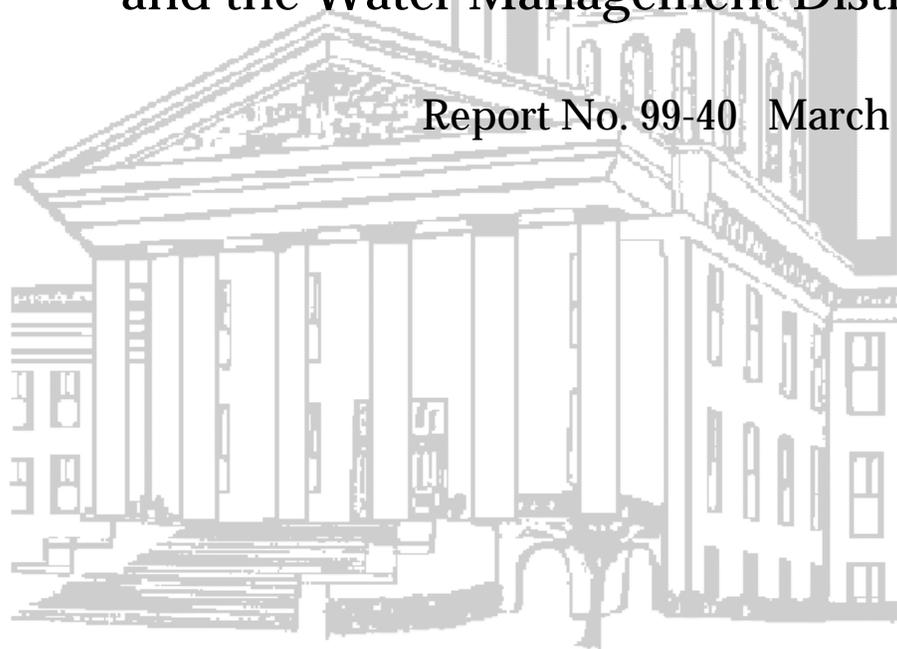


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Policy Review

Wetland Mitigation Department of Environmental Protection and the Water Management Districts

Report No. 99-40 March 2000



*Office of Program Policy Analysis
and Government Accountability*

an office of the Florida Legislature

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The Florida Legislature

OFFICE OF PROGRAM POLICY ANALYSIS AND GOVERNMENT ACCOUNTABILITY



John W. Turcotte, Director

March 2000

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

Florida Statutes directed OPPAGA to study the effectiveness and cost of current wetland mitigation options. The results of this review are presented to you in this report. Mike Molnar, Alex Regalado, and Shelly Personette conducted this review under the supervision of Julie Ferris.

We wish to express our appreciation to the staff of the Department of Environmental Protection and the water management districts for their assistance.

Sincerely,

John W. Turcotte
Director

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Policy Review: Wetland Mitigation

Purpose

Florida law directed the Office of Program Policy Analysis and Government Accountability to study the wetland mitigation options defined in s. 373.414(1)(b), F.S. The study

- considers the effectiveness of current mitigation options in offsetting adverse impacts to wetlands and wetland functions, including the consideration of cumulative impacts;
- considers the cost of the various mitigation options; and
- identifies appropriate recommendations for statutory or rule changes to increase the effectiveness of mitigation strategies.

Background

Wetlands provide vital functions to the natural environment, including groundwater recharge, stormwater attenuation, and wildlife habitat. The efforts of the state regulatory agencies, the Department of Environmental Protection (department hereafter) and the water management districts (districts hereafter), are directed at balancing environmental protection with private property rights and economic development pressures.

The Environmental Resource Permit Program regulates activities that alter the landscape and disrupt water flow to wetland areas and surface waters. Applicants may need to take mitigating actions before a permit will be issued. Mitigation refers to actions that offset the adverse impacts the proposed development will have on surface waters and wetlands. Mitigation can include creation, restoration, or enhancement of wetlands or preservation of wetlands or associated uplands.

Environmental Resource Permits contain conditions that specify allowable wetland impacts and any associated mitigation actions. The department and the districts use mitigation ratio guidelines to establish the amount of mitigation needed to offset a specific impact. Mitigation may include activities on or off of the impacted site. Offsite mitigation options can include mitigation performed offsite by the permittee, donation of funds to offsite regional mitigation areas, or the purchase of mitigation credits

from mitigation banks. A project where the compensating mitigation will be performed outside the impacted drainage basin requires an in-depth cumulative impact assessment. This assessment considers whether the unmitigated impacts of the proposed project, in addition to the past, present, and anticipated future impacts within the drainage basin, would have an unacceptable negative effect on water quality or other wetlands. An unacceptable cumulative impact occurs when mitigation does not offset wetland impacts in the drainage basin. This can be due to either inadequate mitigation in the impacted basin or mitigation performed outside the drainage basin that does not offset the impact.

Findings

Regulatory agencies have shown improvement over the last few years in implementing state wetland mitigation policy. However, limitations in methodologies and data systems prevent a more accurate and complete evaluation of state wetland mitigation policy.

Our conclusions on the effectiveness of current mitigation options in offsetting adverse impacts to wetlands and wetland functions, including cumulative impacts are as follows.

Improvements in mitigation requirements and increased compliance and enforcement efforts have furthered the state's ability to protect wetlands. In an effort to address shortcomings identified in previous studies, the department and districts have worked to improve project design, success criteria, and compliance and enforcement of wetland permits.

Changes are needed to ensure that the proposed mitigation adequately offsets the loss of wetland functions. The permit review criteria establish a goal of “no net loss” of wetland functions; however, the current use of ratios does not provide a clear valuation of the extent to which the mitigation offsets the loss of wetland functions. The current ratio method does not quantitatively measure functions at either the impact or the mitigation site. A wetland assessment methodology, which includes a functional assessment, would allow a more accurate measurement of wetland functions lost and gained. Without the application of such a methodology to all mitigation options, there may be inconsistency among mitigation options in the amount of mitigation required. In addition to methodological concerns, department and district staff need to better ensure that public offsite regional mitigation areas account for time lag, risk, and location considerations. Most public offsite regional mitigation areas do not require a permit for the work performed. Therefore, few assurances are provided that the work conducted will be appropriate or successful.

Changes to the cumulative impact assessment are needed to ensure that it is appropriately applied. Mitigation performed outside the impact drainage basin requires the permittee to perform an in-depth cumulative impact assessment. Varying interpretations and use of the drainage basin definition have hindered the application of cumulative impact assessment in some districts. This factor, in addition to not having minimum functional thresholds for drainage basins, makes the application of the cumulative impact assessment overly complex and arduous.

Additional mitigation options allow applicants to choose the most cost-effective option. However, single-family landowners need greater access to these options. The presence of a large number of mitigation options allows permittees to choose the most cost-effective option available. The emergence of mitigation banks and offsite regional mitigation areas has increased the availability of offsite mitigation options. However, limited geographic distribution and the high costs of these new mitigation options may preclude a single-family landowner from using them. The costs associated with these options vary greatly depending on the option selected. These costs may range from \$887 per acre of mitigation to \$45,000 per mitigation bank credit ([see Exhibit 3-5](#)).

Regulatory agencies need to correct long-standing data deficiencies and develop information systems that better measure the effectiveness of their mitigation programs. Our review of district data and permit files revealed varying degrees of data accuracy, a general lack of documentation, and little data to measure program results. The department had greater problems with data availability and accuracy issues. Their database was incomplete and lacked a significant amount of mitigation information. This lack of information makes it difficult to fully assess program effectiveness.

Recommendations

Develop a methodology to assess wetland function. We recommend that the department and the districts convene a representative workgroup to develop and adopt a statewide mitigation assessment methodology by June 30, 2001. This methodology should include a functional assessment of wetlands and include factors for time lag, risk, location of mitigation, and contain provisions for regional differences in ecosystem type. The adoption of such a methodology would allow a more accurate measurement of wetland functions lost and gained. Such an assessment would also ensure consistency in the amount of mitigation required among the various options.

Require a memorandum of agreement for public offsite regional mitigation areas to increase accountability. We recommend that an independent third party approve a memorandum of agreement for public offsite regional mitigation areas. For example, the department would review memorandums of agreement for district-sponsored mitigation areas. This memorandum should specify the responsibilities of all parties involved and contain certain minimum standards that govern the use and operation of these areas.

