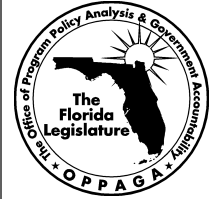




## Office of Program Policy Analysis And Government Accountability



John W. Turcotte, Director

March 1998

# Follow-Up Report on the Surface Water Improvement and Management Program

## Abstract

Since our prior report, the Department of Environmental Protection and the Water Management Districts have continued to make progress in establishing measures of program results for some Surface Water Improvement and Management Act (SWIM) water bodies. However, a gap continues to exist between program resource levels and its objectives.

- If the Legislature continues to fund SWIM, we recommend that the scope of program activities be reduced to match available resources. Scope reduction strategies could include focusing on water bodies of statewide significance, water bodies with greatest reliance on state funding, or water bodies with the greatest degree of degradation.
- If the Legislature discontinues or significantly reduces state funding for SWIM, we recommend that the program be eliminated as a state requirement to avoid creating an unfunded mandate for the water management districts.

## Purpose

In accordance with s. 11.45(7)(f), F.S., this follow-up report informs the Legislature of actions taken by the Department of Environmental Protection and the five Water Management Districts in response to Report No. 95-20, issued in December 1995. This report

presents our assessment of the extent to which these agencies have addressed our findings and recommendations.

## Background

In 1987, the Legislature enacted the Surface Water Improvement and Management Act (SWIM), Ch. 373, F.S., which addresses statewide surface water quality issues and related environmental management issues. When this legislation was enacted, the Legislature determined that existing protection and restoration methods had proven inadequate for some of the state's major lakes, rivers, and bays. The Legislature developed SWIM to address surface water problems through a coordinated effort from the state, water management districts, and local governments. Prior to SWIM, surface water quality projects were funded in a piece-meal fashion and were typically assigned to a variety of agencies. To correct and prevent surface water problems, SWIM assigns priorities to water bodies that have state or regional significance, develops plans and programs for surface water improvement in these priority water bodies, and implements protection and restoration strategies.

The Department of Environmental Protection (DEP) is assigned general oversight responsibility for SWIM. However, the chief planning and implementation role is assigned to the state's five water management districts (WMDs). Each WMD, with the cooperation of other state agencies, local governments, and the public prepare and maintain a list of prioritized water bodies of state and regional significance. In developing their priority list, the WMDs are to give

consideration to the six priority water bodies named in statute.<sup>1</sup> At the time of our review, the WMDs had developed a priority list of 79 water bodies. In order to expend SWIM funds, the WMDs are required to develop surface water improvement and management plans for water bodies based on the priority list. At the time of our review, the WMDs had developed SWIM plans for 27 water bodies. The WMDs currently have plans for 29 water bodies.<sup>2</sup> (See Exhibit 1.)

**Exhibit 1**  
**Water Bodies with Approved SWIM Plans**  
**(as of November 1997)**

***Northwest Florida Water Management District***

Apalachicola River and Bay	Lake Jackson
Deer Point Lake	Pensacola Bay System
St. Marks River	Choctawhatchee Bay

***St. Johns River Water Management District***

Indian River Lagoon	Lake Apopka
Upper Ocklawaha River	Lower St. Johns River

***Suwannee River Water Management District***

Suwannee River	Sante Fe River
Alligator Lake	Coastal Rivers
Aucilla River	Waccasassa River

***Southwest Florida Water Management District***

Tampa Bay	Charlotte Harbor
Lake Tarpon	Lake Thonotosassa
Banana Lake	Winter Haven Chain of Lakes
Lake Panasoffkee	Crystal River/Kings Bay
Rainbow River	Sarasota Bay

***South Florida Water Management District***

Biscayne Bay	Indian River Lagoon
Everglades/East Everglades	Lake Okeechobee /Kissimee River

Source: Department of Environmental Protection and the five Water Management Districts

<sup>1</sup> Section 373.453(1)(c), F.S., identifies Lake Okeechobee, Biscayne Bay, the Indian River Lagoon System and its tributaries, Tampa Bay and its tributaries, Lake Apopka, and the Lower St. Johns River as priority water bodies.

<sup>2</sup> The Indian River Lagoon System is managed by two WMDs.

