

REPORT NO. 95-20

STATE OF FLORIDA



**OFFICE OF PROGRAM POLICY ANALYSIS AND
GOVERNMENT ACCOUNTABILITY**

REVIEW OF
THE IMPLEMENTATION OF THE
SURFACE WATER IMPROVEMENT AND MANAGEMENT PROGRAM
BY THE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND THE
FIVE WATER MANAGEMENT DISTRICTS

December 21, 1995

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JAMES L. CARPENTER
INTERIM DIRECTOR

State of Florida

OFFICE OF PROGRAM POLICY ANALYSIS AND GOVERNMENT ACCOUNTABILITY

December 21, 1995

The President of the Senate,
the Speaker of the House of Representatives,
and the Legislative Auditing Committee

I have directed that a review be made of the implementation of the Surface Water Improvement and Management Program by the Department of Environmental Protection and the five Water Management Districts. The results of the review are presented to you in this report. This review was conducted at the request of the Joint Legislative Auditing Committee. This review was conducted by Ms. Nancy Dufoe under the supervision of Ms. Julie Ferris.

We wish to express our appreciation to the staff of the Department of Environmental Protection and the Water Management Districts for their cooperation during this review.

Respectfully yours,

James L. Carpenter
Interim Director



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Review supervised by:

Julie A. Ferris

Review made by:

Nancy Dufoe

Reviewed by:

Gloria I. Berry

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Summary

Review of the Implementation of the Surface Water Improvement and Management Program

Purpose

This review addressed the following questions:

- What progress has been made since the SWIM Program was created in 1987?
 - What factors have hindered the SWIM Program's efforts? and
 - What options exist for the SWIM Program?
-

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. To correct and prevent surface water problems, the SWIM Program objectives are to assign priorities to water bodies of state or regional significance, develop plans and programs for surface water improvement in the priority water bodies, and implement the protection and restoration strategies contained in the plans. The Department of Environmental Protection (DEP) is assigned general oversight responsibility for the SWIM Program. The chief planning and implementation role for the Program is assigned to the state's five water management districts (WMDs). As of March 1995, the WMDs had developed SWIM plans for 27 of the priority water bodies. Approximately \$90 million of state and district funds has been spent on the Program since 1987.

Program Progress Summary

Some Progress Has Occurred

Some progress has occurred since the SWIM Program was created in 1987, including the designation of SWIM priority water bodies, the development of SWIM plans, and a process for targeting and focusing resources through planning and coordination. The WMDs have developed a priority list of 79 water bodies of state and regional significance and have developed approved SWIM plans for 27 of these water bodies.¹ The Program also contains a

¹ The DEP and WMDs refer to 27 water bodies and plans; they count the Indian River Lagoon System twice because it is located in two districts.

mechanism for targeting and focusing resources through planning and coordination. The WMDs reported that through its coordination activities the Program has helped focus other surface water improvement and protection resources to SWIM water bodies. The WMDs estimate that financial involvement by entities that coordinate with the SWIM Program totaled approximately \$177 million for the period October 1987 through December 1994.

**Adverse Conditions
Still Exist**

Although some improvements have occurred to water quality and natural systems, the conditions that created the need for the SWIM Program still exist to a large extent. The DEP and the WMDs report that restoration and preservation activities have had a positive impact on SWIM water bodies. WMD responses show general improvements in water bodies designated for restoration activities. Of the 15 water bodies designated for restoration, the WMDs identified 11 as having improvements, with 3 having been significantly improved and 8 having improved somewhat.² WMDs also report that 10 of the 14 water bodies they rated as being in poor to fair condition prior to SWIM Program involvement are currently in better condition. The WMDs report no adverse changes in the overall condition of the water bodies designated primarily for preservation. Of the 15 water bodies designated for preservation, the responses indicate that the overall condition has remained the same in 12 water bodies and is better in 3 water bodies.

However, significantly improving and preserving all of the SWIM water bodies will require additional long-term efforts and funding. 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 natural systems. However, in some areas of the state many of the adverse conditions that created the need for the SWIM Program still exist including poor water quality, reductions in fish and wildlife, and contamination by pesticides, fertilizers, and heavy metals from runoff. The five WMD Program administrators indicated that the districts are making progress in implementing the SWIM

² Three water bodies (Lake Jackson, Pensacola Bay, and Lower St. Johns River Basin) are categorized as both restoration and preservation water bodies. The responses for these three water bodies were counted in both categories.

plan projects and programs. However, only one WMD reported that significant changes have occurred to the overall condition of SWIM water bodies in its district.

**Factors Hindering
Program Efforts**

Several factors have hindered the SWIM Program's efforts to accomplish more significant changes including limited funding, time required to achieve improvements, local land use decisions, and the Program's reliance on coordination to affect changes. DEP and WMD staff contend that Program funding has not been sufficient to fully implement SWIM plans. The Program has experienced decreases in funding compared to the levels appropriated during the first three years, with no state funds appropriated for fiscal year 1995-96. Funding uncertainty from year to year can hinder the WMDs' ability to do long-term planning and can cause delays in projects as well as inhibit any commitments from local governments. Planning and implementing restoration and preservation activities is a time consuming process. In addition, the Program does not have direct regulatory and land management authority to address adverse conditions that impact SWIM water body areas. As a result, the Program must rely on its planning and coordination activities to try to affect needed regulatory and land use management changes.

**Formal Evaluation
Process Needed**

Although DEP and the WMDs have developed goals and objectives for the Program, they have not defined the overall outcome they hope to achieve for each water body. The lack of clear, measurable outcomes creates some confusion in evaluating the success of improvement efforts. Assessing Program results and costs pose specific challenges for the SWIM Program due to the decentralized structure of the Program and the unique needs of the 27 water bodies. However, without an agreed upon measurable outcome for SWIM water bodies, it is difficult to assess the success of the Program or the results achieved. The Legislature and Program managers are precluded from determining if the Program is achieving its purpose efficiently and effectively and identifying the most optimal strategies and policies given available funding. Consequently, the WMDs have spent approximately \$90 million of state and district funds since 1987, yet it is not possible to determine the cost effectiveness of these

expenditures. SWIM management recognize the importance of evaluating Program effectiveness; they said that establishing a formal evaluation process would have required additional funding.

Alternatives

Continuing the Program as designed to meet all Program objectives does not seem feasible in light of current funding restrictions on general revenue. Continuing the Program without sufficient funds would amount to an unfunded mandate with disproportionate funding responsibility falling to local and regional sources. In an effort to better match available resources to Program objectives, we have developed several options for the Legislature to consider.

Option 1 Eliminate the Program

Given it is unlikely that sufficient general revenue and ad valorem tax dollars will be available to fully implement the Program, the Legislature may wish to simply eliminate the Program rather than provide insufficient funding. Surface water quality efforts would then depend largely on local and regional initiatives. Under this option, it is likely that efforts to improve and preserve surface water quality would be significantly reduced and the primary mechanism for planning and coordinating surface water improvements would be eliminated.

Option 2 Reduce Program Scope

The Legislature may wish to continue the Program but reduce the scope of it activities in order to meet more limited funding requirements. Different criteria can be used to reduce the Program's scope such as reducing the number of water bodies, or funding only specific types of activities. Partial funding would allow for some surface water improvements to continue and would help in mitigating the potential loss of local government and federal program involvement in SWIM projects.

Option 3 Delegate Program Responsibilities to the WMDs

Under this option, DEP oversight would be eliminated and the WMDs would have sole responsibility for implementing the Program. This option is more desirable if the Legislature determines that it will continue to reduce or discontinue funding. The primary limitation of this option is that it would fall inequitably on those WMDs that could not conduct surface water improvement projects without state funds. This would also result in an unfunded mandate.

**Option 4
Continue the Program With
a Dedicated Funding Source**

This option offers the best opportunity for meeting current Program objectives because many corrective and prevention efforts require long-term funding. Providing a consistent funding mechanism in place of general revenue would provide a greater assurance to the implementing agencies that future funds would be available and Program administrators would be able to better plan projects in anticipation of funding. This option has the major disadvantage of necessitating additional taxes.

**Conclusions and
Recommendations**

If the SWIM Program continues in some form, the DEP and the WMDs must take steps to provide some means of measuring Program results, and tying outcomes to strategies and expenditures. Emphasis should be placed on developing generalizable and more simple measures that indicate changes in the health of the overall water body.

An infusion of significant additional resources are needed if the Program is to ever meet its original intent. Therefore, if funds are not available, then the Legislature should eliminate the Program. If limited state funding is available, we recommend that the Program scope be reduced to better match Program requirements to funding levels. However, if the Legislature wants to make a long-term commitment to surface waters of state and regional significance, then we recommend that a dedicated funding source be adopted to allow WMDs to make better decisions regarding surface water improvement projects. Program scope and activities should be adjusted depending on the level of funding achieved through the dedicated funding source.