Consider additional guidance and redelineation of drainage basins for cumulative impacts. We recommend that the Legislature consider three options to address weaknesses in the cumulative impact review process. Given the concerns raised in this report, we believe Options One and Two are stop gap measures that improve aspects of implementation, but do not address fundamental issues with the cumulative impact assessment. For these reasons, we favor Option Three.

Option One assumes that some minimum thresholds could and should be established and that the department and the districts need to develop a more consistent and clear method for implementing a cumulative impact assessment. The first component of this option entails a consistent delineation of drainage basins based upon environmental and hydrologic considerations. In addition, this option includes a list of exemptions in which mitigation may be performed outside the impacted drainage basin and still offset the impact. Projects meeting the criteria set forth in the exemptions would not be subject to a cumulative impact assessment. The third component of this option is for the department and the districts to establish minimum thresholds for all drainage basins.

Option Two would restrict mitigation to stay within the impacted basin unless it met the criteria set in a stated exemption. This option contains all the same requirements as Option One with the exception of the establishment of functional thresholds for drainage basins.

Option Three is a more comprehensive review of the cumulative impact assessment that involves the Legislature directing that a study of cumulative impacts be conducted. The study would examine the cumulative impact review in concert with larger environmental permitting and growth management issues. Elements of this study may be incorporated into current legislative and Department of Community Affairs' efforts to review aspects of the growth management and planning laws. If the study is not incorporated into this review then it could be conducted by the department, the water management districts, or by outside consultants under the direction of the department, the water management districts, or the Legislature. The cost of conducting such a review would vary depending upon whom the Legislature selects to conduct the review. The proposed growth management review is

budgeted at \$250,000.¹ Incorporating the cumulative impact review into the growth management review would reduce costs and avoid duplication of efforts.

Add rules to provide mitigation options needed for single-family landowners. We recommend that the department revise its rules to allow the department, the districts, and local governments to create, for single-family landowners only, a mitigation option not subject to the same requirements of other offsite mitigation options. This new option would increase the availability of low-cost mitigation to single-family landowners. This will allow some landowners the possibility to mitigate for impacts for which they would not have been able to previously.

Install information systems to facilitate reporting on effectiveness of the mitigation program. We recommend that the Legislature amend Chapter 373, F.S., to include a wetland reporting requirement to direct the department and the districts to each file an annual report of permitted wetland activities that occur within their district. The report should include specified information to ensure that the department and districts collect and report the same information. The department should be responsible for consolidating data into a central shared database. The wetland inventory data should be incorporated into existing Geographic Information System applications and regional land use comprehensive plans to identify drainage basins that require special protections.

Agency Responses

The Secretary of the Department of Environmental Protection and executive directors of the St. Johns River Water Management District, the South Florida Water Management District, the Southwest Florida Water Management District, the Suwannee River Water Management District, and the U.S. Army Corps of Engineers provided written responses to our findings and recommendations. Complete written responses and our comments regarding the accuracy and appropriateness are contained in [Appendix C](#) starting on page 33.

¹ HB 693 and SB 758 create the Growth-Management Advisory Committee to review the operation and implementation of Florida's growth management statutes.

Introduction

Purpose

Florida law directed the Office of Program Policy Analysis and Government Accountability to study the wetland mitigation options defined in s. 373.414(1)(b), F.S. These mitigation options include onsite mitigation, offsite mitigation, offsite regional mitigation, and the purchase of mitigation credits from mitigation banks permitted under s. 373.4136, F.S.

The purpose of the study is to

- consider the effectiveness of current mitigation options in offsetting adverse impacts to wetlands and wetland functions, including the consideration of cumulative impacts;
- consider the costs of the various mitigation options; and
- identify appropriate recommendations for statutory or rule changes to increase the effectiveness of mitigation strategies.

Background

State policy protects wetlands, but certain losses are permitted

Wetlands provide vital functions to the natural environment, including groundwater recharge, stormwater attenuation, and wildlife habitat.² Given the environmental importance of wetlands, state policy is to prevent or minimize the loss of wetland functions. While some individuals describe the state's wetland policy goal as a "no net loss" of wetlands acreage, there is no formal written state policy that establishes this goal. In fact, the state loses wetlands every year through permitted losses and wetland impacts exempted from permitting requirements.

² Florida law (s. 373.019(22), F.S.) defines wetlands "as those areas that are inundated or saturated by surface or ground water at a frequency and a duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas."

Introduction

Current wetland policy strives to balance economic development and wetland protection

The efforts of the state regulatory agencies, the Department of Environmental Protection and the water management districts, are directed at balancing environmental protection with private property rights and economic development pressures. This approach acknowledges that growth will entail some loss of environmental and wetland function. The state relies upon environmental regulations, such as wetland permitting, to prevent these losses from reaching a critical threshold. The most accurate way of characterizing current policy is that state regulatory agencies strive to attain the best environmental result given these strong competing interests. Balancing these interests seems to be in keeping with the Legislature's intent for environmental permitting and offers the most practical approach to implementing state policy.

Permit Process and Mitigation

The Environmental Resource Permit Program regulates activities that alter the landscape and disrupt water flow to wetland areas and surface waters.³ The Department of Environmental Protection (department hereafter) and four of the five water management districts (districts hereafter) jointly administer the program.⁴ Depending on the development activity, individuals apply for an Environmental Resource Permit to the department or one of the districts.⁵

Florida law exempts certain activities involving wetlands from permit requirements

Florida law exempts certain types of activities from either Environmental Resource Permitting requirements or from mitigation requirements for offsetting the impact. Activities that meet standards for (1) statutory exemptions, (2) exemptions established by rule, and (3) general permits do not require mitigation.

The Legislature created statutory exemptions for certain activities that impact wetlands. These statutory exemptions include some activities for agriculture and silviculture that impact an isolated wetland. The department and districts are authorized by statute to exempt, in rule, development activities that are determined to have minimal impacts on

³ The Environmental Resource Permit Program was established as a result of the Florida Environmental Reorganization Act of 1993. This act consolidated two previous programs—the Wetland Resource Permitting Program and the Management and Storage of Surface Waters Program—to enable the Department of Environmental Protection and the water management districts to review and issue a single permit for wetland development activities rather than two permits for the same activity.

⁴ The department also issues all wetland resource permits within the Northwest Florida Water Management District, which was statutorily given until 2003 to establish its own environmental resource permit program.

⁵ The department issues permits for activities related to solid and hazardous waste facilities, mines, power plants, single-family dwellings on five acres or less, marinas and docks having more than nine slips, and open water projects. Water management districts review and issue permits for most other types of development activity.

wetlands. For example, developments that affect an isolated wetland that is less than one-half acre in total size are commonly exempted from mitigation under the Environmental Resource Permit regulations. Activities that qualify for a Noticed General Permit (i.e., impacts up to 4,000 square feet of isolated wetlands for single-family dwellings, or 1,000 square feet of impact for docks) do not require mitigation.

The department and the districts must process Environmental Resource Permit applications within time limits specified by law. These agencies have 30 days to review the applications or request additional information. When the requested materials have been received, the agency must review the submitted information and request any additional clarifying information within 30 days. Final agency action must occur within 90 days after receipt of the original application or the last submittal of additional requested information, whichever is the latter.

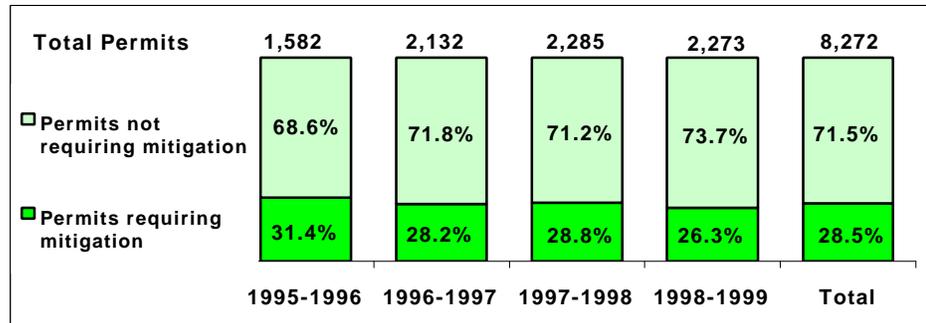
Mitigation refers to actions taken to offset adverse impacts to wetlands after avoiding and minimizing impacts

A factor that is considered in issuing an Environmental Resource Permit is the need for wetland mitigation. In general, proposed projects must avoid and minimize the wetland impacts of the proposed development activity. However, avoiding damage to wetlands is not always feasible, and applicants may need to take mitigating actions before a permit will be issued. Mitigation refers to actions that the applicant may propose to offset the adverse impacts the proposed development will have on the surface waters and wetlands. Mitigation actions can include creating new wetlands, restoring existing wetlands that have previously been damaged, enhancing the functions of wetlands, or preserving wetland or associated uplands.