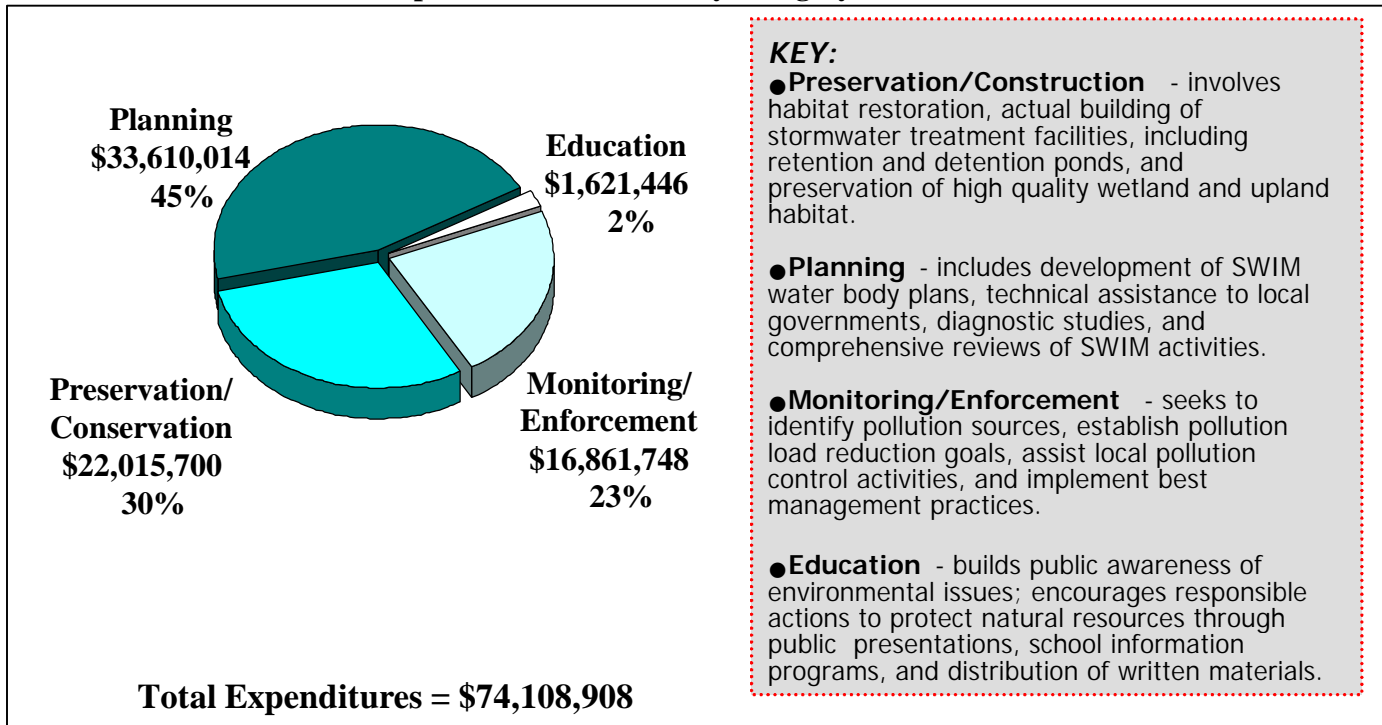
Once a SWIM plan is approved, the water management districts are responsible for implementing the protection and restoration strategies contained in the plans. Restoration and protection strategies include restoring wetlands and natural systems, monitoring water quality, upgrading older stormwater systems, controlling nutrient levels, and conducting diagnostic studies.

At the time of our review, state funding for the program was done through legislative appropriations deposited into the SWIM Trust Fund. In 1996, the Legislature replaced the SWIM Trust Fund with the Ecosystem Management and Restoration Trust Fund. Historically, state funding for SWIM came primarily from general revenue. SWIM Trust Fund expenditures totaled approximately \$74 million through March 1997. (See Exhibit 2.)

Expenditures from state funds are limited to the costs of detailed planning for and implementation of programs prepared for priority water bodies. DEP tracks expenditures of state funds in four categories—preservation/construction, planning, monitoring/enforcement, and education. Exhibit 2 shows state expenditures from 1987 through March 1997 in these four categories.

In addition to state resources, funding for SWIM water body projects comes from a variety of sources including the five water management districts, local governments, other state programs, and the federal government. WMD expenditures totaled approximately \$74.5 million through March 1997 and local governments are estimated to have contributed \$71 million during the same time period. (See Appendices A and B for a summary of program related expenditures.)