Agency Responses

The Secretary of the Department of Environmental Protection and the Executive Directors of the Water Management Districts generally concurred with our conclusions and our findings and recommendations. The Department and the Water Management Districts generally agreed that a dedicated funding source would be beneficial to the Program. Copies of their complete responses are included in Appendix A of our full report.

Review of the Implementation of the Surface Water Improvement and Management Program

CHAPTER I Introduction

Purpose and Scope

In this review, we evaluated the implementation of the Surface Water Improvement and Management (SWIM) Program by the Department of Environmental Protection (DEP) and the five Water Management Districts (WMDs). Specifically, we addressed the following questions:

- What progress has been made since the SWIM Program was created in 1987?
- What factors have hindered the SWIM Program's efforts? and
- What options exist for the SWIM Program?

Methodology

This review was made in accordance with generally accepted government auditing standards and accordingly included appropriate performance auditing and evaluation methods. To gain a general understanding of the SWIM Program, we reviewed appropriate sections of the Florida Statutes, the Florida Administrative Code, and the SWIM Program policies and procedures manual. To determine what progress the SWIM Program has made since it was established in 1987, we reviewed the SWIM plans and surveyed the five WMD Program administrators to determine what impact SWIM restoration and preservation have had on SWIM water bodies and the types of activities that have been the most effective. To determine what factors have hindered Program efforts, we reviewed Program appropriations, expenditures, and other WMD documents that describe the effects of funding levels on the Program. To determine what options exist for the Program, we interviewed Program management and reviewed the SWIM plans to determine whether goals, objectives, and

performance measures have been developed to guide Program policies and activities. In addition, we reviewed Program literature and studies to identify the types of performance measures that would be the most useful for assessing the Program's impact on SWIM water bodies and for determining the best direction for the future of the Program.

CHAPTER II **Background**

Program Design

In 1987, the Legislature enacted the Surface Water Improvement and Management Act (SWIM), Ch. 373, F.S. This Act addresses statewide surface water quality issues and related environmental management issues. The Act states that the water quality of many of the surface waters of the state has been degraded, or is in danger of being degraded, and the natural systems associated with many surface waters have been altered so that these surface waters no longer perform the important function that they once performed. The Legislature found that two major factors have contributed to the decline in the state's surface waters, point and non-point sources of pollution and the destruction of natural systems that serve to purify surface waters and provide wildlife habitat. The Legislature also determined that it is the state's duty to enhance the environmental and scenic value of surface waters. To correct and prevent surface water problems, the SWIM Program objectives are to:

- Assign priorities to water bodies of state or regional significance based on their need for protection and restoration;
- Develop plans and programs for surface water improvement and management in the priority water bodies; and
- Implement the protection and restoration strategies contained in the SWIM plans.

Program Organization

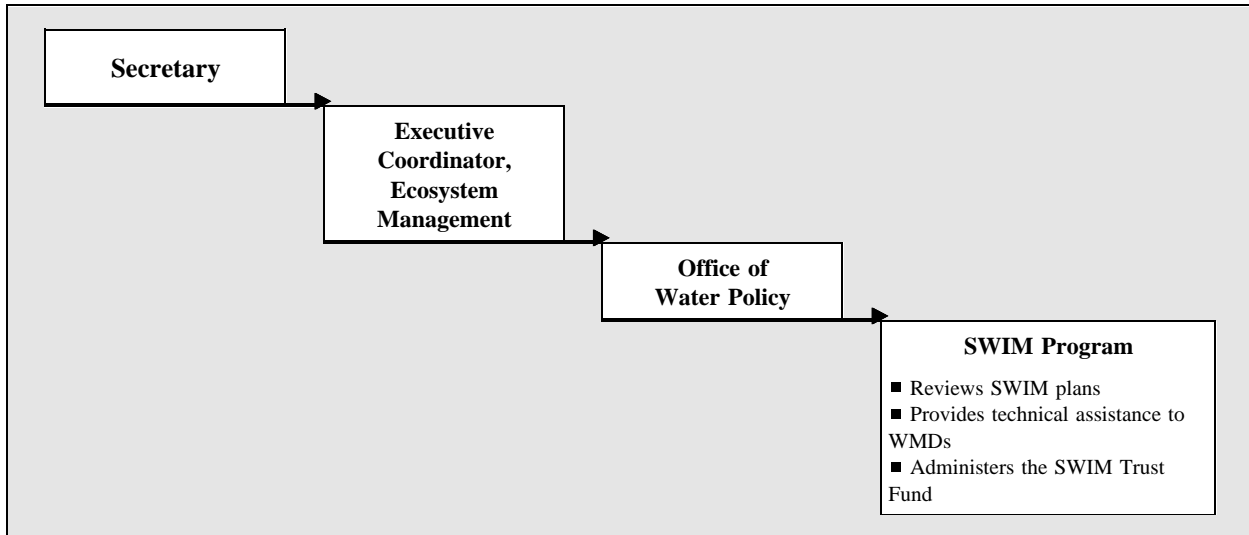
Department of Environmental Protection. The Department of Environmental Protection (DEP) is assigned general oversight responsibility for the SWIM Program. DEP is headed by a Secretary, who is appointed by the Governor and confirmed by the Senate. Virginia Wetherell was appointed Secretary of the Department on February 2, 1993.

One of DEP's responsibilities is to develop criteria for the Water Management Districts (WMDs) to use to prioritize water bodies of state or regional significance for the SWIM Program. This criteria is contained in Ch. 62-43, F.A.C. DEP is also required to review proposed SWIM plans to determine:

- Whether the estimated costs described in the plans are reasonable;
- The likelihood that the plan will significantly improve or protect water quality and associated natural systems; and
- Whether the activities included in the plans can be funded based on available revenues within the SWIM Trust Fund or other funding which may be proposed by the Department, the WMDs, or local governments.

DEP's Office of Water Policy is responsible for administering the SWIM Program. (See Exhibit 1.) Program administration is funded by DEP's Administrative Trust Fund and not from the SWIM Trust Fund. During 1994-95 there were five full-time equivalent positions (FTEs) assigned to the SWIM Program. During fiscal year 1995-96 there were three DEP staff assigned to work on SWIM activities. SWIM staff review SWIM plans, provide technical assistance to the districts, and administer the SWIM Trust Fund.

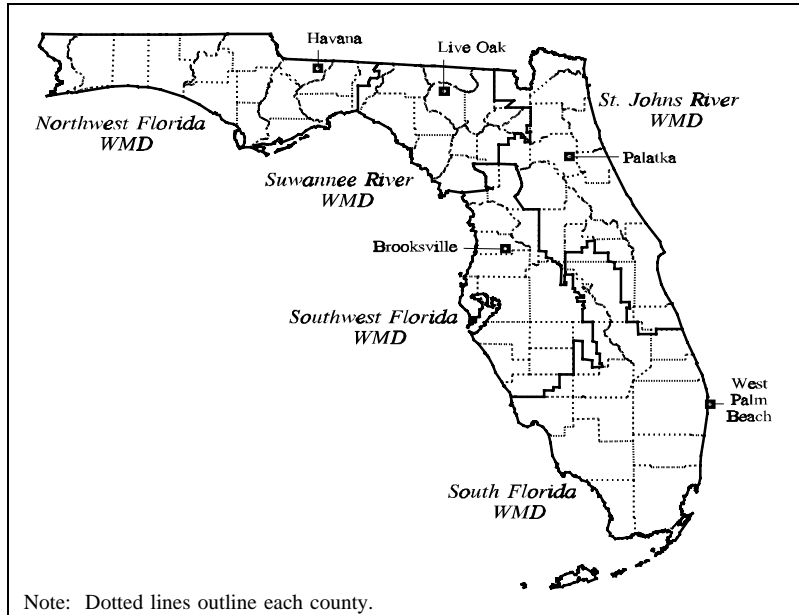
Exhibit 1: Organization Chart for the SWIM Program Office within the Department of Environmental Protection



Source: Department of Environmental Protection.

Water Management Districts. The 1972 Water Resources Act established the statewide network of five WMDs that are divided along natural hydrological boundaries. (See Exhibit 2.) Each district is headed by a 9-member Governing Board, except for the Southwest Florida WMD, which is headed by an 11-member board. Each Governing Board member is appointed by the Governor and serves without compensation. An executive director guides the staff of each district.

Exhibit 2: Location of WMDs and District Headquarters



Source: Department of Environmental Protection.