Water Management Districts Permits with Mitigation

Exhibit 1-1 shows the number of Environmental Resource Permits issued by the districts over the past four years and the percentage of permits with required mitigation. The number of permit applications received, withdrawn, and denied has fluctuated over the years. However, an average of 29% of the permits issued since 1995 have included wetland mitigation actions.

Exhibit 1 -1
An Average of 29% of the Environmental Resource Permits Issued by Water Management Districts Have Required Wetland Mitigation ¹

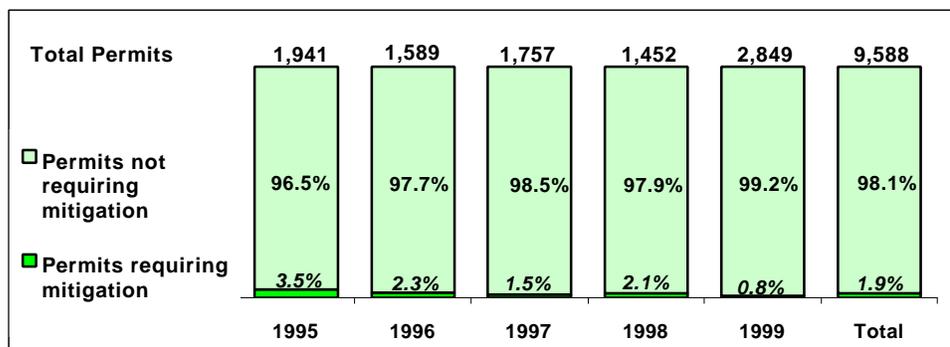


¹ Does not include Noticed General Permits or exempted activities. Numbers for South Florida Water Management District only reflect permits that had preservation as part of the mitigation. Source: OPPAGA analysis of district data.

Department Permits with Mitigation

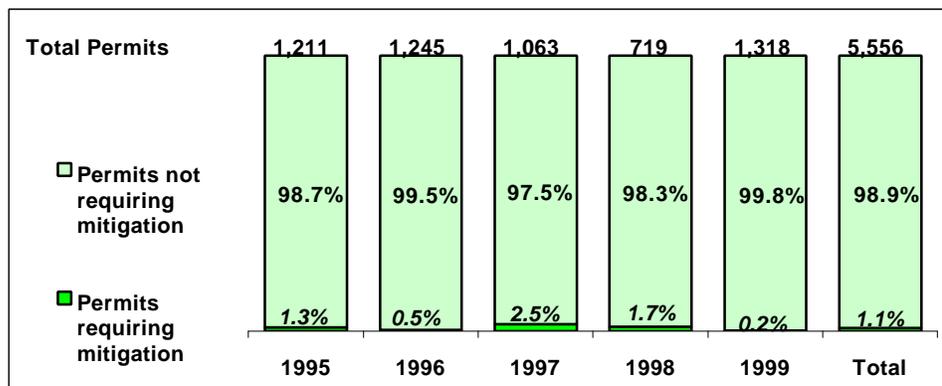
As shown in Exhibit 1-2, 98% of the Environmental Resource Permits issued by the department over the past five years did not require mitigation. This does not include the northwest district, because this district issues Wetland Resource Permits, not Environmental Resource Permits (see Exhibit 1-3 for totals). The northwest district does not have permitting jurisdiction over isolated wetlands due to the different permitting requirements. The number of permit applications received, withdrawn, and denied has fluctuated over the years. However, 3% or less of all the permits issued in the past five years have included wetland mitigation actions.

Exhibit 1 -2
Most Environmental Resource Permits Issued by the Department Have Not Required Wetland Mitigation ¹



¹ Includes Individual permits only. Data is incomplete due to department data problems. Source: OPPAGA analysis of department data.

Exhibit 1 -3
Most Wetland Resource Permits Issued by the Department's Northwest District
Have Not Required Mitigation ¹



¹ Includes Individual permits only.
 Data is incomplete due to department data problems.
 Source: OPPAGA analysis of department data.

Permit conditions contain certain criteria for evaluating mitigation success

Each Environmental Resource Permit contains conditions that specify what wetland impacts will be allowed and what mitigation actions, if any, must be performed in offsetting the impacts. The permit also specifies the criteria that will be used to evaluate the success of the mitigation effort and the monitoring and maintenance requirements that must be met. Most permits with mitigation require a minimum of five years of monitoring. However, permittees are not typically released from monitoring requirements after five years. Although the monitoring phase may have ended, the requirement to maintain the mitigation area typically continues in perpetuity. The success criteria used for monitoring establish biological and engineering conditions that must be met prior to the project being released from monitoring. ⁶ An example of a success criterion is the percentage of exotic species present on the mitigation site.

Ratios are used to establish the amount of mitigation required to offset an impact

When determining mitigation requirements, the department and the districts use mitigation ratio guidelines to establish the amount of mitigation needed to offset a specific impact. These ratios are based on the quality of the wetland impacted, the wetland functions being performed, and the ability of the mitigation to offset those functions. The ratios vary depending upon the type of mitigation conducted. The ratios (mitigation acreage: impact acreage) generally range between: 1.5:1 to 4:1 for created or restored marshes; 2:1 to 5:1 for created or restored forested wetlands; 4:1 to 20:1 for wetland enhancement; and 10:1 to 60:1 for wetland preservation. ⁷ The difference in ratio ranges depends upon the

⁶ In most cases, all permits that include mitigation monitoring contain conditions that address intermediate success criteria. Mitigation banks have intermediate success criteria that must be met in order to receive mitigation credit releases.

⁷ For example, given that the ratios for creation of marshes vary from 1.5 to 4, acres of mitigation per

Introduction

quality of the impacted wetland and amount of ecological improvement expected from each mitigation type. Creation and restoration are assigned lower ratios since these activities add new wetlands that provide functions similar to those of the impacted wetland. Ratios for enhancement are higher than ratios for creation and restoration, because activities serve to enhance existing wetland function rather than creating new functions. Preservation receives the highest ratio in that it does not improve existing ecological value; however, it ensures that the functions of the preserved area are protected for the long term.

Cumulative impacts are considered in permit decisions

In deciding to grant or deny a permit, Florida law also requires the department and the districts to consider direct, secondary, and cumulative impacts upon wetlands within a defined geographic area. The law defines these geographic areas as drainage basins. When the mitigation from the proposed activity does not fully offset the impacts within the drainage basin, there is a residual impact. This impact may be unacceptable and must be addressed through a cumulative impact assessment. This analysis considers whether the residual impacts from the proposed project, in addition to the past, present, and anticipated future impacts within the basin, would have an unacceptable negative effect on water quality or other wetland functions in the basin. The assessment poses the question whether the proposed project would be the proverbial “straw that breaks the camel’s back.” If a project is determined to have unacceptable cumulative impacts, the permit application is denied.

Mitigation can be conducted onsite or offsite by the permittee or a third party

Mitigation requirements may include activities on the impacted site as well as mitigation actions taken at another site. Offsite mitigation options can include donation of funds to offsite regional mitigation areas as well as the purchase of mitigation credits from mitigation banks. One of the differences between the mitigation options is the party responsible for performing the mitigation. The developer is responsible for preparing the mitigation plan and constructing, monitoring, and maintaining the mitigation site for the onsite and offsite mitigation options. However, if the mitigation includes buying mitigation credits from a mitigation bank or donation of funds to an offsite regional mitigation area, responsibility for the mitigation action is transferred to the third party (the mitigation bank/offsite regional mitigation area).