**Exhibit 2**  
**State Expenditures for SWIM by Category: 1987 - March 1997**



Source: Department of Environmental Protection

### Prior Findings

**Although some progress had occurred, adverse conditions still existed in some SWIM water bodies.**

Our report found that although some improvements had occurred to SWIM water bodies, many of the adverse conditions that created the need for the program still existed. Improvements made include designating SWIM priority water bodies, developing SWIM plans, and developing a process for targeting and focusing resources through planning and coordination. The program also helped focus other surface water improvement and protection resources on SWIM water bodies. However, many of the adverse conditions that created the need for the program still existed in 1995. These included poor water quality, reductions in fish and wildlife populations, contamination by pesticides, fertilizers, and heavy metals from runoff.

Several factors hindered SWIM's efforts to accomplish more significant changes including limited funding, the long time required to achieve water quality improvements, local land use decisions, and the program's reliance on coordination to affect changes. DEP and WMD staff contended that program funding had not been sufficient to fully implement SWIM plans. The program had experienced reduced funding levels and no state funds were appropriated during Fiscal Year 1995-96. Furthermore, while state funding had decreased, the program's scope and responsibilities had increased.

#### **Formal Evaluation of Impact Needed**

Although DEP and the WMDs had developed program goals and objectives, they had not defined the overall outcome they hoped to achieve for each water body. From the program's creation in 1987 to 1995, participating agencies spent approximately \$265 million on SWIM water bodies with little determination of what these expenditures

accomplished. We recommended that DEP and the WMDs take steps to measure program results and tie outcomes to strategies and expenditures.

### Program Alternatives

Our prior report concluded that significantly greater resources would be needed for the program to fully meet its original intent of significantly improving and protecting water quality and associated natural systems. However, this option did not seem feasible in light of the limited availability of general revenue funding. Moreover, continuing the program without sufficient state funds would amount to an unfunded mandate because regional and local governments would be required to meet unfunded state requirements. In an effort to better match available resources to program objectives, we developed several options for the Legislature to consider.

- **Eliminate the program.** The Legislature could eliminate the program rather than provide limited funding.
- **Reduce program scope.** The Legislature could continue the program but reduce its scope to meet more limited funding requirements.
- **Delegate program responsibilities to the WMDs.** DEP oversight could be eliminated and the WMDs could be given sole responsibility for implementing the program and no state funds would be provided.
- **Continue the program with a dedicated funding source.** A long-term funding source could be established for the program, which would match the long-term nature of the program's objectives. However, this option would require a dedicated funding source and may necessitate additional taxes.

## Current Status

### Some progress has been made in measuring program results.

Although the WMDs are making progress in establishing measures of program results, DEP and the districts still have not systematically evaluated the results of SWIM expenditures in terms of surface water protection and improvements. However, the WMDs are currently in the process of defining management objectives, as well as monitoring baselines and developing environmental indicators. These indicators will set numeric targets for certain parameters such as nutrient levels, seagrass growth and submerged aquatic vegetation growth, and trophic state indices for many SWIM water bodies. This effort, when completed, will provide valuable information for water resource planning and management. WMD progress in developing measures for individual districts is discussed below.

**Southwest Florida WMD.** The district is working cooperatively with the National Estuary Program, DEP, local governments, and interested citizens to establish goals, targets, and strategies to measure changes in SWIM water bodies. For example the goal for Tampa Bay is to achieve water clarity levels estimated to have existed in the benchmark period for the water body, the 1950s. An increase in seagrasses indicates that water clarity has improved in Tampa Bay.

**Suwannee River WMD.** The district has established baseline conditions for each of its SWIM water bodies and is monitoring activities that affect water quality to identify trends. District staff contend that developing additional measures would be too costly. The majority of the SWIM water bodies in this district are designated for preservation rather than restoration. Given the emphasis on preservation, the district believes that the cost effectiveness of work done on these SWIM water bodies should be reviewed from the perspective that costly restoration is being avoided.

**South Florida WMD.** The district has continued to emphasize developing general, simple measures that indicate changes in water bodies. The primary measures that the district uses are trends in water quality and species distribution. For example, one of the major measures used for the Everglades is the rate of cattail invasion. One of the key measures used for the Indian River Lagoon is the distribution and abundance of oysters.