The chief planning and implementation role for the SWIM Program is assigned to the state's five WMDs. Each WMD, with the cooperation of DEP, the Department of Community Affairs, the Department of Agriculture and Consumer Services, the Game and Fresh Water Fish Commission, and local governments prepare and maintain lists of prioritized water bodies of state and regional significance. Once the priority water bodies are identified, the WMDs are required to develop, with the cooperation of other named agencies, surface water improvement and management plans for those water bodies based on the priority lists. Each plan is to include information such as a description of the history and problems with the water body, a description of land uses within the water basin, identification of possible pollution sources, a description of strategies and potential strategies for restoring or protecting the water body to Class III or better, a schedule for restoration and protection of the water body, and an estimate of the funding needed to carry out the restoration

and preservation activities.¹ As of March 1995, the WMDs had developed SWIM plans for 27 of the priority water bodies.² (See Exhibit 3.) SWIM plans are to be updated every three years.

Exhibit 3: Water Bodies With Approved SWIM Plans as of March 1995

Water Management District	Preservation	Restoration
<i>Southwest Florida</i>	Rainbow River/Blue River Crystal River/Kings Bay Lake Panasoffkee Charlotte Harbor Lake Tarpon	Tampa Bay Banana Lake Lake Thonotosassa Winter Haven Chain of Lakes
<i>South Florida</i>	None	Lake Okeechobee Florida Everglades Indian River Lagoon System ¹ Biscayne Bay
<i>St. Johns River</i>	Lower St. Johns River Basin ²	Lake Apopka Indian River Lagoon System ¹ Upper Oklawaha River Basin Lower St. Johns River Basin ²
<i>Northwest Florida</i>	Lake Jackson ² Pensacola Bay System ² Apalachicola River and Bay System Deer Point Lake	Lake Jackson ² Pensacola Bay System ²
<i>Suwannee River</i>	Suwannee River System Sante Fe River System Coastal Rivers System Aucilla River System Waccasassa River System	Alligator Lake

¹ Indian River Lagoon System is managed by two WMDs.
² These water bodies are classified as both restoration and preservation water bodies.

Source: Water Management Districts.

Program Resources

The SWIM Program is primarily funded through legislative appropriations deposited into the SWIM Trust Fund. Historically, SWIM has been funded primarily from general revenue, although a portion (19%) of the Advance Disposal Fee was dedicated to the Program during fiscal years

¹ Rule 62-302.400, F.A.C., requires the state to classify all surface waters according to designated use classifications as follows: Class I - drinking water; Class II - shellfish harvesting and propagating; Class III - recreation and wildlife; Class IV - agricultural use; and Class V - industrial.

² The DEP and WMDs refer to 27 water bodies and plans; they count the Indian River Lagoon System twice because it is located in two districts.

1993-94 and 1994-95. Trust Fund revenues from fiscal year 1987-88 through 1994-95 total \$80.1 million (see Exhibit 4).

Expenditures from the Fund are limited to the costs of detailed planning for and implementation of programs prepared for priority water bodies. The Fund cannot be used for planning or construction of treatment facilities for domestic or industrial waste disposal. To receive funds, the districts must certify that the money is needed for detailed planning for or implementation of SWIM plans. A WMD may not receive more than 50% of the monies in the Fund in any fiscal year unless otherwise provided by law. Each WMD shall receive the amount it requested or 10% of the money in the appropriation, whichever is less. The DEP shall allocate the remaining money in the appropriation annually, based on the specific needs of the districts. The amount of money that may be released to a WMD from the SWIM Trust Fund is limited to not more than 60% of the approved plans of the South Florida WMD, the Southwest Florida WMD, and the St. Johns River WMD and not more than 80% of the amount of money necessary for the approved plans of the Northwest Florida WMD and the Suwannee River WMD. The remaining funds necessary for the approved plans shall be provided by the districts. As of June 30, 1995, SWIM Trust Fund expenditures totaled \$61.7 million. In addition, the WMDs reported district funds used for SWIM totaled approximately \$26.6 million from October 1987 through December 1994.

Exhibit 4: SWIM Trust Fund Revenues for Fiscal Years 1987-88 Through 1994-95

Fiscal Year	Transfer to the SWIM Trust Fund From General Revenue	Transfer to the SWIM Trust Fund From the Advance Disposal Fee	Interest Accrued to the SWIM Trust Fund	Total Annual Revenue to the SWIM Trust Fund
1987-88	\$15,000,000	\$ 0	\$ 70,934	\$15,070,934
1988-89	15,000,000	0	1,325,013	16,325,013
1989-90	15,000,000	0	2,563,129	17,563,129
1990-91	3,000,000	0	1,946,044	4,946,044
1991-92	6,978,048	0	1,293,026	8,271,074
1992-93	0	0	801,461	801,461
1993-94	5,000,000	6,259,175	525,850	11,785,025
1994-95	0	4,431,595	894,073	5,325,668
TOTAL	<u>\$59,978,048</u>	<u>\$10,690,770</u>	<u>\$9,419,530</u>	<u>\$80,088,348</u>

Source: Compiled by the Office of Program Policy Analysis and Government Accountability from the Department of Environmental Protection's Bureau of Finance and Accounting financial documents, as of June 30, 1995.

CHAPTER III

Questions, Answers, and Alternatives

Question 1

What progress has been made since the SWIM Program was created in 1987?

Some progress has occurred since the SWIM Program was created in 1987 including the designation of SWIM priority water bodies, the development of SWIM plans, and a process for targeting and focusing resources through planning and coordination. Although some improvements have occurred to water quality and natural systems in SWIM water bodies designated for restoration, the conditions that created the need for the SWIM Program still exist to a large extent. Water quality problems and degradation still exist in the majority of the SWIM water bodies.

Program Background

At the time the legislation was enacted, existing protection and restoration methods had proven inadequate for some of the state's major lakes, rivers, and bays. Prior to SWIM, surface water quality projects were funded in a piece-meal fashion and typically assigned to a variety of agencies. The types of water quality problems that existed when SWIM was enacted include:

- Tampa Bay, Florida's largest open estuary, experienced declines in important fisheries and a complete collapse of the bay's oyster and scallop fisheries;
- Phosphorous levels in Lake Okeechobee, Florida's largest lake, had doubled, causing an algae bloom that covered a quarter of the lake's surface;
- Lake Apopka, once Florida's second largest lake, no longer functioned as a natural system because of sewage releases, citrus packing waste, and muck

farming. The number of fish camps had been reduced from 21 in 1956 to only 1 in 1987;

- The Lower St. Johns River was contaminated with coliform bacteria and heavy metals from faulty septic tanks and stormwater runoff; and
- The Indian River Lagoon system had deteriorated as a result of freshwater discharges from stormwater runoff, drainage canals, and waste water effluent which killed seagrass and clam beds and degraded water quality throughout the system.

The SWIM Program was developed by the Legislature to address surface water problems through a coordinated effort from the state, water management districts (WMDs), and local governments.

SWIM Program Progress

Sets Priorities and Develops Plans. The SWIM Program provides a mechanism for identifying the highest priority water bodies and a plan of action for effecting surface water improvements. To identify priority water bodies, each WMD, in cooperation with other state agencies is required to prepare a list of prioritized water bodies of regional and statewide significance.³ In developing their priority lists, the WMDs shall give consideration to six priority areas named in statute.⁴ The WMDs have developed a priority list of 79 water bodies of state and regional significance with the participation of other state agencies, local governments, and the public. The WMDs are also required to develop plans for priority water bodies in order to expend SWIM funds. Each plan is to include a description of the water body's history and problems, a description of land uses within the drainage basin,

³ The agencies required to cooperate with the WMDs are the Department of Environmental Protection, the Department of Agriculture and Consumer Services, the Department of Community Affairs, the Game and Fresh Water Fish Commission, and local governments.

⁴ Section 373.453(1)(c), F.S., requires the WMDs, when developing their priority lists, to give consideration to the following priority areas: the South Florida WMD shall give priority to the restoration needs of Lake Okeechobee, Biscayne Bay, and the Indian River Lagoon system and their tributaries; the Southwest Florida WMD shall give priority to the restoration needs of Tampa Bay and its tributaries; and the St. Johns River WMD shall give priority to the restoration needs of Lake Apopka, the Lower St. Johns River, and the Indian River Lagoon system and their tributaries.

identification of possible pollution sources, a description of strategies and potential strategies for the water body's restoration and protection, a schedule for restoration and protection, and an estimate of the funds needed for restoration and preservation activities. The WMDs have developed SWIM plans for 27 of the 79 water bodies identified on the priority list.⁵

Positive Impacts on Restoration Water Bodies. The Department of Environmental Protection (DEP) and the WMDs report that restoration efforts have had a positive impact on SWIM water bodies. The SWIM plans include restoration and preservation projects and programs that address restoring wetlands and natural systems, monitoring water quality, upgrading older stormwater systems, and controlling nutrient levels. We surveyed the five WMDs to identify the current condition of SWIM water bodies.