Offsite regional mitigation areas are private and public areas where more than one permitted wetland impact can be mitigated on a large scale. For example, South Florida Water Management District and St. Johns River Water Management District have public offsite regional mitigation areas whereby applicants can meet their mitigation requirements by donating funds to a restoration, enhancement, or preservation project. Local

acre of impact for a wetland impact of two acres of marsh would require between three and eight acres of creation based upon the type and function of the impacted wetland site, the location, the likelihood of success, and time lag until mitigation serves to offset the impacts.

governments, such as Palm Beach and Lee counties, also have ongoing enhancement projects in which permittees can donate funds to meet mitigation requirements. Florida law requires that cash donations accepted by the department and the districts represent the full cost of the mitigation activities undertaken.⁸ The department and the districts must report to the Governor's office every six months any cash donations accepted for mitigation purposes; however there is no reporting requirement for local government projects. An Environmental Resource Permit may not be required for offsite regional mitigation areas due to the activities performed.⁹

Applicants can buy credits from a mitigation bank to meet mitigation requirements

Mitigation banks are an additional offsite mitigation option. Mitigation banks are entities that restore, create, enhance, or in some cases preserve wetlands and/or other aquatic resources. To establish a mitigation bank, an applicant must obtain a Mitigation Bank Permit from the appropriate state agency and a Mitigation Banking Instrument from the federal agencies. Mitigation bank applicants are encouraged to meet with an interagency Mitigation Bank Review Team before submitting a permit application.¹⁰ This process is intended to streamline and ensure consistency between the state and federal reviews. Once the state application is deemed complete, differing regulatory requirements may not allow for a concurrent review. Thus, the Mitigation Bank Permit and Mitigation Banking Instrument may be issued at different times.

Mitigation banks are awarded credits for their mitigation efforts, which permit applicants can purchase to meet their mitigation requirements. A mitigation bank credit is equivalent to the ecological value gained by the successful creation of one acre of wetland. Mitigation bank credits are determined using a functional assessment methodology that measures the degree of improvement in ecological value due to the mitigation bank

⁸ The full cost shall include all direct and indirect costs, as applicable, such as those for land acquisition, land restoration or enhancement, perpetual land management, and general overhead consisting of costs such as staff time, buildings, and vehicles.

⁹ These activities include acquisition, exotic species removal, replanting, and controlled burning. In addition, agencies must have a sufficient legal interest but not necessarily own the land, which is a prerequisite for obtaining an Environmental Resource Permit.

¹⁰ The Mitigation Bank Review Team is composed of state and federal representatives from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, National Marine Fisheries Service, Natural Resources Conservation Service, Florida Department of Environmental Protection, and the relevant water management district. The process is an effort to streamline the permit process and decrease the amount of time involved in obtaining the required permits.

Introduction

operation.¹¹ After completion and inspection of activities set forth in the mitigation plan, credits are released to the mitigation bank for sale to third parties. The price of credits is not regulated but reflects the cost that the market will bear.

Generally, mitigation banks can sell credits only within a defined geographic area

Mitigation banks are assigned service areas where mitigation credits may be used. The service areas generally match a regional watershed boundary, but may be larger or smaller than this boundary based on local ecological or hydrological considerations. However, due to cumulative impact considerations, the mitigation bank may not be able to sell credits to every project in the service area. In addition, the mitigation bank may not offset the impacts of every project in a mitigation service area.

Program resources for the Environmental Resource Permit Program for the department and the districts are reported in [Appendix B](#).

¹¹ A functional assessment methodology measures the functional values of various wetland characteristics and uses this to determine how many acres of the proposed wetland mitigation are required to offset the wetland impact. Functional assessments consider improvements in wetland function, not just increase in wetland acreage as in a “no net loss” of acreage approach.

Program Improvements Need to Continue

Introduction

We concluded that regulatory agencies have shown improvement over the last few years in implementing state wetland mitigation policy. However, limitations in methodologies and data systems prevent a more accurate and complete evaluation of state wetland mitigation policy. Since the state's goal is to prevent the loss of wetland functions, changes are needed in current methodologies and data systems in order to more accurately measure the loss associated with wetland impacts, and the extent to which mitigation offsets adverse impacts to wetlands. Other changes are needed to increase the availability of mitigation options.

Our conclusions on the effectiveness of current mitigation options in offsetting adverse impacts to wetlands and wetland functions, including cumulative impacts, are presented in five findings.

- Improvements in mitigation requirements and increased compliance and enforcement efforts have furthered the state's ability to protect wetlands.
- Changes are needed to ensure that the proposed mitigation adequately offsets the loss of wetland functions.
- Changes to the cumulative impact assessment are needed to ensure an appropriately applied analysis.
- Additional mitigation options offer applicants choices for cost-effectiveness. However, single-family landowners need greater access to these options.
- Regulatory agencies need to correct long-standing data deficiencies and develop information systems that better measure the effectiveness of their mitigation programs.

Findings

Improvements in mitigation requirements and increased compliance and enforcement efforts have furthered the state's ability to protect wetlands

Prior studies found that mitigation efforts were unsuccessful and had high noncompliance; however, state regulatory agencies have made improvements

Over the past 10 years, the department and the districts have taken actions that have strengthened the state's ability to protect wetlands. A series of studies conducted in the early 1990s found problems with wetland mitigation, primarily the creation of new wetlands.¹² Permits contained vague success criteria, completed mitigation projects had low compliance and ecological success rates, and regulatory agencies permitted net losses of wetlands. The studies also found that a significant number of mitigation projects had not been constructed. For example, a 1991 Department of Environmental Regulation report estimated that mitigation required by 34% of all dredge and fill permits were never initiated. In an effort to address identified shortcomings these studies called for improvements in project design, success criteria, and compliance and enforcement of wetland permits. State regulatory agencies have worked to overcome the problems identified in these early studies. As a result, successful mitigation currently being performed by the public and private sector is helping protect the state's wetlands.

It is too early to determine if most mitigation projects will be successful—compliance information can be used to evaluate intermediate success

To determine how effective the current program is in protecting wetlands, we examined department and district data on permitted mitigation projects. In practice, mitigation success is defined as meeting the conditions and requirements established in the Environmental Resource Permits. Most permits requiring mitigation establish a five-year monitoring period to give sufficient time to determine whether the mitigation area is functioning as intended. Few mitigation projects have yet been released from monitoring and deemed successful. Accordingly, we collected and examined data on how well mitigation projects are complying with permit conditions during the monitoring period. Although the data that were available to evaluate project success varied

¹² Erwin, Kevin L. *An Evaluation of Wetland Mitigation in the South Florida Water Management District*. Prepared for the South Florida Water Management District, July 1991. *Report on the Effectiveness of Permitted Mitigation*, Florida Department of Environmental Regulation, March 1991. *Operational and Compliance Audit of Mitigation in the Wetland Resource Regulation Permitting Process*, Department of Environmental Regulation, Audit Report No. AR-249, November 1991. *A Review of the Management and Storage of Surface Waters Program Administered by the Water Management Districts Under the General Supervision of the Department of Environmental Protection*, Program Audit Division, Office of the Auditor General [Report No. 12211](#), December 1993.

Program Improvements Need to Continue

by district (see discussion on page 23), in general the compliance rates have increased significantly since the early 1990s.

Compliance rates have increased

Since the early 1990s, improvements in mitigation requirements and compliance monitoring have increased the state’s ability to preserve wetlands. The department and the districts have increased their efforts to monitor compliance with wetland mitigation requirements. As a result, compliance rates for permits involving mitigation have increased.

South Florida Water Management District

The South Florida Water Management District has tracked annual permit compliance rates since 1992, when its compliance division was established. Exhibit 2-1 shows that since that date, the compliance rate has increased from a low of 51% in 1992 to a current rate of 79%.

**Exhibit 2 -1
Environmental Resource Permit Compliance Rates for the
South Florida Water Management District Have Increased Since 1992**

Fiscal Year	1992	1993	1994	1995	1996	1997 ¹	1998 ¹	1999
Permits in compliance	51%	65%	63%	62%	69%	70%	73%	79%

Compliance figures include minor noncompliance due to administrative items.

¹Numbers represent an average derived from two or more district quarterly reports.

Source: South Florida Water Management District, 1999.