**Northwest Florida WMD.** The district has been working to assess the existing condition of the SWIM water bodies in order to develop a baseline from which future impacts and program effectiveness can be measured. For example, the district is currently monitoring water and sediment quality in Lake Jackson's Megginis Arm basin to quantify the effectiveness of the stormwater retrofit and lake restoration projects that have been completed in that area over the last seven years.

**St. Johns River WMD.** The district is working toward developing numeric targets and defining healthy ecosystems in comprehensible terms. For example, the Lake Apopka SWIM project has developed several approaches to evaluating improvements in the lake that include indicators of changes in water quality and redevelopment of submerged vegetation. In addition, SWIM staff working on the Upper Ocklawaha River Basin project have developed measures of water clarity, algae productivity, and nutrient concentrations to track trends in water quality.

### **Gap Between Program Funding and Program Objectives Continues**

A gap continues to exist between the amount of resources allocated for the program and the program's statutory objectives. The Legislature has not reduced the program's scope although program funding has remained relatively the same since the time of our review. In addition, the Legislature designated some of the SWIM appropriations for Fiscal Years 1996-97 and 1997-98 for specific water body projects instead of using the funding process

established by the SWIM statutes. This tendency reverts back to the funding process used prior to the enactment of SWIM legislation.

Although no substantive changes have been made to program requirements or funding levels, the Legislature plans to address SWIM program funding issues in 1998. In 1997, the Legislature established a Solid Waste Management Trust Fund Review commission. One of the commission's goals is to consider whether that trust fund is an appropriate source of funding for the SWIM program. The commission is also charged with reviewing alternative funding strategies for the program. The commission issued a report and recommendations to the Governor, the President of the Senate, and the Speaker of the House of Representatives on January 30, 1998. In its report, the commission recommended that dedicated state funding be provided at the level of \$25 million to \$30 million per year.

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## **Conclusions and Recommendations**

Even with the creation of a commission to study alternative funding approaches, there is no indication that there will be an infusion of new dollars sufficient enough to meet the program's requirements for all 29 SWIM water bodies. In the 1998-99 Recommended Budget, the Governor is requesting \$7 million from general revenue for SWIM. One of the criteria established by s. 373.455, F.S., for SWIM plan approval is the likelihood that the plan will significantly improve or protect water quality and associated natural systems. Although estimates of the resources that would be needed to effect significant changes in all SWIM water bodies are not available, experience shows that the resource needs greatly exceed funding levels. Our 1995 report showed that all of the various agencies participating in SWIM funding (state, federal, WMD, local governments) contributed approximately \$265 million to SWIM projects between 1987 and the end of 1994. However, even

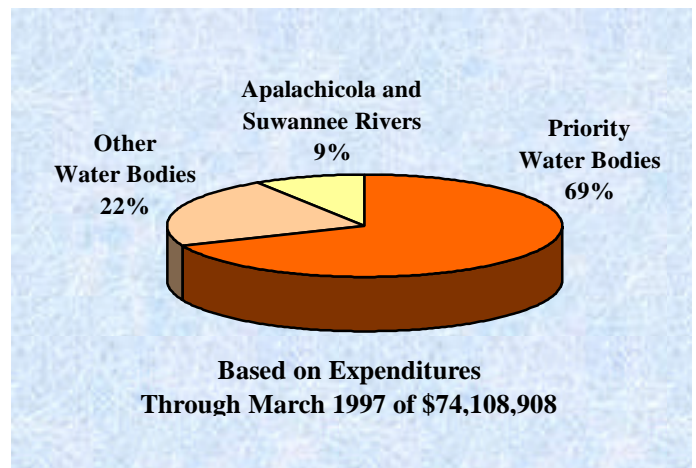
at this funding level, many of the adverse conditions that created the need for the program continued to exist.

To better evaluate efforts to improve surface water conditions, DEP and the WMDs should continue efforts to better define the overall outcome they hope to achieve for each water body. This effort should result in clearly defined and realistic outcomes, estimated costs to achieve the outcomes, and planned completion dates. Defining outcome goals will help legislators and program staff make better decisions about how to best target available resources. The resource needs of some water bodies may be so great for marginal improvement that other water bodies may represent more cost effective choices for SWIM funding. More clearly defined outcomes will also allow program staff to better evaluate the effectiveness of the program.