The WMD survey responses show general improvements to water bodies designated for restoration activities.⁶ Of the 15 water bodies designated for restoration, the WMDs identified 11 as having improvements, with 3 having been significantly improved and 8 having improved somewhat.⁷ WMDs also report that 10 of the 14 water bodies they rated as being in poor to fair condition prior to SWIM Program involvement are currently in better condition. We also asked the WMDs to rate four specific types of changes (see Exhibit 5). The results show that: water quality is better in 11 water bodies; submerged vegetation is generally better in 6 water bodies; fisheries are better in 5 water bodies; and aesthetic changes have occurred in 8 water bodies. These results have been achieved by reductions in nutrient loading, the introduction of desirable plants or the reappearance of native plant species, increases in populations of desirable fish or in fish diversity, and the

⁵ The DEP and WMDs refer to 27 water bodies and plans; they count the Indian River Lagoon System twice because it is located in two districts.

⁶ Three water bodies (Lake Jackson, Pensacola Bay, and the Lower St. Johns River Basin) are categorized as both restoration and preservation water bodies. The responses for these three water bodies were counted in both categories.

⁷ Survey results for the four other water bodies show the following; one water body improved little, one lacks data to determine results, and restoration efforts have been limited in one water body and have not begun in the other (Alligator Lake).

removal of exotic plant species, increases in water clarity, and fewer algae blooms. WMD staff indicated that the most effective types of restoration activities are diagnostic studies and research, efforts designed to reduce nutrient loadings such as stormwater treatment and improving agricultural practices, and restoration of wetlands and habitats.

Exhibit 5: SWIM Restoration Water Bodies

Water Body	Condition		Water Quality	Submerged Vegetation	Fish Population or Variety	Aesthetic Changes
	Prior to SWIM	Current				
<i>Southwest Florida WMD</i>						
Tampa Bay	Good	Better	Better	Better	Better	Better
Banana Lake	Poor	Better	Better	Better	Better	Better
Lake Thonotosassa	Poor	Better	Better	Better	Same	Same
Winter Haven Chain of Lakes	Fair	Better	Better/Same	Same/Worse	Better/Same	Better/Same
<i>South Florida WMD</i>						
Lake Okeechobee	Fair	Better	Better	Insufficient Data	Insufficient Data	Better
Everglades	Fair	Same	Better	Same	Insufficient Data	Same
Indian River Lagoon	Poor	Better	Better	Same	Better	Same
Biscayne Bay	Fair	Better	Better	Better	Insufficient Data	Better
<i>St. Johns River WMD</i>						
Lake Apopka	Poor	Same	Better	Same	Same	Better
Indian River Lagoon	Fair	Better	Same	Same	Better	Same
Upper Oklawaha River Basin	Fair	Better	Same	Better	Same	Better
Lower St. Johns River Basin	Fair	Better	Same	Same	Same	Same
<i>Northwest Florida WMD</i>						
Lake Jackson	Fair	Same	Better	Worse	Insufficient Data	Better
Pensacola Bay System	Poor	Better	Better	Better	Same	Same
<i>Suwannee River WMD</i>						
Alligator Lake ¹	Poor	Same	Same	Worse	Same	Worse

¹ Restoration efforts have not begun in Alligator Lake.

Source: Compiled by the Office of Program Policy Analysis and Government Accountability from information provided by the Water Management Districts.

**Other Benefits
of the Program**

Positive Impacts on Preservation Water Bodies. The WMDs report no adverse changes in the overall condition of the water bodies designated for preservation activities. Of the 15 water bodies designated for preservation, the responses indicate that the overall condition has remained the same in 12 water bodies and is better in 3 water bodies. Preservation activities largely focus on improvements to watershed management in order to prevent degradation to water quality and natural systems. The types of activities reported to be most effective in these water bodies are water quality monitoring, diagnostic studies, and cooperation with other agencies involved in SWIM water body preservation efforts.

Targets Resources for Priority Projects. The Program also contains a process that assists in targeting limited resources for priority projects within a water body. DEP's SWIM Program Review Procedures Manual requires the WMDs to include in the SWIM plans a ranking of projects or programs in terms of the level of support they provide for carrying out the strategies identified in the plan. This ranking allows the WMDs to focus resources on the highest priority projects in the plan. Eight of the ten SWIM plans we reviewed prioritized their projects. In addition, annual and quarterly reports submitted to DEP by the WMDs show that the WMDs tend to focus their efforts on the priority projects listed in the plans.

Better Coordination Efforts. Through its coordination activities, the Program helps to focus other surface water improvement and protection resources to SWIM water bodies. The SWIM plans represent a watershed approach to addressing surface water problems as intended by the SWIM Act. SWIM is the only statewide program that currently addresses a water body's needs as a system of connected resources rather than isolated wetlands or water bodies. The WMDs estimated local government involvement in SWIM projects totaled approximately \$26.4 million for the period October 1987 through December 1994 (see Exhibit 6). Local government involvement includes stormwater retrofit and water quality monitoring projects. During the same time period, federal involvement in SWIM-related projects through programs

such as the National Estuary Program and Section 319 of the Clean Water Act were estimated to be \$7 million.

Exhibit 6: Estimated Financial Involvement By Entities that Coordinate With the SWIM Program, October 1987 Through December 1994

	Water Management Districts					Total
	Northwest	St. Johns River	South Florida	Southwest Florida	Suwannee River	
Local Government Funds	\$ 570,363	\$ 6,409,328	\$ 9,285,171	\$10,141,211	\$ 0	\$26,406,073
Federal Funds	792,270	3,412,706	2,122,749	600,000	72,385	7,000,110
Other State and District Funds (including P2000, Save Our Rivers, and Pollutant Recovery Trust Fund)	25,674,783	84,452,533	29,894,481	0	219,959	140,241,756
Other - Various Sources	601,001	1,835,848	706,120	0	0	3,142,969
Total	<u>\$27,638,417</u>	<u>\$96,110,415</u>	<u>\$42,008,521</u>	<u>\$10,741,211</u>	<u>\$292,344</u>	<u>\$176,790,908</u>

Source: Compiled by the Office of Program Policy Analysis and Government Accountability from information reported by the Water Management Districts.

SWIM projects also benefit from the effects of other programs which fund surface water improvement projects. Land acquisition within SWIM watersheds can help achieve surface water improvements and enhance the environmental and scenic value of surface waters. The WMDs estimated that involvement in SWIM-related projects with programs such as Save Our Rivers, P2000, and the Pollution Recovery Trust Fund totaled an estimated \$140.2 million from October 1987 through December 1994.

Adverse Conditions Still Exist in Many Water Bodies

However, significantly improving and preserving all of the SWIM water bodies will require additional long-term efforts and funding. 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. However, in some areas of the state, many of the adverse conditions that created the need for the SWIM Program still exist including poor water quality, reductions in fish and wildlife, and contamination

by pesticides, fertilizers, and heavy metals from runoff. The five WMD Program administrators indicated that the districts are making progress in implementing the SWIM plan projects and programs. Only one WMD reported that significant changes have occurred to the overall condition of SWIM water bodies in its district. In addition, survey results show that only 3 of the 15 water bodies designated for restoration have been significantly improved.

Question 2

What factors have hindered the SWIM Program's efforts?

Several factors have hindered the SWIM Program's efforts to accomplish more significant changes including limited funding, time required to achieve improvements, local land use decisions, and the Program's reliance on coordination to affect regulatory changes. DEP and WMD staff noted that it often takes considerable time to make and observe changes in natural systems and it is too soon to expect significant changes given the broad Program responsibilities, the level of funding, and the extent of degradation in the SWIM water bodies. In addition, the Program does not have direct regulatory and land management authority to address adverse conditions that impact SWIM water body areas. As a result, the Program must rely on its planning and coordination activities to try to affect needed regulatory and land use management changes.