St. Johns River Water Management District

The St. Johns River Water Management District has until recently tracked information on compliance and permits meeting success criteria, but its compliance database is currently not operating due to a system failure. Available data from 1992 and 1999 show that the percentage of mitigation sites that are found to be in compliance with permit requirements and the percentage of permits that meet success criteria have substantially increased since 1992 (see Exhibit 2-2).

**Exhibit 2 -2
Mitigation Compliance and Success Rates for the
St. Johns River Water Management District Have Increased Since 1992**

Mitigation sites in compliance	43%	78%
Permits meeting success criteria	27%	67%

Numbers reported in district reports are estimates from a sample of permits taken from district database.

Sources: OPPAGA analysis of St. Johns River Water Management District data.

Program Improvements Need to Continue

Suwannee River Water Management District

Since 1995, the Suwannee River Water Management District has issued 19 Environmental Resource Permits that have required mitigation. There are no data on prior permit compliance rates. However, district data indicate that 100% of permits issued are currently in compliance with permit conditions.

Southwest Florida Water Management District

Compliance and mitigation success rates have increased in this district as well. District field audits in 1988 and 1989 found a 33% success rate, in that 11 of the 33 inspected constructed mitigation projects were successful. One district office found noncompliance rates of 40% for mitigation requirements in a second field audit of permits.

To assess the status of its current projects, district staff reviewed all Environmental Resource Permits issued since 1995 that required mitigation and had completed construction. Staff identified the number of successful projects and the number of projects that were trending toward success. Their review revealed that of the 254 projects that had completed construction (or, at a minimum, had completed the required mitigation), 19% had already achieved success and 63% were trending toward success. Combining these categories indicates that 82% of the completed mitigation projects were substantially in compliance.

Department of Environmental Protection

A prior audit conducted by the Department of Environmental Regulation in 1991 found 56% of projects out of compliance. Compliance data for permits requiring mitigation since 1995 are not available for all six of the department's districts. Two districts have reported data; the southeast district reported that 67% of projects inspected were in compliance; and the northeast district reported 87% of projects inspected were in compliance.

Improvements in Success Criteria

Current success criteria are better indicators of mitigation success

The department and the districts are now using stronger criteria to evaluate the ecological success of mitigation projects. Our review of water management district permit files found that the success criteria used to assess mitigation projects generally articulated a clear environmental result. For example, in the past the primary measure of mitigation success was percentage of plantings survival. Current quantitative measures of success include hydrologic conditions as well as percentage of vegetative cover, and exotic and nuisance species. In addition, regulatory agencies now recognize that qualitative measures are also important. For instance, earlier permit requirements deemed

mitigation sites unsuccessful if native plant species replaced planted species, since the permit did not list these plants specifically.

Changes are needed to ensure that the proposed mitigation adequately offsets the loss of wetland functions

While the state has increased its ability to offset wetland impacts through improvements in success criteria and compliance efforts, wetland losses continue. These continued losses of wetland acres and functions occur due to statutory and rule exemptions and inadequacies within the current permit system. Three problems must be resolved to better ensure that mitigation offsets impacted wetland functions.

- The current use of ratios does not provide a clear valuation of the extent to which the mitigation offsets the loss of wetland functions.
- There is a lack of a consistent methodology between mitigation options in assessing mitigation requirements.
- Additional requirements are needed to ensure that public offsite regional mitigation areas account for time lag, risk, and location considerations.

The current use of ratios does not provide a clear valuation of the extent to which the mitigation offsets the loss of wetland functions

State regulatory agencies must consider wetland functions in determining mitigation ratios

Environmental Resource Permit (ERP) rules require that the department and the districts consider wetland functions in determining mitigation ratios for the wetlands impacted. These wetland functions to be considered include habitat and corridors for wildlife, ground water recharge, and stormwater attenuation.¹³ The ratios set forth in permits reflect a measure of the amount of mitigation acreage needed to offset the wetland acreage impacted. For example, permit rules require a ratio of 1.5:1 to 5:1 (mitigation to impact acreage) for creation of wetlands as mitigation. The permit reviewers are to use their best professional judgment to determine the assigned ratio, considering wetland function and value for both the impacted and proposed mitigation site.

The amount of wetland functions lost and replaced is not being assessed by state regulatory agencies

Although the permit review criteria establishes a goal of no net loss of wetland functions, the department and districts do not measure the extent to which this goal is met. The current use of ratios does not allow the department and the districts to determine to what extent mitigation offsets wetland functions lost due to adverse impacts. Available data on

¹³ ERP rules also identify food chain support, nutrient cycling, detrital production, water quality enhancement, water storage, flood conveyance, navigation, water supply, and recreation.

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permitted wetland impacts and mitigation show that the state has experienced a net loss of wetlands since 1995 because Environmental Resource Permits have required less wetland acreage be created than authorized to be lost through permitted activities (Exhibit 2-3). Although state policy allows permittees to enhance and preserve wetlands as mitigation for wetland impacts, the use of ratios does not explicitly measure the amount of replacement in wetland function these mitigation types provide. Thus, the department and the districts are unable to ensure that permitted mitigation fully offsets the loss of wetland functions. In contrast to using ratios, the department and districts could use a wetland assessment methodology, which includes a functional assessment and would allow a more accurate measurement of wetland functions lost and gained. This assessment would explicitly consider wetland functions in establishing the amount of mitigation needed to offset wetland impacts. While wetland losses will continue due to exempted activities, a functional assessment methodology will provide better assurance that permitted losses offset wetland functional losses.

Exhibit 2 -3 State Regulatory Agencies Cannot Assess the Extent to Which Wetland Functions Are Being Replaced

Fiscal Year	<u>Water Management District Information</u>			Other Permitted Mitigation	
	Net Permitted Mitigation Acreage			Acres	Acres
	Acres Lost	Acres Created ¹	Net Acreage	Enhanced ²	Preserved ³
1996	1,794.10	589.49	-1,204.61	2,406.83	9,239.60
1997	3,069.53	788.32	-2,281.21	6,905.61	12,877.25
1998	3,471.72	988.43	-2,483.29	6,941.59	19,438.35
1999	3,308.46	1,130.74	-2,177.72	5,732.35	26,008.45
Totals	11,643.81	3,496.98	-8,146.83	21,986.38	67,563.65

¹ Data for two districts include restoration as well.

² Data for St. Johns River Water Management District includes restoration as well.

³ Data includes both wetland and upland preservation.

Source: OPPAGA analysis of district information.

Calendar Year	<u>Department Information</u>			Other Permitted Mitigation	
	Net Permitted Mitigation Acreage			Acres	Acres
	Acres Lost	Acres Created ¹	Net Acreage	Improved ²	Preserved
1995	30.25	19.15	-11.10	172.76	157.08
1996	8.29	2.25	-6.04	17.19	115.56
1997	19.87	17.52	-2.35	56.18	160.09
1998	16.07	6.95	-9.12	383.45	329.79
1999	204.78	0	-204.78	6,180.14	102.82
Totals	279.26	45.87	-233.39	6,809.72	865.34

¹ Creation includes restoration.

² Acres Improved corresponds with Acres Enhanced in district data.

Information reflects both Environmental Resource Permit and Wetland Resource Permit Data. Data is incomplete due to department data problems. Accuracy of data not verified by OPPAGA staff.

Source: OPPAGA analysis of department information.

There is a lack of a consistent methodology between mitigation options in assessing mitigation requirements

The current ratio method does not allow comparison between mitigation options

The second problem is the lack of a common method of measuring wetland functions when establishing mitigation requirements, which prevents the comparison of mitigation options. Mitigation bank credits are assigned using a functional methodology, where one credit is assumed to be equivalent to one acre of successful onsite wetland creation. It is not possible to compare the functional value of one mitigation bank credit to the functions provided by ratio determined mitigation, unless that mitigation is wetland creation. Ratios rely upon the permit reviewer's best professional judgment, guided by a range of predetermined ratios set in rule. The adoption of a uniform methodology to determine mitigation requirements would provide a greater level of certainty and predictability in the permit process for permit applicants.

