why Dade County was at 5 percent reuse. Ms. Llewellyn offered that Dade County has infrastructure and funding issues with reuse; DEP and SFWMD are applying pressure for improvement.

**Miami-Dade Water and Sewer Department
Population and Water Demand Projections**

Year	Total System-wide Population Served (people)	Average Day Demand (MGD)
2006	2,226,305	348.42
2007	2,256,517	349.76
2008	2,239,564	347.13
2009	2,269,203	351.73
2010	2,298,841	358.90
2015	2,447,888	382.45
2020	2,570,634	401.88
2025	2,693,379	421.32

MGD = million gallons per day

20

¹⁸ <http://www.dep.state.fl.us/water/waterpolicy/index.htm>.

¹⁹ Presentation by Janet Llewellyn, Director of the Division of Water Resource Management for DEP to the Governmental Services Committee on September 20, 2007

²⁰ Table 6: Population and Water Demand Projections from 2006 to 2025 for the MDWASD service area. (Source: Miami-Dade Water and Sewer Department 2006) - http://conservefloridawater.org/csdocs/conserveflorida_water_guide_case_studies.pdf.

Reclaimed water and brackish water demineralization are the dominant sources of new water supplies, and will provide approximately 77 percent of the water developed by the alternative water supply projects. When completed, these projects are expected to provide 725 million gallons per day of “new” water.²¹

Commissioner Moore noted that Pinellas County has low-flow toilet rebates and that the program seems to have saved a lot of gallons of water. He asked how that impacts other areas of the state and if water is too cheap. Ms. Llewellyn indicated that price signal is very important, and conservation should be paramount.

Increasing knowledge or awareness of issues and concerns related to our water resources will help protect these important resources in the future. Public education programs are designed to increase public awareness of water quality conditions and provide opportunities for participation and involvement. Printed materials such as brochures, booklets and posters, as well as educational displays at environmental events, are part of the educational efforts of the WMDs. By increasing public awareness of the importance of water resources and conservation, further degradation can be prevented.²²

Water conservation is another area where the WMDs have begun focusing their attention. Conservation is a very important demand management tool for public water supply utilities to enhance

the sustainability of Florida's water resources. Many years of developing, implementing, and refining water conservation programs by public water supply utilities have created the opportunity for the next phase of effectiveness: the implementation of the Statewide Comprehensive Water Conservation Program for Public Water Supply.²³

The Governmental Services Committee held a public meeting on December 14, 2007. The committee continued its discussion of the state's water policies, the urgent need to begin developing alternative water sources, and the statewide advantages to regional cooperation.

Commissioner Randy Miller began by explaining that without an adequate water supply, development stops, and Florida's economy fails. He posed the following question for consideration: “Who is in charge of water policy in Florida?”

He suggested that the committee should take a look at the state's five WMDs. They were created by statute (Ch. 373, F.S.) as special taxing districts and given specific taxing authority and millage caps by amendment to the Florida Constitution (Art. 7, Sec. 9). Four of the five WMDs were granted a millage rate of not more than 1 percent. The fifth district, the Northwest Florida Water Management District, was given authority to levy up to half a mill. This disparity in tax rates was due, in part, to the relative lack of population and growth experienced by Florida's panhandle. Commissioner Randy Miller explained that Northwest Florida is now

²¹ *Tapping New Sources, Meeting 2025 Water Supply Needs*, FDEP March, 2007

²² <http://www.nwfwmd.state.fl.us/about/protectwaterresources.html>.

²³ Ibid

among the fastest growing regions in the state, and should be granted authority to levy a full mill in order to bring equity to the 5 districts.²⁴

Commissioner Miller opined that demands and pressures throughout the state are creating a situation where management should be spearheaded by the state, followed by regional and local governments, in order to secure the funding needed to develop and build alternative water supply sources.

Ms. Diane Salz, representing the NFWFMD, the Peace River Regional Water Supply Authority, and the Withlacoochee Regional Water Supply Authority, suggested that regional water supply authorities are unique to the SWFWMD, but should be expanded. There are currently three regional water supply authorities operating within the SWFWMD.²⁵ The three water supply authorities are: the Tampa Bay Water Authority, the Withlacoochee Regional Water Supply Authority, and the Peace River/Manasota Regional Water Authority. Ms. Salz introduced Mr. Ray Pilon, the Governmental Affairs Director of the Peace River/Manasota Regional Water Authority.