Limited Funding

According to DEP and WMD Program staff, a major constraint to significantly improving SWIM water bodies is that resources have not been sufficient to meet Program objectives. The SWIM Act makes the WMDs responsible for planning and coordinating restoration and protection strategies that have a likelihood of significantly improving or protecting water quality and natural systems. This broad charge includes many types of activities including planning and coordinating with other agencies such as federal, state, and local governments and the private sector; directing restoration projects, such as stormwater retrofit and

wetlands and habitat restoration projects; and conducting diagnostic studies and water quality monitoring projects. Planning and implementing projects on a watershed-wide basis requires addressing complex water resources and environmental management issues. However, both DEP and WMD Program management contend that the level of funding in the last few years has not been sufficient to fully implement SWIM plans. Consequently, restoration activities have been limited in some water bodies and have not begun in one water body. The Program has experienced decreases in funding compared to the levels appropriated in the first three years, with no state funds appropriated for fiscal year 1995-96.⁸ As the funding levels have decreased, the Program's scope and responsibilities have increased. For example, the number of SWIM water bodies has increased from the 6 originally designated by the SWIM Act to 27. In addition, a 1991 rule change gave the Program the responsibility for developing Pollutant Load Reduction Goals (PLRGs) for SWIM water bodies.⁹

Funding limitations create uncertainty about future funding for the SWIM Program. Program management cite difficulties such as reducing the scope of projects, making difficult decisions regarding priorities, and slower project implementation. In addition, the uncertainty of funding from year to year can hinder the WMD's ability to do long-term planning and can cause delays in projects as well as inhibit any commitments from local governments. Although the WMDs are charged with the responsibility of developing comprehensive preservation and restoration strategies in the SWIM plans, SWIM plans are developed without the benefit of a long-term budget or funding certainty. Furthermore, the need to continually revise and reschedule funding plans increases the administrative costs to the Program. A reliable source of funds would allow the WMDs to make decisions regarding long-term needs.

⁸ For fiscal year 1995-96 the Legislature authorized the WMDs to use district Water Management Lands Trust Fund money for the SWIM Program. According to DEP staff, two of the five WMDs are going to use these funds to fund SWIM plan activities this year.

⁹ PLRGs are the estimated reductions in pollutant loadings needed to preserve or restore beneficial uses in the water body.

**Time Required to
Achieve Improvements**

Planning and implementing restoration and preservation activities is a time consuming process. For example, in 1991, the St. Johns River WMD estimated that it did not expect to complete planning for the lower St. Johns River for 10 years, for Lake Apopka for 5 years, and for the Indian River Lagoon System for 8 years. Once the planning process is complete, it is uncertain as to how long it will take to implement SWIM plans. In some circumstances, several years of data collection and analysis are needed before improvement strategies can be devised. According to a 1991 report, the WMDs indicated that complete implementation of SWIM plans should not be expected in the near future for those water bodies having complex problems.¹⁰

**Regulatory and
Land Use Decisions**

The SWIM Program does not have direct regulatory and land management authority to address adverse conditions that impact SWIM water bodies. As a result, the WMDs must rely on coordination and cooperation to implement SWIM plan strategies involving regulatory and land use decisions which are beyond the domain of the Program. For example, land use becomes an issue in SWIM Program efforts to reduce non-point source pollution. Polluted stormwater from incompatible or improper land uses and practices is one of the major factors contributing to degradation in SWIM water bodies. Examples of this include the impacts of agricultural and other land uses on Lake Okeechobee, Lake Apopka, and the Florida Everglades, and urban uses on Lake Jackson, the lower St. Johns River, Biscayne Bay, and Tampa Bay.¹¹

**Difficulty in Evaluating
Program Progress**

Assessing Program results and costs pose specific challenges for the SWIM Program. SWIM is a decentralized program, implemented largely through the five WMDs. In addition to organizational diversity, the Program is further complicated as its primary objective

¹⁰ "A Review of Part IV of Chapter 373, F.S. Relating to the Management and Storage of Surface Waters"; Senate Committee on Natural Resources and Conservation; November 1991.

¹¹ "An Analysis of Florida's SWIM Program"; Homer Hoyt Center for Land Economics and Real Estate, Florida State University and Florida Atlantic University/Florida International University Joint Center for Environmental and Urban Problems; September 1991.

must address the needs of 27 different water bodies that include lakes, rivers, and bays. The water quality improvements needed and the amount and level of data available on each water body varies. These factors make evaluating Program results more complex and difficult and highlight the need for a mechanism that provides general, understandable measures of Program results.

Although DEP and the WMDs have developed goals and objectives for the Program, they have not defined the overall outcome they hope to achieve for each water body. DEP and the WMDs have developed four broad goals for the Program; water quality protection, natural systems protection, cooperative activities, and watershed management. DEP and the WMDs have indicated they are striving to attain a healthy ecosystem for each water body, but have not defined what that means in all cases. Although the SWIM plans contain goals and objectives for implementing the strategies outlined in the plans, they do not identify the overall outcome. For example, a goal developed for one of the SWIM water bodies is "to improve and maintain the water quality of the lake . . ." One objective for this goal is "to reduce the amount of nutrients, sediments, and other pollutants entering the lake." The usefulness of this goal and objective is limited because the plan does not include numeric benchmarks that define the overall outcome desired.

These difficulties reflect some general confusion about the overall water quality improvement goals of the Program. The lack of clear, measurable outcomes creates some confusion in evaluating the success of improvement efforts. For example, all water bodies are assigned a designated use classification.¹² According to WMD staff, some portions of SWIM water bodies meet their designated use classification while others do not. Staff also indicated that meeting Class III standards does not preclude significant water quality problems that still need to be addressed.

¹² Rule 62-302.400, F.A.C., requires the state to classify all surface waters according to designated use classifications as follows: Class I - drinking water; Class II - shellfish harvesting and propagating; Class III - recreation and wildlife; Class IV - agricultural use; and Class V - industrial.

Without an agreed upon measurable outcome for SWIM water bodies, it is difficult to assess the success of the Program or the results achieved. The Legislature and Program managers are precluded from determining if the Program is achieving its purpose efficiently and effectively and identifying the most optimal strategies and policies given available funding. Although the Program contains a process for targeting resources for priority projects, it is not possible to assess the cost effectiveness of those activities without some measure of outcome. Consequently, although approximately \$90 million of state and district funds has been spent by WMDs, it is not possible to determine the cost effectiveness of these expenditures. Furthermore, without Program outcome information, it is not possible to determine the most cost effective activities and strategies for the future of the Program.

Although SWIM management recognize the importance of evaluating the effectiveness of the Program's activities; they said that establishing a formal evaluation process would have required additional funding. According to the DEP SWIM Program administrator, because of funding limitations and the perceived need to make visible improvements to water bodies rather than conduct studies or collect data, Program resources were primarily focused on restoration projects such as stormwater retrofits. Management also contends that scientific information and expertise needed to develop and report outcomes were lacking in the early years of Program development.

In developing and formalizing SWIM's evaluation component, the DEP and WMDs need to establish a uniform method for determining what data is needed to establish measures and for defining and reporting environmental results. We surveyed the five WMDs to determine the extent to which information and measures are available for assessing environmental results. Survey responses indicate that some of the districts are beginning to include numeric measures in their SWIM plans. Survey responses also indicate that WMDs have established baseline data in most of the SWIM water bodies. However, the DEP and WMDs have not clearly articulated how this data is to be used to establish performance measures or

what types of data still need to be collected. Our survey responses reflect the need for uniform definitions and methods for assessing environmental results. Although the survey results have provided valuable and unique insight into the Program's impact on water bodies, the results also reflect the need for a formal consistent process for evaluating impacts. There should be sufficient flexibility among the measures to accommodate specific evaluation needs in the plan for each water body.

Question 3

What options exist for the SWIM Program?

In an effort to better match available resources to Program objectives, we have developed several options for the Legislature to consider. Although additional options exist, we identified four options that offer some means of addressing current limitations (see Exhibit 7):

- Option 1: Eliminate the SWIM Program;
- Option 2: Reduce the current scope of the Program;
- Option 3: Delegate the Program's responsibilities to the five WMDs; and
- Option 4: Continue the Program and provide a dedicated funding source.