Continuing the program requirements as designed to meet all program objectives does not seem feasible in light of current funding restrictions. If the Legislature decides to continue funding the SWIM program, we recommend it limit the scope of the program to more closely match funding levels. One option is to reduce the scope to the water bodies that have received most of the SWIM funds. A DEP analysis shows that the majority of state expenditures (69%) have been spent on the six priority water bodies listed in the SWIM Act. (See Exhibit 3.) The DEP analysis also shows that 9% of state expenditures have been spent for two water bodies, the Apalachicola and Suwannee rivers. Thus, 78% of state expenditures have been spent on 8 of the 29 SWIM water bodies. This trend indicates that program funding has already limited the scope of the program to some degree. Other options include focusing the program on water bodies with greatest reliance on state funding or with greatest degree of degradation.

On the other hand, if the Legislature decides to discontinue or significantly reduce SWIM funding, we recommend that the program be eliminated as a statewide requirement. Continuing the program as designed without sufficient state funds to match state requirement amounts to an unfunded mandate. Under this option, the WMDs would no longer be required to comply with the state requirements for the program contained in Ch. 373, F.S. However, the WMDs could choose to continue the program in a more limited form at the regional level. A major limitation of this approach is that the WMDs have different levels of available resources to address surface water problems and significant water quality problems in state water bodies may not be resolved. In fact, according to DEP and the WMDs, the Northwest Florida WMD and the Suwannee River WMD would be unable to continue the SWIM program, even in a more limited form. This would eliminate SWIM funding for two water bodies of statewide significance located in those districts, the Apalachicola and Suwannee rivers.

**Exhibit 3**  
**Most State Funds Have Been Spent on the Six Priority Water Bodies**



Source: Department of Environmental Protection

## Appendix A

### State and Water Management District Expenditures: 1987 Through March 1997

Water Management District (WMD)	State SWIM Funds	Water Management District Expenditures		Totals
		Required District Match	Amount Over Required Match	
Northwest Florida WMD	\$ 7,376,808	\$ 2,142,546	\$ 2,298	\$ 9,521,652
Suwannee River WMD	6,120,966	2,228,506		8,349,472
St. Johns River WMD	22,825,318	8,316,340	13,745,995	44,887,653
Southwest Florida WMD	14,682,930	4,663,787	7,387,099	26,733,816
South Florida WMD	23,102,886	11,383,131	24,668,981	59,154,998
<b>Total</b>	<b>\$74,108,908</b>	<b>\$28,734,310</b>	<b>\$45,804,373</b>	<b>\$148,647,591</b>

Source: Department of Environmental Protection

## Appendix B

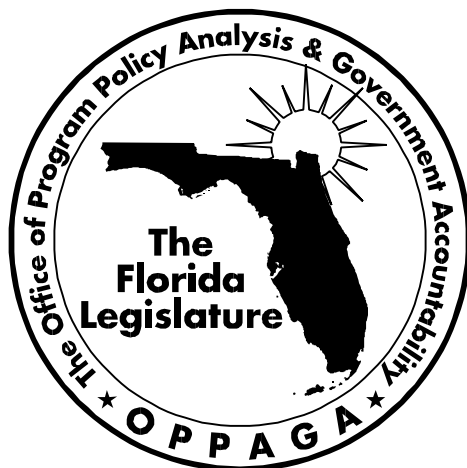
### Estimated Financial Involvement by Entities That Coordinate With the SWIM Program: 1987 Through March 1997

Water Management District (WMD)	Local Funding	Federal Funding	Other State Funding (land acquisition, state revolving fund, etc.)	Other Funding	Totals
Northwest Florida WMD	\$ 1,303,041	\$ 1,307,647	\$ 26,798,851	\$ 250,000	\$ 29,659,539
Suwannee River WMD	-0-	1,244,145	2,155,622		3,399,767
St. Johns River WMD	23,040,909	33,692,136	65,000,000	1,835,848	123,568,893
Southwest Florida WMD	32,985,289	5,378,300	4,781,500	359,550	43,504,639
South Florida WMD	14,033,333	3,799,806	9,853,172		27,686,311
<b>Total</b>	<b>\$71,362,572</b>	<b>\$45,422,034</b>	<b>\$108,589,145</b>	<b>\$2,445,398</b>	<b>\$227,819,149</b>

Source: Department of Environmental Protection

## The Florida Legislature

### Office of Program Policy Analysis and Government Accountability



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