Mr. Pilon stated that change occurs when the status quo becomes more painful than change itself. Change can be very difficult, but often is necessary. Regional water supply authorities offer the development and delivery of water in an environmentally sensitive and sustainable manner.

Mr. Pilon indicated that a natural area to begin a review is to look at what is working and what is not. Regionalism is the most effective method of pooling local government funds. The joining of common interests with common watersheds and resources is the central premise of regional water supply authorities. Simply put, regionalism works, and going it alone may not be a long term solution.

The Peace River Water Supply Authority purchased the General Development Corporation's infrastructure and assets to increase the supply of affordable water. Members of the Peace River Water Supply Authority typically work together to take high flows off of the Peace River, store the water, and redistribute it according to county contracts.

These Regional Authorities are able to develop economies of scale, protecting the resource and sustaining supply. Funding comes from ad valorem appropriations through CS/SB 444 and bonding.²⁶ Mr. Pilon indicated that regional water supply authorities should have more thorough funding through a formula whereby the authorities can have funds secured for economic downturns and instability.

Commissioner Randy Miller asked how documentary stamp tax funds are currently allocated. Mr. Pilon believes that there was an amount guaranteed for ten years on documentary stamps, but the legislature cut the amount short in their last round of budget cuts. He

²⁴ Comments by Commissioner Randy Miller, from the Governmental Services Committee meeting on December 14, 2007

²⁵ The Southwest Florida Water Management District is often referred to as "Swiftmud"

²⁶ Presentation Ray Pilon, Director of Governmental Affairs for the Peace River Water Supply Authority to the Governmental Services Committee on December 14, 2007

indicated that he was unsure of exact figures.

Ernie Barnett was recognized to discuss documentary stamp funding issues. Mr. Barnett explained that CS/SB 444 had set up \$100 million per year to be directed into a trust fund for water issues. The 2007 Legislature reduced the \$100 million to \$80 million, then eliminated SWIM funding and spread out other cuts across remaining programs. The net effect is a reduction of \$52 million for fiscal year 2007 - 2008.²⁷

Ray Pilon noted that the regional water supply authorities are considered utilities, serving their member governments, which have varying concerns and problems with water supply. He noted that all counties participating in the Peace River Regional Water Supply Authority are in the water supply business.

The authority provides 100 percent of Desoto County's wholesale water, over 90 percent for Charlotte County, 30-40 percent for Sarasota County, and none to Manatee County. Customers all pay a unitary rate, which is based on a 7 year contract on rates and a 20 year contract on supply. Their governing board is made up of four members who are elected to various local posts. Mr. Pilon added that the Peace River Water Supply Authority is quite different from the Tampa Bay Water Authority, which is

very dissimilar from the Withlacoochee Supply Authority.²⁸

Commissioner McKee asked Mr. Pilon if their board members are locally elected officials. Mr. Pilon answered that they are most often elected officers of city and county governments. Commissioner McKee then asked if the local officials could levy their own millage increase to benefit the creation of regional water supply authorities. Mr. Pilon replied that local governments can adjust the millage rate for water supply, but that their members tend to favor increases in the millage rate for projects which will diversify their water sources.

Commissioner McKee identified alternative sources of water as a statewide problem. He asked Mr. Pilon if he believed that WMDs should be the exclusive entity on alternative water supplies. Mr. Pilon replied in the negative and noted that the districts have too many responsibilities already. The regional approach has proven to be an effective way to encourage local water retailers to pool funds in order to develop methods of water supply which could not be afforded without the regional cooperation.

Jackson Sullivan, Executive Director of the Withlacoochee Regional Water Supply Authority, addressed the committee regarding the creation and expansion of regional water supply authorities. Mr. Sullivan noted that the Peace River Regional Water Supply

²⁷Presentation by Ernie Barnett, Director of Policy and Legislation for the South Florida Water Management District to the Governmental Services Committee on December 14, 2007

²⁸Presentation by Ray Pilon, Director of Governmental Affairs for the Peace River Regional Water Supply Authority to the Governmental Services Committee on December 14, 2007

Authority had reached the milestone of 25 years in business. One of the major differences between the Withlacoochee Regional Water Supply Authority and the other two Regional Authorities is that the Withlacoochee Authority has not yet begun to develop alternative water supplies, but will do so when the infrastructure is ready.