Exhibit 7: Funding Options for the SWIM Program

OPTIONS	ADVANTAGES	DISADVANTAGES
OPTION 1		
Eliminate the Program	<ul style="list-style-type: none"> ■ Eliminates demand on general revenue and meets need for greater fiscal restraint ■ Is not an unfunded mandate 	<ul style="list-style-type: none"> ■ Will adversely affect efforts to address water quality problems ■ Economic loss in SWIM water body areas because of surface water quality degradation ■ Loss of other dollars ■ Loss of planning\coordination mechanism
OPTION 2:		
Reduce the current scope of the Program (e.g., focus on a smaller number of water bodies such as the six named in statute, a certain number per district, the worst water bodies, those water bodies most likely to benefit from available resources, restoration only, or preservation only) (e.g., limit WMD involvement in SWIM water bodies to certain key activities such as planning and coordination or development of PLRGs and numeric criteria)	<ul style="list-style-type: none"> ■ Better match of program objectives to historical levels of program funding ■ Allows some surface water improvement and protection activities to continue to occur ■ Helps to mitigate loss of other funds ■ Provides partial funding to two districts with fiscal constraints 	<ul style="list-style-type: none"> ■ Reduces the impact of efforts to improve and protect surface water quality ■ Adverse impacts will continue to occur to some extent ■ May result in the loss of other funds currently directed toward SWIM water bodies
OPTION 3		
Delegate Program responsibilities to WMDs	<ul style="list-style-type: none"> ■ Eliminates demand on general revenue and meets need for greater fiscal restraint ■ Some water quality improvement activities will continue to occur due to district and local government commitment 	<ul style="list-style-type: none"> ■ Will adversely affect efforts to address water quality problems ■ Results in an unfunded mandate by the state ■ May result in the loss of other dollars such as federal and local government dollars
OPTION 4		
Continue the Program and provide a dedicated funding source	<ul style="list-style-type: none"> ■ Matches program funding to original program intent and objectives ■ Provides best possible scenario for improving and protecting surface waters in the state ■ Would maximize drawdown and leveraging potential of state funds ■ Provides needed assistance to two districts with fiscal constraints 	<ul style="list-style-type: none"> ■ Increased taxation

Source: Office of Program Policy Analysis and Government Accountability.

**Option 1
Eliminate the Program**

Given it is unlikely that sufficient general revenue and ad valorem tax dollars will be available to fully implement the Program, the Legislature may wish to simply eliminate the Program rather than provide insufficient funding. Surface water quality efforts would then depend largely on local and regional initiatives. It is likely that efforts to improve and preserve surface water quality would be significantly reduced. Elimination of the Program would also eliminate the primary mechanism for planning and coordinating surface water improvements potentially affecting efforts to maximize the use of available dollars. Local government and federal program involvement in SWIM projects may also be lost in the absence of state funding.

**Option 2
Reduce Program Scope**

Continuing the Program as designed to meet all Program objectives does not seem feasible in light of current funding restrictions on general revenue. To continue the Program as designed without sufficient funds would amount to an unfunded mandate with disproportionate funding responsibility falling to local and regional sources. However, the Legislature may wish to continue the Program but reduce the scope of its activities in order to meet more limited funding requirements. Different criteria can be used to reduce the Program's scope such as reducing the number of water bodies, or funding only specific types of activities. Partial funding would allow for some surface water improvement activities to continue and would help in mitigating the potential loss of local government and federal program involvement in SWIM projects.

**Option 3
Delegate Program
Responsibilities
to the WMDs**

The Program could be delegated to the WMDs, thus eliminating DEP's oversight role. This option is more desirable if the Legislature determines that it will continue to reduce or discontinue funding. Under this option, the WMDs would have sole responsibility for implementing the Program in relation to local and regional needs and resources. The primary limitation of this option is that WMDs have different levels of available resources to address surface water problems. The effects of this option would fall inequitably on those WMDs that could not conduct surface water improvement projects without state funds. This would also result in an unfunded state mandate.

**Option 4
Continue the Program
With a Dedicated
Funding Source**

This option offers the best opportunity for meeting current Program objectives because many corrective and prevention efforts require long-term funding. Providing a consistent funding mechanism in place of general revenue would provide a greater assurance to the implementing agencies that future funds will be available. Program administrators would be able to better plan projects in anticipation of funding. In 1990, DEP developed an internal proposal for financing stormwater management programs that involved taxing sources of stormwater pollution such as pesticides, asphalt, concrete, and fertilizer. While this type of dedicated funding source would alleviate some funding constraints, this option has the major disadvantage of necessitating additional taxation.

CHAPTER IV

Conclusions and Recommendations

Need for Program Measures

The absence of definitive measures of what water quality improvements have been made and at what cost creates difficulties in making the most appropriate decision. Times of fiscal constraints make efforts to measure results all the more critical due to the need to evaluate competing demands. Without some clear basis for comparing results and costs, legislative choices for funding or not funding the Program have no assurance of being the most cost effective choices, or of fully considering the consequences of those choices.

If the SWIM Program continues in some form, the DEP and the WMDs must take steps to provide some means of measuring Program results, and tying outcomes to strategies and expenditures. Although Program staff should continue to work with more technically complex measures of water quality, emphasis should be placed on developing generalizable and more simple measures that indicate change in water bodies. Each SWIM plan should define what a healthy ecosystem is for each water body in measurable terms and incorporate numeric targets.

Program Alternatives

Ideally, decisions about the Program's future would be based on more definitive information about Program accomplishments; however, such data is not available. However, it is clear that an infusion of significant additional resources are needed if the Program is to ever meet its original intent. Therefore, if funds are not available for the Program, then the Legislature should eliminate the Program. In order to avoid creating an unfunded mandate, the Legislature should not continue to require the WMDs to comply with the provisions of the SWIM Act without a commitment of state funds. The WMDs and local governments could then choose whether they want to continue the Program on their own. If limited state funding is available, we recommend that the Program scope be reduced to better match Program requirements to

funding levels. However, if the Legislature wants to make a long-term commitment to surface waters of state and regional significance, then we recommend that a dedicated funding source be adopted to allow WMDs to make better decisions regarding surface water improvement projects. Program scope and activities should be adjusted depending on the level of funding achieved through the dedicated funding source.

Appendix A

Responses to This Review

In accordance with the provisions of s. 11.45(7)(d), F.S., a list of preliminary and tentative review findings was submitted to the Secretary of the Department of Environmental Protection and the five Water Management Districts for their review and response.

The Secretary's response and the responses of the five Water Management Districts are reprinted herein beginning on page 28.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

December 7, 1995

Mr. James L. Carpenter, Interim Director
Office of Program Policy Analysis and Government Accountability
111 West Madison St., Room 312
Tallahassee, Florida 32302

Subject: Response to Preliminary and Tentative Findings and
Recommendations on the Surface Water Improvement and
Management Program

Dear Mr. Carpenter:

This letter is the Department's written statement of explanation concerning the findings contained in Chapter III of your "Review of the Implementation of the Surface Water Improvement and Management Program" (SWIM). I would like to express our appreciation to you and your staff for your efforts in carrying out the performance audit of the SWIM Program. Your staff conducted interviews, requests for information, and other evaluation activities professionally and courteously, and reported their findings in a positive and constructive manner.

The SWIM Program is comprehensive - meshing local projects, permitting, single purpose resource management programs, and environmental education to restore and protect waterbodies of statewide significance. While we are pleased with the development of this innovative program, we do recognize the need for strengthening it along the lines of your recommendations.

Comments on Chapter III: "Questions, Answers, and Alternatives"

For your convenience, our comments are referenced by the reports question, page, and paragraph numbers where possible.

Question 1: "What progress has been made since the SWIM Program was created in 1987"?

The report states on page 14 that "... significantly improving and preserving all of the SWIM water bodies will require additional long-term efforts and funding". We concur with this conclusion and will continue our support for the program in our

Mr. James L. Carpenter

December 7, 1995

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budget proposals to the Governor and through coordination with the water management districts.

Pages 11 and 13: The Department and the Districts feel that minor reformatting would help clarify distinguishing the status of restoration and preservation waterbodies. Under the heading "Positive Impacts on Water Bodies" (pg 11), before the second paragraph beginning with "The WMD survey...", insert the subheading "Positive Impacts on Restoration Water Bodies". In front of the third paragraph (pg. 13) beginning with "The WMDs report no adverse...", insert the subheading "Positive Impacts on Preservation Water Bodies".

Page 13: There is general agreement among the WMD SWIM managers that the importance of preservation in the SWIM Program could be more clearly expressed in Chapter III. This could be remedied by inserting the following first sentence under the new subhead "Preservation Water Bodies": Preservation is an important aspect of the SWIM Program, since efforts taken now to assess water body conditions and identify watershed management improvements will likely reduce the need for expensive future restoration.

Question 2: "What factors have hindered the SWIM Program"?

On page 19, the report concludes that "Without an agreed upon measurable outcome, it is difficult to assess the success of the Program or the results achieved. The Legislature and Program managers are precluded from determining if the Program is achieving its purpose efficiently and effectively and identifying the most optimal strategies and policies given available funding". While we concur with the general nature of this conclusion, it is important not to underestimate the complexity and cost of developing performance standards and measurements on the desired overall health of SWIM waterbodies.

For many SWIM water bodies, system-wide measurement programs have been established, identifying overall water quality, vegetative, and fishery conditions and tracking improvements in these conditions. However, given the lack of available funding for the SWIM Program, expenditures on system-wide measurements must be balanced with project implementation and measures which track the effectiveness of specific restoration projects.