Differences in methods may result in an incorrect amount of mitigation being required

Differences in methodologies potentially affect the amount of mitigation required. Establishing a comparable functional exchange requires a quantitative assessment of wetland functions on the impact site and the mitigation site. However, this approach is not taken when the permit applicant uses a mitigation bank to offset the impacts. Mitigation bank credits are determined using a functional assessment methodology and are equivalent to one acre of successful wetland creation. Due to a lack of a functional assessment on the impact site, the ERP ratio range for creation is used to determine the amount of mitigation credits required from a bank for an applicant to offset the proposed impact.¹⁴ The actual amount of mitigation may be lost in the translation between mitigation credits and mitigation ratios. As a result, the amount of mitigation required may be overstated or understated since both the impact and mitigation sites were not assessed using a functional assessment methodology. This may result in the permit applicant being required to purchase more or fewer bank credits than are possibly needed, which affects the cost of mitigation.

¹⁴ The ERP rules establish the mitigation ratios for creation from 1.5:1 to 5:1 (mitigation to impact). Since one bank credit equals one acre of successful creation, these ratios are applied. For example, for a hypothetical one-acre wetland impact the permit applicant would be required to purchase between 1.5 to 5 credits from a mitigation bank, depending on the type and quality of wetland impacted. Because time lag and risk are accounted for, these ratios would generally be at the low end of the range.

Program Improvements Need to Continue

Additional requirements are needed to ensure that public offsite regional mitigation areas account for time lag, risk, and location considerations

Public offsite regional mitigation areas do not provide the same level of assurances as other mitigation options

The third weakness in mitigation requirements is that public offsite regional mitigation areas do not provide the same level of assurances for ecological success as other mitigation options.¹⁵ Permittees who conduct their own mitigation efforts and mitigation banks must obtain Environmental Resource Permits for activities undertaken on the mitigation site. However, activities currently conducted at public offsite regional mitigation areas do not require Environmental Resource Permits.¹⁶ This is significant because Environmental Resource Permits provide a review of wetland functions, what and when enhancement or restoration activities will be undertaken, and establish monitoring requirements and environmental criteria to measure success. Without permits or other binding agreements, there are fewer assurances that the mitigation work at public offsite regional mitigation areas will be appropriate, conducted, or successful.

Mitigation requirements are lower than expected for some public offsite regional mitigation areas

At some public offsite mitigation areas the amount of mitigation that has been required to offset wetland impacts is lower than what Environmental Resource Permits rules specify. Public offsite regional mitigation areas in the South Florida Water Management District are enhancement projects. It would be expected that these projects would follow the state's Environmental Resource Permit ratios in setting mitigation requirements. The ranges for these ratios are between 4:1 and 20:1 for wetland enhancement. The department states that the lowest end of the ratio range is most appropriate when a high degree of reasonable assurance exists that the mitigation will be successful and capable of offsetting the otherwise unpermissible aspects of the project. This can best be achieved through preconstruction mitigation efforts. These public offsite regional mitigation areas do not account for time lag and risk when establishing the required mitigation. As a result, public offsite regional mitigation areas should require a higher ratio than the lowest end of the ratio range. Exhibit 2-4 indicates that the mitigation ratios that have been used for offsite regional mitigation areas for the South Florida Water Management District are at or below the expected ratio range set forth in the permit guidelines.

¹⁵ St. Johns River Water Management District and South Florida Water Management District both allow applicants to fulfil mitigation requirements by accepting donations for mitigation, but their programs differ. Funds donated to SJRWMD for mitigation are used to purchase lands identified for acquisition on the district's five-year acquisition plan that are under contract. In contrast, funds donated to SFWMD for mitigation are used to purchase and enhance land in one of two specific offsite mitigation areas. Palm Beach County also allows permittees to donate funds for mitigation. Questions about the amount of time between collection of funds and initiating the mitigation, a defined service area, and risk have been raised for these specific projects.

¹⁶ These activities include acquisition, exotic species removal, replanting, and controlled burning. In addition, agencies do not yet own the land, which is a requirement for obtaining an environmental resource permit.

Program Improvements Need to Continue

Exhibit 2 -4 Mitigation Ratios for Some Public Offsite Mitigation Areas Are Lower Than Expected

Mitigation Area	Impact Acreage	Mitigation Acreage	Mitigation Ratio (Mitigation/Impact)	Expected ERP Ratio Range (Mitigation/Impact)
Pennsuco ¹	610.31	1,097.03	1.68:1	4:1 to 20:1
Crew ¹	164.89	658.50	4.45:1	4:1 to 20:1
Unit 11 ²	907.90	1,154.01	1.81:1	4:1 to 20:1

¹Projects managed by South Florida Water Management District.

²Project managed by Palm Beach County.

Sources: Water Management District Annual Reports to the Governors Office (1997-1999), OPPAGA analysis of district information, SFWMD, Environmental Resource Permit guidelines.

South Florida Water Management District staff acknowledge that these ratios are low, but attribute the low ratios to the Melaleuca Rule for CREW and Pennsuco mitigation areas.¹⁷ Based on the memory of permit reviewers, district staff reviewed a list of permits issued for the Pennsuco mitigation area and were able to recall permit conditions for 99 of the 121 projects. Staff determined that 55 of the 99 projects were melaleuca dominated and, therefore, current mitigation ratios for Pennsuco are within the accepted ERP ratio range. The Melaleuca Rule did not apply to the remaining 44 projects. Even though the average mitigation for these melaleuca dominated projects is 1.5:1, which is below the expected ratio range of 4:1, district staff contend that adverse impacts were offset. District staff were unable to recall if the remaining 22 permits were Melaleuca dominated or not.

While the Melaleuca Rule clearly has some impact on the ratios for some projects, we have no readily available method of verifying the district's results nor were we able to obtain comparable impact data from the district for mitigation banks in the area. These difficulties in determining whether district ratios offset adverse impacts illustrate the need for greater accountability. Given the additional sensitivity of the districts having offsite mitigation projects that compete with mitigation banks, it is imperative that the districts maintain documentation that clearly establish that its projects are meeting the same standards as other mitigation options.

Mitigation ratios for public offsite regional mitigation areas in the St. Johns River Water Management District are within the range established by mitigation ratio guidelines. These projects consist of preservation and maintenance on acquired parcels. The ERP ratio

¹⁷ The Melaleuca Rule was established in January of 1997. The rule provides for lower ratios on wetlands that have a 50% or greater coverage of melaleuca. The Melaleuca Rule ratio guidelines for enhancement projects are 0.7:1 to 3.0:1 (mitigation to impact acreage).

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guidelines for wetland and upland preservation are 10:1 to 60:1, and 3:1 to 20:1, respectively. Taking into account the upland preservation ratio along with the wetland preservation ratio, the composite mitigation ratio of 13.64:1 (mitigation/impact) is within the expected range.¹⁸

Unlike mitigation bank service areas, public offsite mitigation areas do not have a defined geographic area in which wetland impacts may be offset. Setting geographic boundaries is an important aspect of mitigation. It establishes where the mitigation can occur and still offset the adverse impacts to the wetland. Without defined service areas the public offsite regional area may not provide comparable offset in wetland function as the wetland impact site.

Districts are addressing weaknesses with accountability for public mitigation areas

Districts using regional offsite mitigation are addressing some of the weaknesses in their current implementation of district projects. The South Florida Water Management District Governing Board has adopted a Memorandum of Agreement for the offsite regional mitigation area in Palm Beach County to address some accountability issues related to the performed mitigation. The agreement establishes responsibilities for performing mitigation, a mitigation plan with acquisition thresholds, and service area for the project. This district expects to adopt similar agreements for the other two endorsed and sponsored offsite regional mitigation areas within the district.

Changes to the cumulative impact assessment are needed to ensure an appropriately applied assessment

Florida statutes require the department and the governing boards of the districts to consider cumulative impacts on surface waters and wetlands in the same drainage basin when deciding whether to issue a permit. This analysis considers whether the impacts of the proposed project, in addition to the past, present, and anticipated future impacts within the drainage basin would have an unacceptable negative effect on water quality or other wetlands. The assessment poses the question whether the proposed project would be the proverbial “straw that breaks the camel’s back.” If a project is determined to have unacceptable cumulative impacts, the permit application is denied. This statutory requirement has been incorporated into Environmental Resource Permit rules. Two problems must be addressed to ensure that the cumulative impact assessment can be appropriately applied. These problems include redelineating the geographic area (the drainage basin) for which the analysis applies and determining the minimum functional level for the

¹⁸ The adjustment for time lag and risk should be small due to the fact that the district projects involve preservation and long-term maintenance.

drainage basin below which unacceptable cumulative impacts would occur.