According to Mr. Sullivan, SWFWMD is the only district which both sponsors and mentors the regional water supply authorities. The Withlacoochee Regional Water Supply Authority is currently on the cusp of working out a solution between all of the local governments and water retailers.

Since its inception, several of the original counties have dropped out of the regional authority. One of the main reasons for the difficulties is that local governments are not used to working together to solve problems. The local governments are typically very sensitive to the “local resources first” concepts. To be successful, the local authorities must focus on the development of alternative resources such as: reclaimed water, reverse osmosis, and desalinization.²⁹

The WMDs can assist in regionalization by refusing to issue permits on local projects unless they are part of the regional water supply plan. Mr. Sullivan indicated that “local sources first” standards help governments look at all possible alternatives before going beyond the authority level.

²⁹ Presentation by Jackson Sullivan, Executive Director of the Withlacoochee Regional Water Supply Authority to the Governmental Services Committee on December 14, 2007

Additionally, regionalization helps maximize options for local sources. Mr. Sullivan continued that all water supplies begin with sources from groundwater. Groundwater sources should be maximized before the more expensive alternative options are employed.

Mr. Sullivan indicated that places with extremely fast population growth, such as The Villages in northeastern Sumter County will need alternative sources very soon. He added that Hernando County also has experienced tremendous growth in recent years.

Commissioner McKee asked Mr. Sullivan why regional supply authorities are better for alternative sources. Mr. Sullivan explained that the local sources are collected first, then new supply sources can be implemented such as: reuse, reclaimed water, desalinization, and others. These alternative sources are more expensive to build and operate, so regional cooperation is the most cost-effective method of utilizing alternative sources. Mr. Sullivan suggested that as important as these new methods of water supply will be for the state, groundwater will still be the most used water source in 20 years. By that time, however, there will have been significant growth in alternative supplies to supplement the groundwater intake.³⁰

Commissioner Randy Miller asked Mr. Sullivan how many counties in Florida currently operate under regional water supply authorities. Mr. Sullivan responded that there is a similar association made up of 3 panhandle counties (Walton, Okaloosa, and Santa Rosa), and another similar water board

³⁰ Ibid

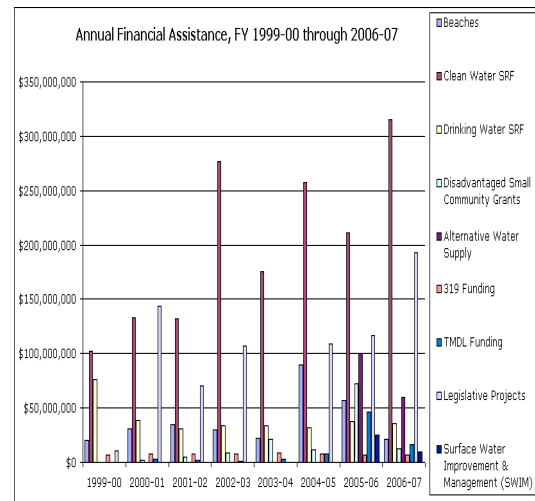
set up to be used only in Volusia County. Finally, there are three such organizations found in the SWFWMD consisting of Pasco, Pinellas, Hillsborough, Sarasota, Charlotte, Desoto, Manatee, Citrus, Hernando, and Sumter counties.³¹

Mr. Sullivan suggested that he did not believe this type of regional plan would work very well in Southeast Florida. Broward, Palm Beach, and Dade counties could each constitute their own regional authorities. The regional water authorities are wholesale providers to local governments and are not designed to make a profit from their member governments.

Doug Mann, representing the American Waterworks Association, commented that population growth will cause water to be a huge cost factor for the future. CS/SB 444 requires a 100-percent funding match from water management districts, which local governments then have to match up to 60 percent to draw down state appropriated funds. Mr. Mann opined that where regionalism works, it can be a good solution, but a state mandate could harm the regional concept and Florida Water policy as a whole.³²

Tom Swihart, Administrator of the Office of Water Policy for DEP, stated that the Department is the statewide manager for water, providing general

supervisory authority over WMDs. The districts do have the authority to levy up to 1 mill, but none of the five districts levy the full mill, and there are statutory caps as well.³³



34

Commissioner D'Alemberte suggested Florida needs a Water Estimating Conference that meets on a regular basis. He added that DEP is charged with providing a Florida Water Plan every five years. He noted that the University of Florida's Florida Water Institute has begun developing a model for long-term water use.