Contingent on available SWIM funding, the Department will continue to work with the water management districts to develop and formalize the SWIM Program's evaluation component, including the development of measures for reporting environmental results. Presently, the Department is developing a model ecosystem planning process to provide a performance planning structure for

Mr. James L. Carpenter

December 7, 1995

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ecosystem management. We and the water management districts are working through this model in two SWIM areas - the Hillsborough River watershed and Apalachicola River and Bay. Major elements of this process directly address the SWIM evaluation conclusions.

Page 15: The last two sentences in the first paragraph are confusing - The text states that only one WMD reported significant overall changes in its water bodies; however, it goes on to say that survey results showed 3 of 15 improving. This ambiguity could be eliminated by deleting the last sentence and substituting a sentence as follows: However, improvements have occurred in segments of most water bodies designated for restoration.

Question 3: "What options exist for the SWIM Program"?

Under Question 3, four options are identified for the future of the SWIM Program. The order of funding options in the report does not reflect the expressed concern of the Legislature and the public about maintaining restoration and protection activities in priority water bodies. Thus, we suggest that the order of the options be changed consistent with this level of concern as follows: Change present option 4 to option 1, present option 1 to option 4, and do not change options 2 and 3.

Thank you for a very useful review of the SWIM Program. We are looking forward to receiving your final report. If you have any questions, please call Fred Calder at 488-0784.

Sincerely,

Virginia B. Wetherell
Secretary

VBW/fc

cc: Terry Pride, DEP
Pam McVety, DEP
Ken Chambers, DEP
Henry Dean, SJRWMD
Peter Hubbell, SWFWMD
Jerry Scarborough, SRWMD
Sam Poole, SFWMD
Douglas Barr, NFWWMD

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

December 7, 1995

Mr. James L. Carpenter
Interim Director
Office of Program Policy Analysis
and Government Accountability
Post Office Box 1735
Tallahassee, Florida 32302

Dear Mr. Carpenter:

Thank you for the opportunity to review and comment on the Preliminary and Tentative Findings Report: Review of the Implementation of the Surface Water Improvement and Management Program which was performed by your staff. District staff have reviewed the report and feel that as a whole the report accurately reflects the past and current status of the SWIM program. Staff had a few comments and have worked with your staff to clarify those issues. The SWIM program is an important and innovative program which has allowed the District to implement projects which would have been out of the bounds of our financial capabilities without the financial support of the program.

If you have any questions or need additional information, please call me or Janet Starnes of my staff at (904) 539-5999.

Sincerely,

Douglas E. Barr
Executive Director

cc: Fred Calder, FDEP

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

December 13, 1995

Mr. James L. Carpenter, Interim Director
Office of Program Policy Analysis and Government Accountability
111 West Madison Street
Room 312
Tallahassee, Florida 32302

Dear Mr. Carpenter:

RE: OPPAGA Audit of SWIM

Thank you for the opportunity to comment regarding the Preliminary and Tentative Findings of your audit of the Surface Water Management and Improvement Program administered by the Department of Environmental Protection and the five Water Management Districts. The Governing Board of the St. Johns River Water Management District has demonstrated complete support for the SWIM program since its inception through significant financial and staff commitments,

We support the findings expressed in the conclusions and recommendations chapter of the report. A legislatively mandated, dedicated long term funding source commitment is critical to the cleanup of polluted surface waters of state and regional significance. With such a commitment in place, the Department of Environmental Protection and the Water Management Districts can cooperatively implement the long term methodologies needed to achieve the goals of the Program.

If you have questions or require further information, please contact Timothy P. Boyer, Inspector General at (904)329-4105.

Sincerely,

Henry Dean,
Executive Director

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
PRO SWIM RF: 96]]]

December 7, 1995

James L. Carpenter, Interim Director
State of Florida
Office of Program Policy Analysis and
Government Accountability
P.O. Box 1735
Tallahassee, Florida 32302

Dear Mr. Carpenter:

Subject: Implementation of the Surface Water Improvement and Management Program Administered by the Florida Department of Environmental Protection (FDEP) and the Water Management Districts (WMDS)

As requested in your November 8, 1995 letter, the following represents the South Florida Water Management District's response to the findings contained within Chapter III and conclusions and recommendations contained within Chapter IV of the above noted review:

"In developing and formalizing SWIM's evaluation component, the FDEP and WMDs need to establish a uniform method for determining what data is needed to establish measures, and for defining and reporting environmental results."

Response: The development of evaluative criteria to assess the degree of water quality improvement in twenty-seven different lakes, rivers, and bays would be expensive, time consuming, and would currently require the redirection of resources from restoration to research and data collection projects. The establishment of uniform definitions and methods to formally evaluate improvement efforts and cost effectiveness would be difficult using the same criteria for all water bodies. In many cases there is more than one overall outcome goal for each water body.

"Each SWIM plan should define what a healthy ecosystem is for each water body in measurable terms and incorporate numeric targets."

Response: Performance measures and numerical targets for the overall health of SWIM water bodies have not been created to date through the program. This is at least partly due to the unique set of preservation or restoration challenges that each water body faces. However, system-wide measures have been individually established for our water bodies, which identify and monitor improvements in a range of attributes relative to each watershed. Indicators of

James L. Carpenter, Interim Director

December 7, 1995

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overall ecosystem health include water and sediment quality (measured through PLRGs), submerged vegetation, fisheries, habitat restoration, stormwater retrofits, best management practices, and the reduction of pollution sources. Additionally, research is continuing for the attributes for which we have yet to develop target values. We are also endeavoring to establish a numeric "score card" for the overall health of Lake Okeechobee.

"Therefore, if funds are not available for the Program, then the Legislature should eliminate the Program. In order to avoid creating an unfunded mandate, the Legislature should not continue to require the WMDs to comply with the provisions of the SWIM Act without a commitment of state funds. If limited state funding is available, we recommend that the Program scope be reduced to better match Program requirements to funding levels. However, if the Legislature wants to make a long-term commitment to surface waters of state and regional significance, then we recommend that a dedicated funding source be adopted to allow WMDs to make better decisions regarding surface water improvement projects.

Response: We agree. This finding is a common sense approach to the challenges brought about by the continued lack of funding for a vital environmental mandate. If limited state funding is available, we recommend that the WMDs participate in any process to reduce the scope of the Program. We believe that the SWIM Program is the most successful and cost effective approach to preserving and restoring the state's surface waters. A dedicated funding source would provide the long-term funding necessary to meet Program objectives while continuing to effectively leverage SWIM dollars in partnership with local, state, district, and federal programs.

The District is committed to the current and future improvement efforts of its surface waters through the SWIM program.

Sincerely,

Samuel E. Poole III
Executive Director
South Florida Water Management District

SEP/pc

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

December 13, 1995

Mr. James L. Carpenter, Interim Director
Office of Program Policy Analysis and Government Accountability Post Office Box 1735,
Room 312
Tallahassee, Florida 32302

Dear Mr. Carpenter:

Pursuant to the provisions of Section 11.45(7)(d), Florida Statutes, we are submitting written statements of explanation concerning the tentative findings contained in Chapter III of your Review of the Implementation of the Surface Water Improvement and Management Program. Our statements are referenced to the related questions and chapter subsections.

What progress has been made since the SWIM Program was created in 1987?

Program Background

In initiating the Surface Water Improvement and Management (SWIM) program, the legislature recognized that significant water problems in this state had been created during three quarters of a century of environmental abuse. Further, the legislature identified specific water bodies with such complex problems as to make any single piecemeal legislation or agency action ineffectual. Accordingly, the SWIM program was created as a means to coordinate state, water management district and local government efforts to address the most difficult surface water problems. Through governmental efforts coordinated under the SWIM program, the state, the Southwest Florida Water Management District, and the local governments within our district boundaries have caused substantive, measurable improvements to those water bodies in which restorative efforts have occurred. However, planned work has not had an opportunity to be completed. Therefore, we concur that the problems that created the need for the SWIM program still exist and that a SWIM program with a dedicated funding source remains the best means to complete the coordinated plans designed to address those problems.

SWIM Program Progress

We concur that the SWIM program has had positive impacts. Within die Southwest Florida Water Management District, all four water bodies designated for restoration have been improved. Furthermore, the outcomes of restoration efforts on Banana Lake, which has been completed and removed from the SWIM priority list, are identifiable and measurable. We

emphasize that the successful restoration of Banana Lake probably would not have occurred without SWIM program funding. Banana Lake was restored using a whole lake dredging process, and though a restoration plan had been in place, SWIM funding and the coordination of state, district, Polk County, and City of Lakeland efforts and funds were necessary to commence and complete the project. Without SWIM program funds, Banana Lake would still be waiting for restoration.