Varying interpretations and application of the drainage basin definition potentially limits the availability of mitigation options in some geographic areas

Mitigation options are limited by defined drainage basins in some areas

A problem in applying the cumulative impact assessment is that the districts use differing interpretations of the drainage basin definition. Florida law defines a drainage basin as a subdivision of a watershed, which is a land area that contributes to a flow of water to a receiving body of water. The drainage basin definition also does not explicitly require the establishment of drainage basins upon natural hydrologic patterns or other natural features. As a result, the districts have identified substantially differing numbers and sizes of drainage basins, ranging from 16 large basins in the Southwest Florida Water Management District to 134 small basins in the South Florida Water Management District. As the South Florida Water Management District recognizes, some of the drainage basins are too small to allow for a practical application of the cumulative impact assessment. Thus, permit applicants in these small basins have fewer available mitigation options.

In an effort to address the application of cumulative impacts and drainage basin size, both the St. Johns River and the South Florida Water Management districts have convened workgroups. The purpose of these workgroups is to redefine the drainage basins based upon natural features, such as habitat type and historic hydrologic patterns. The proposed redefined drainage basins identify critical resources, such as undeveloped tracts of land and areas of special concern. The proposed changes will result in reducing the number and increasing the size of the drainage basins. Increasing the size of the drainage basin reduces the number of times that a cumulative impact assessment needs to be conducted. This alleviates some of the concerns and problems that applicants are experiencing by making additional mitigation options available.

The lack of minimum functional thresholds for the drainage basins complicates the cumulative impact assessment

Cumulative impact assessment is difficult to perform

Agency staff and environmental consultants indicate that a cumulative impact assessment is complex, unclear, and difficult to apply to a given proposed impact when mitigation is proposed outside the drainage basins. To provide guidance in how to apply cumulative impact analyses, district and department staff have drafted the Cumulative Impact White Paper. The white paper recognizes that identifying an acceptable level of impact requires an understanding of existing resources as well as future conditions of the drainage basin. This assumes that an acceptable threshold of minimum function can be established for the drainage basins. However, district staff indicate that such set thresholds have not been

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established and may not be attainable. Determining an acceptable level of impact is further complicated by the lack of a functional assessment methodology, which would provide a measure of current wetland functions within the drainage basin.

Identifying conditions under which a cumulative impact assessment would not apply would also provide clearer guidance both to district staff and permit applicants. The white paper identifies possible examples where it may be appropriate to mitigate outside the drainage basin. It also offers six of these examples and acknowledges that cumulative impacts may only be allowed under select conditions. Clearly defined exceptions would also provide permit applicants with additional mitigation options when they apply.

No consensus on how to best apply cumulative impact criteria exists

Although some of the current concerns with the cumulative impact assessment can be addressed, it remains unclear whether the districts can successfully address the more difficult measurement problems associated with the analysis. In discussions with staff of federal and other state wetlands programs, we could find no agency that has successfully applied a cumulative impact assessment to a wetland permitting program. At best, some agencies have developed similar concept papers to provide some guidance to staff as to how the analysis could be done. None are actually using a defined methodology nor have they developed functional thresholds for wetland systems, watershed, or other geographic areas. This raises questions as to the practicality and feasibility of cumulative impact assessment as it is currently defined. Even department and district staff differ on how best to implement the analysis. Suggestions range from implementing the white paper to simply designating areas or drainage basins on maps where the resources are at risk of an unacceptable cumulative impact. Further work will be necessary to address these concerns in order to provide permit applicants with a clear, consistent, and replicable method of assessing cumulative impacts.

Additional mitigation options allow applicants to choose the most cost-effective option. However, single-family landowners need greater access to these options

The availability of offsite mitigation options has increased

The presence of a large number of mitigation options allows permittees to choose the most cost-effective option available. The emergence of mitigation banks and offsite regional mitigation areas has increased the availability of offsite mitigation options. In the past, the majority of mitigation occurred onsite. Permittees can now meet mitigation requirements by purchasing mitigation credits from a mitigation bank or donating funds to private sector and government restoration, enhancement, and preservation projects. Environmental consultants and

district staff indicate there has been an increase in the amount of offsite mitigation in the last several years. However, data on mitigation acreage for onsite and offsite mitigation collected from regulatory agencies were limited and inconclusive.

Mitigation costs vary on a case-by-case basis and are difficult to compare across options

Mitigation costs depend on a variety of factors such as the type, size, and location of the mitigation site.¹⁹ Mitigation costs also vary based upon the amount of mitigation required to offset the impact. Environmental consultants surveyed indicated higher costs are associated with labor-intensive mitigation, such as wetland creation. However, wetland creation and restoration have lower mitigation ratios than enhancement and preservation.²⁰ While wetland creation and restoration per acre is generally more expensive than enhancement and preservation, the amount of mitigation required would be less. Thus, the total mitigation costs may be similar.

The variability of mitigation costs and lack of comparability between options preclude statewide conclusions on which mitigation options have the lowest cost. The lack of a common method of measuring wetland function and establishing mitigation requirements further prevents the comparison of mitigation options and associated costs (see Exhibit 2-5). Thus, we were not able to determine which mitigation option is the most cost effective because the costs of mitigation vary on a case-by-case basis and permittees do not usually track cost data on mitigation. However, the increase of offsite mitigation options allows permittees to select the most cost-effective option available.

¹⁹ In addition, methodological differences in determining mitigation do not allow for a clear comparison between mitigation options.

²⁰ The ERP ratios establish the amount of mitigation acreage necessary to offset a given wetland impact. The ratios for marsh creation vary from 1.5 to 4 acres of mitigation per acre of impact. A marsh impact of two acres would require between three and eight acres of creation based upon the type and function of the impacted wetland site.

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Exhibit 2 -5 Mitigation Costs Are Not Comparable Across Mitigation Options

			ERP Ratio Range (Mitigation /Impact) ²
Onsite mitigation ³	Creation and Restoration	\$4,371 - \$44,065 per acre	1.5:1 to 5:1 1 credit = 1 acre of creation
Mitigation Bank	Varies	\$20,000 – \$45,000 per credit	
Public offsite regional mitigation (SFWMD) ⁴	Enhancement and Preservation	\$6,142 per acre (Pennsuco) \$6,500 per acre (CREW)	4:1 to 20:1
Public offsite regional mitigation (Palm Beach County) ⁵	Restoration and Enhancement	\$9,650 per acre (Unit 11)	4:1 to 20:1
Public off site regional mitigation (SJRWMD) ⁴	Acquisition and Management	\$887 - \$10,795 per acre	10:1 to 60:1

¹ Mitigation costs depend on a variety of factors including the amount of mitigation needed to offset an impact. Differing methodologies for establishing mitigation requirements does not allow comparison among mitigation options.

² Excludes the Melaleuca Rule.

³ Cost estimates collected by OPPAGA exclude permitting and land acquisition costs, and reflect a limited sample of projects.

⁴ *Water Management District Annual Report to the Governor's Office, 1999.*

⁵ South Florida Water Management District.

Single-family landowners lack mitigation options

Greater access to mitigation options is needed for single-family landowners limited by mitigation costs. Program administrators in all department districts stated that single-family landowners lack money, knowledge, and sometimes the land onsite to mitigate for wetland impacts. Their access to mitigation options can be further limited because the impact may not occur within the defined service area of an offsite regional mitigation areas or mitigation bank. Department staff also indicated that increasing accessibility to offsite options could provide additional alternatives for these permittees for meeting their mitigation requirements. These offsite mitigation options provide several advantages.

- They provide flexibility in meeting mitigation requirements— a receipt of payment to the mitigation bank or government agency fulfills mitigation requirements;
- They enable regulatory agencies to focus their permitting, compliance, and enforcement functions more effectively— a few larger projects as opposed to many small projects; and
- They consolidate small or fragmented projects into larger and more effective restoration projects.