Commissioner Les Miller asked if it may be time for Florida to look into a 'Water Czar.' After some discussion among the committee members, the group decided that water policy should be managed as close to those affected by the policies as possible. According to Commissioner Miller, water management districts are

³¹ Presentation by Jackson Sullivan, Executive Director of the Withlacoochee Regional Water Supply Authority to the Governmental Services Committee on December 14, 2007

³² Remarks by Doug Mann, Shareholder of Littlejohn, Mann & Associates and representative of the American Waterworks Association to the Governmental Services Committee on December 14, 2007

³³ Remarks by Tom Swihart, Administrator of the Office of Water Policy for DEP to the Governmental Services Committee on December 14, 2007

³⁴ <http://www.dep.state.fl.us/water/waterprojectfunding/index.htm>.

decidedly the most effective agency for issuing consumptive use permits.

Total Maximum Daily Loads

The Total Maximum Daily Load (TMDL) Program is a federally required water quality program administered by DEP under the Florida Watershed Restoration Act (Section 403.067, Florida Statutes).³⁵

Through the program, DEP works closely with affected stakeholders to determine how to reduce targeted pollutant loadings to restore the legally designated uses (e.g., drinking water, fishing, swimming, shellfish harvesting) of the polluted waters. A TMDL is the maximum amount of a pollutant that a water body can receive and maintain its designated uses. A given water body may have several TMDLs – one for each target pollutant (phosphorus, coliforms, nutrients, etc.)³⁶

Under the Florida Watershed Restoration Act, TMDLs must be developed for all waters that do not meet their designated uses due to human impacts and consequently, are defined as “impaired.” A TMDL, or a water body’s assimilative capacity, is scientifically derived, typically using existing monitoring data and water quality models or empirical relationships between the pollutant load and the water body’s response. The final TMDL provides a margin of safety that accounts for uncertainty in the analysis.³⁷

³⁵ *Total Maximum Daily Loads, Guidance for Local Officials*, produced by the Florida Stormwater Association and the Florida Department of Environmental Protection

³⁶ Ibid

³⁷ Ibid

Section 303(d) of the Clean Water Act (33 United States Code) requires states to identify impaired waters and the pollutants causing the water quality impairment. The state must then establish a TMDL for each identified pollutant. Though these federal requirements were enacted in the early 1970s, they were not implemented in most states until citizen and environmental groups filed a number of successful lawsuits in the mid-1990s.

Florida Springs Initiative

Geologists estimate that there are more than 700 springs in the state of Florida, representing what may be the largest concentration of freshwater springs on Earth.³⁸

Springs have provided immeasurable natural, recreational, and economic benefits for residents and visitors for more than a century. Ginnie Springs is the most popular freshwater diving location in the world, and the 15 state parks named for springs across Florida attract more than 2 million visitors, contributing nearly \$7 million in revenue annually.³⁹

Florida’s springs serve as windows to the mysteries of the Floridan Aquifer. Because of the pristine beauty of the springs, the bottled water industry has a renewed interest in spring water, while at the same time, many of Florida’s diverse wildlife communities continue to depend on the careful stewardship of Florida springs for their needs. The challenge lies in preserving the water quality of Florida’s springs while

³⁸ www.dep.state.fl.us/springs/about.htm.

³⁹ <http://www.dep.state.fl.us/springs/about.htm>.

meeting the needs of Florida's residents, visitors, and wildlife alike.

In 1999, DEP inaugurated the Florida Springs Protection Initiative to help protect and restore the state's six hundred plus springs. This included the formation of a multi-agency Florida Springs Task Force (FSTF) to provide recommended strategies for the protection and restoration of the springs.

The FSTF's principal goals are to determine the current status of Florida's springs and develop strategies for their long-term protection. To achieve these goals, in November 2000, the FSTF produced the Florida's Springs Task Force Report "Strategies for Protection and Restoration." This report outlines steps for protecting and restoring the springs and the underground aquifer through on-going scientific research, biological and water quality monitoring, regulation and management, education and outreach, and landowner assistance and land acquisition projects.