Other Benefits of the Program

We concur that the SWIM program has required and facilitated decisions and communications involving district and statewide priorities on water body restoration and preservation. In accordance with SWIM program procedures, the Basin Boards of the Southwest Florida Water Management District reached concurrence on water body priorities with individual citizens, designees representing private industry, and the decision makers of the region's local governments before committing more than seven million dollars of district funding. Table I illustrates the district's general fund and basin board financial commitment to the SWIM program.

Table 1

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT'S FINANCIAL COMMITMENT

General Fund	\$2,496,960
Alafia River	495,466
Hillsborough River	626,991
Northwest Hillsborough	582,491
Coastal River	369,027
Pinellas-Anclote River	1,228,664
Withlatchoochee River	211,019
Peace River	684,951
Manasota	535,357
 Total	 \$7,230,926

Further, through the SWIM program, the district has been able to coordinate better with other ongoing projects essential to maintain the water body improvements gained by the SWIM program. Restoration efforts would be thwarted without the cooperation of local governments who completed stormwater retrofits and otherwise improved the quality of run off into the water bodies. Similarly, water management districts have utilized other program funds to purchase vital adjacent watershed lands. The purchase of these lands provided assurance of the districts' ability to protect the water bodies from certain forms of contamination.

Adverse Conditions Still Exist in Many Water Bodies

We concur that adverse conditions still exist in many water bodies despite the significant improvements made within the Southwest Florida Water Management District. For this reason, we strongly believe that other program funds should not be used to supplant SWIM program funds, and that the SWIM program needs a dedicated funding source. With a dedicated funding source, the district may continue with the restoration efforts necessary to achieve the optimal water quality standards while coordinating those efforts designed to ultimately preserve and protect the integrity of the water body once it has been restored.

Potentially negative results of insufficient funding or supplanted funding sources have been evidenced in the Winter Haven Chain of Lakes. Due to efforts resulting from the SWIM program water quality in targeted lakes within the chain of 19 lakes has improved. However, as water quality and clarity improved, the water bodies became more susceptible to exotic plant infiltration. SWIM efforts require coordination with other quality programs such as the Aquatic Weed Program. Due to legislative funding reductions in the Aquatic Weeds Program, that program could not keep pace with enhanced exotic plant growth resulting from improved water body conditions generated under the SWIM program.

What factors have hindered the SWIM Program's efforts?

We concur with the findings of this chapter section. The Southwest Florida Water Management District is particularly sensitive to the need for developing measurement standards and evaluating program and project results. Prior to this review, this district had already initiated efforts to place specific measurable outcomes in each SWIM water body plan. Future SWIM program plans will include measurable predicted outcomes. The inclusion of such measures should permit the plans to be appropriately considered and approved before funds are committed and should allow the completed projects to be evaluated for effectiveness.

What options exist for the SWIM Program?

We concur that option four, to continue the program with a dedicated funding source, represents the best opportunity for meeting SWIM program objectives.

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Thank you for your consideration in extending the District an opportunity to review the draft Performance Review. If you have any questions, please feel free to call me.

Sincerely,

Peter G. Hubbell, Executive Director
PGH:jr

SUWANNEE RIVER WATER MANAGEMENT DISTRICT

December 11, 1995

Mr. Jim Carpenter
Office of Program Policy Analysis
and Government Accountability
Post Office Box 1735
Tallahassee, Florida 32302

Subject: Preliminary and Tentative Findings - Review of the Implementation of the Surface Water Improvement and Management (SWIM) Program Report

Dear Mr. Carpenter:

The District has reviewed the Preliminary and Tentative Findings Report concerning the SWIM program. We found the findings generally appropriate and would like to provide some clarification and comments to the readers of this report in our response.

SWIM Trust Funds have been extremely important to the SWIM Priority Waters Bodies located in the Suwannee River Water Management District. When SWIM began, the District reviewed information about all the water bodies in our District, prioritized them based on Florida Statutes, and selected the SWIM Priority Water Bodies. It was found that very little data was available to assess the overall quality of the water bodies or to determine what impacts were or might be taking place. SWIM has made it possible for the District to assess the overall quality of our higher Priority Water Bodies and to begin implementation of programs that will protect them for the future generations of Floridians.

In our review, the District saw the need to add clarification related to the following questions.

1. Why have restoration efforts not been initiated on Alligator Lake?
2. Why is preservation important to the SWIM Program and the surface waters of North Florida?
3. Do measures have to show, water quality improvements?
4. Should uniform methods be used for establishing measures?

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1. Why have restoration efforts not been initiated on Alligator Lake? Alligator Lake is the District's fourth ranked SWIM water body and the only one slated for restoration. Some water quality and biological monitoring has been completed and a conceptual restoration approach has been developed which requires the acquisitions of several large parcels. The implementation of the restoration efforts has been hampered because the land owners and the District could not agree on a selling price for their parcels. Because of Columbia County's desire for the lake to be restored by SWIM, Columbia County has applied for and been approved to receive money from the Florida Communities Trust for the acquisition of the land if an agreement can be reached with the land owners. Upon completion of the acquisition, the District's SWIM program will develop a restoration plan and implement it if moneys are available.
 2. Why is preservation important to the SWIM Program and the surface waters of North Florida? SWIM was created to correct and prevent surfacewater problems (Florida Statutes 373.451). Only one restoration oriented water body was found in the District's planning efforts to identify SWIM Priority Water Bodies. But we did identify numerous water bodies that needed protection based on our knowledge of the land uses in the region. Therefore, the District's SWIM program was primarily designed to preserve and protect water bodies. It should be noted that statewide over half the SWIM Priority Water Bodies are considered to be preservation oriented.

We believe that it is more cost effective to prevent problems from taking place and to identify problems when they are in the early stages than it is to restore large existing problems that can be seen in other parts of the state. Restoration can be extremely expensive and sometimes almost impossible since water management districts have no authority in regulating land use. But in a cooperative effort, we can work with the public, local governments, state agencies, and other groups to try to prevent problems from growing worse or even taking place. They can also be corrected when they are detected or before they reach a critical state. Through efforts of our SWIM program and working with the public and other agencies, we have identified problems and addressed them.

Since very little long-term data was available or being collected on our water bodies, the SWIM staff saw the need to establish a monitoring program on our higher Priority Water Bodies. We began collecting water quality aquatic biological, and digital spatial data to assess the resource and identify existing and potential impacts. If the preservation aspect of SWIM had not been available, almost none of the data would have been collected in the past eight years. SWIM has provided almost six years of water quality and aquatic biological data. With this data, we have been able to establish what our ambient water quality is, look at trends, monitor the effects of point and nonpoint sources as the water moves down stream, and establish a general understanding of the overall quality of the SWIM Priority Water Bodies where the samples are taken. This data has been made available to regulators for use in

permitting. SWIM has also created numerous layers of digital spatial information that is being used to look at nonpoint contributions, target lands for acquisition, and create numerous maps used in publications and presentations. By developing maps, providing the water quality and biological data, and making numerous presentations, we have helped the public to have a better understanding of how important it is to protect the surfacewater resources for the public. Implementation tools (stormwater retrofits, establishing best management practices, land acquisition, public land management procedures, etc.) are also being developed to reduce or eliminate the problems identified. Without SWIM, the District would not have been able to work toward protecting our water bodies. The cost effectiveness of the preservation aspect of SWIM is extremely hard to measure.

3. Do measures have to show water quality improvements? The first sentence on page 24 is "The absence of definitive measures of what water quality improvements have been made and at what cost creates difficulties in making the most appropriate decision." In a preservation water body, improvements may or may not happen and one of our goals is to prevent surfacewater problems. Water quality and aquatic biological sampling were implemented early in our SWIM program to establish what the ambient quality was in our higher Priority Water Bodies. The data will be used to establish measures, but showing a cost benefit to measures will be a difficult task since our goal is prevention and not necessarily improvement.
4. Should uniform methods be used for establishing measures? Water bodies have their own uniqueness both naturally or man induced. We believe that a "uniform method for determining what data is needed to establish measures and for defining and reporting environmental results" (page 19) does not reflect each water bodies' uniqueness. Definitive program measures need to be established to determine if the water body has improved due to restoration or has been protected due to preservation, but the methods need to reflect this uniqueness. They need to allow waterbody specific measures to be set.

Should you have any questions concerning our response, please do not hesitate to call Joe Flanagan or Glenn Horvath.

We would like to take this opportunity to thank your staff for the professional way with which they collected their data and worked with our staff.

Sincerely,

Jerry Scarborough, Executive Director

JAS/sc

cc:Joe Flanagan

Glenn Horvath