Disadvantaged Small Community Wastewater Grant Programs

Established in 2000, the Disadvantaged Small Community Grant Program provides funds to plan, design, and build wastewater management facilities. The program provides money for installation or renovation of sewer systems, wastewater treatment plants, water reuse facilities, and effluent disposal systems.

Since the program began, the state has committed more than \$45 million for wastewater upgrades in smaller communities throughout the state. Funding for the grants comes from fees assessed on DEP State Revolving Fund

(SRF) loans. As the SRF grows, more grant money becomes available for disadvantaged communities.⁴⁰ The grant is being distributed yearly in \$750,000 installments to build new collection systems and provide reclaimed water to nearby areas, further safeguarding public health and protecting the quality of the St. Johns River.⁴¹

The Disadvantaged Small Community Wastewater Grant Programs is the only water supply program created by CS/SB 444 which was unaffected by the 2007 budget cuts.

Florida's Future Water Needs

According to findings reported in the March 2007 DEP Report, "Tapping New Sources, Meeting 2025 Water Supply Needs," by 2025, the demand for fresh water is estimated to increase by about 2 billion gallons per day to 8.5 billion gallons per day. This is an increase of 29.5 percent.

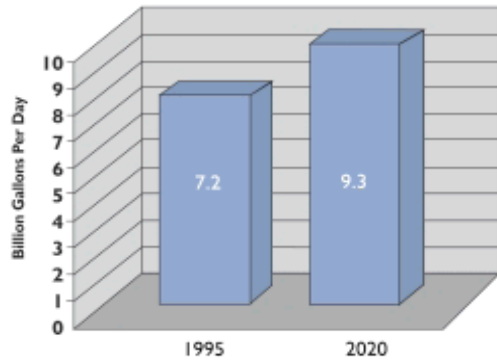
Agriculture, the sector with the smallest projected increase in use over the next 20 years, will no longer be the largest user and its percentage of total use will decline to 35 percent. By 2025, public water supply is expected to increase by 49 percent and become the largest user of fresh water (43 percent of total fresh water use). The sector with the largest percentage increase over the next 20 years is expected to be power generation. However, this sector is still expected to account for only 5 percent of the total fresh water used.⁴²

⁴⁰ http://www.floridadep.com/secretary/post/2006/1103_2.htm.

⁴¹ Ibid

⁴² *Tapping New Sources, Meeting 2025 Water Supply Needs*, FDEP March, 2007

**Projected Total Water Use Statewide
1995-2020**



Morelli, R.L., "Water Withdrawals, Use, Discharge, and Trends in Florida", USGS, Water-Resource Inventory Report, 99-4002, (1999)

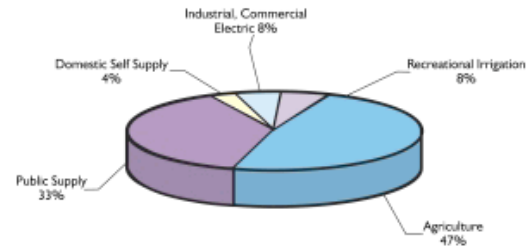
43

As water supply needs in Florida continue to grow, it is imperative to find new methods of cooperation with all levels of government in order to ensure that fresh water remains available. Local, regional, state, and federal cooperation will benefit the state's demand for new alternative water supply options.

Many of the alternative water supply projects described above can be quite costly. Regional plans can be an effective way to share the costs of expensive options, such as desalinization, among local governments and utilities.

⁴³http://www.floridaagwaterpolicy.com/PDF/Florida_Agricultural_Water_Policy_Report.pdf.

Statewide 2020 Projected Demands



Morelli, R.L., "Water Withdrawals, Use, Discharge, and Trends in Florida", USGS, Water-Resource Inventory Report, 99-4002, (1999)

44

Full implementation of regional water supply plans and other efforts will be challenging, but the work done to date indicates that meeting Florida's future needs in an environmentally sound and cost-effective manner is within our reach. Water conservation and alternative supplies will become more imperative over time. Many projects will succeed only if local stakeholders can structure coordinated approaches to regional projects.

⁴⁴ Ibid

Appendix A

Please visit the Florida Council of 100 website to view the 2003 report on water policy,

Improving Florida's Water Supply Management Structure

This report was adopted to constitute the background section of the TBRC Report.

To access the Florida Council of 100 report please click on the following link:

<http://www.fc100.org/documents/waterreportfinal.pdf>