Federal delays in permitting mitigation banks increase costs

One factor that can affect the costs of the mitigation banking option is the delay caused by the federal permit process. Several mitigation bankers indicated the federal permit process needs to be as timely and responsive as the state agencies' process. While state agencies must respond to a complete application in 90 days, federal agencies do not have a similar time constraint. Time delays are attributed to project design issues and agency coordination of the Mitigation Bank Review Team. These time delays increase the initial costs of establishing a mitigation bank, which are eventually passed on to the permittees in the form of higher credit prices. Reducing or eliminating this delay would reduce the permitting costs associated with mitigation banks. This reduction in start-up costs could encourage more mitigation banks to enter the market and make banking a more financially feasible option.

Regulatory agencies need to correct long-standing data deficiencies and develop information systems that better measure the effectiveness of their mitigation programs

Prior data problems for state regulatory agencies still exist

Studies of the mitigation program in the early 1990s identified serious data problems. These problems included double counting of mitigation efforts, lack of controls ensuring that permit information is submitted to data entry staff, and inaccurate data entry. A 1993 report from the Program Audit Division of the Office of the Auditor General identified data problems: inaccuracy of data entry, the inability to record actual wetland losses and gains with the current information systems, and the elimination of the annual wetland inventory report to the Legislature. These problems with data collection and reporting still exist.

As part of our review, we conducted site visits to the Suwannee River Water Management District, the Southwest Florida Water Management District, the South Florida Water Management District, and the St. Johns River Water Management District. During our visits, we reviewed permit files to verify the accuracy of data entry, the presence of success criteria, and documentation of site inspections. In addition, we interviewed water management district staff about available data used to measure program effectiveness.

Our review of district data and permit files revealed varying degrees of data accuracy, a general lack of documentation, and little data to measure program results. These data problems included duplicate entries, missing entries, as well as inaccurate entries. In addition, the districts still have not implemented a means of capturing actual losses, which inhibits their ability to measure the effectiveness of their Environmental Resource Permit programs. Due to time constraints, we did not visit the

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department's district offices to conduct file reviews. Consequently, we cannot comment on the accuracy of department data.

There is no centralized database that exists for tracking mitigation activities

In addition to data accuracy problems, the current statewide database on mitigation activities cannot be used to measure the amount of mitigation required annually. The department and the districts collect and report permit information differently. For example, Suwannee River Water Management District records data on all four types of mitigation in separate categories, Southwest Florida and South Florida Water Management Districts combine creation and restoration into a single category, and the St. Johns River Water Management District records restoration and enhancement together. These inconsistent approaches to data collection make it difficult to determine exactly how many acres of creation, restoration, or enhancement have been performed under the program.

Greater data limitations exist for the department

Greater data limitations exist for the department's information systems. The central office in Tallahassee has a database that is used to collect Environmental Resource Permit data. The three different parts of this database are not linked to provide an overall picture as to what is occurring at the program level. Other data problems are noted below.

- There is no data field in the compliance portion of the database that captures which projects require mitigation.
- The department could not provide permit issue dates for one-third of the permits potentially involving mitigation; thus the permit numbers and acreages presented in this report are incomplete and potentially inaccurate.
- The compliance portion of the database tracks compliance activities, such as number of site inspections, but data does not exist to report on the number of wetland permits in compliance or released from monitoring.

Prior recommendations on annual reporting have not been implemented

The elimination of the statutory requirement to report wetland data could have some impact on the status of current data systems. Prior to 1993, the districts were required to submit an annual report that summarized the permitted wetland losses and gains. The legislation that created the Environmental Resource Permit Program discontinued the statutory requirement of this reporting. In December 1993, the Office of the Auditor General issued a recommendation to the Legislature that the department and the districts be required to immediately reestablish the wetlands inventory and reporting system. The Auditor General also recommended that the wetland inventory capture all actual wetland losses and gains, and that a time frame be established to require this reporting. The Legislature did not implement these recommendations. Whether required by statute or not, this data should be produced by the districts and department. Without this data, program accountability is compromised.

Recommendations

Develop a methodology to assess wetland function

In order to assess the loss of wetland function, we recommend that the Legislature require the department and the water management districts to develop and adopt a statewide mitigation assessment methodology by June 30, 2001. This methodology should include a functional assessment of wetlands for impact and mitigation sites as well as factors that consider time lag, risk, location of mitigation, and provisions for regional differences in ecosystem type. The adoption of such a methodology would allow a more accurate measurement of wetland functions lost and gained. Such an assessment would also assure consistency in the amount of mitigation required among the various options.

We recommend that the department and water management districts convene a representative workgroup including the following groups: the Department of Environmental Protection, the water management districts, Army Corps of Engineers, local governments, environmental consultants, developers, mitigation bankers, and environmental groups. The workgroup should develop a mitigation assessment methodology to be used statewide.

Require a memorandum of agreement for public offsite regional mitigation areas to increase accountability

We recommend that an independent third party approve a memorandum of agreement for public offsite regional mitigation areas. For example, the department would review memorandums of agreement for district-sponsored offsite regional mitigation areas. This memorandum should specify the responsibilities of all parties involved and contain at a minimum the elements noted below.

- Success criteria
- Mitigation plan that specifies what work will be conducted and when
- Monitoring and long-term management requirements
- Functional assessment of wetlands on the site to determine the amount of mitigation available

Recommendations

- Designation of the party responsible for successful completion of the mitigation
- A defined geographic area where mitigation can occur
- Full-cost accounting including annual review and adjustments
- Restrictions to assure that money collected is used only on the specified mitigation project
- Annual report on the status of mitigation and the donations collected
- Conservation easement or similar agreement to provide perpetual protection of the site
- Provision for expiration of the agreement

Consider additional guidance and redelineation of drainage basins for cumulative impacts

This report raises issues about the application of cumulative impact considerations including the interpretation of the definition drainage basin and whether the cumulative impact assessment can be implemented as outlined in current agency guidance. The agency guidance presumes that agency staff can determine a minimum threshold for wetland functions within a drainage basin. Agency staff reiterated concerns about the ability of the department and districts to effectively set functional thresholds for drainage basins. In an effort to address these issues, the Legislature could pursue three options.

Option One assumes that some minimum thresholds could and should be established and that the department and the districts need to develop a more consistent and clear method for implementing a cumulative impact assessment. The first component of this option entails a consistent delineation of drainage basins based upon environmental and hydrologic considerations. In addition, this option includes a list of exemptions in which mitigation may be performed outside the impacted drainage basin and still offset the impact. Projects meeting the criteria set forth in the exemptions would not be subject to a cumulative impact assessment. The third component of this option is for the department and the districts to establish minimum thresholds for all drainage basins.

Option Two includes redelineating drainage basins and providing additional guidance, but eliminates the requirement to establish minimum functional thresholds for drainage basins. This option would restrict mitigation to stay within the impacted basin unless it met the criteria set in a stated exemption. This option recognizes the fact that establishing minimum functional thresholds is not feasible.

Option Three is a comprehensive review of the intent and application of cumulative impact considerations. The Legislature may decide to

examine cumulative impact considerations within a larger environmental permitting and growth management context.

We have offered these options in order to provide the Legislature with some mechanism for addressing current problems with the cumulative impact assessment. However, given the concerns raised in this report, we believe Options One and Two are stop gap measures that improve aspects of implementation but do not address fundamental issues with the cumulative impact assessment. To address these issues, we believe it is necessary to put the cumulative impact assessment in the larger context of the policy objectives of environmental permitting and growth management and ensure that these objectives are consistent with wetland mitigation policy. For these reasons, we favor Option Three.

Option One: Additional Guidance for the Cumulative Impact Assessment

Option One provides three clarifications that would allow for a more consistent statewide application of cumulative impact assessment by the department and the districts.

1. The Legislature should require the districts to establish a standard interpretation of the drainage basin definition.
2. The department and the districts should define instances where the mitigation may be performed outside the impacted drainage basin without incurring an unacceptable cumulative impact.
3. The department and the districts should also establish minimum thresholds for wetland functions for each drainage basin.

Consistent definitions for drainage basins. Where drainage basins have been established using criteria other than ecological and hydrological considerations, we recommend that the department and the districts identify critical natural resources and redelineate, where necessary, drainage basins using environmental and hydrologic criteria.

Instances where mitigation outside the impacted drainage basin is acceptable. We recommend that the Legislature require the districts to define exemptions where the mitigation may be performed outside the impacted drainage basin without incurring an unacceptable cumulative impact. Such a list, although not complete, is included in the White Paper on Cumulative Impacts. These situations are identified below.

- The applicant proposes enough mitigation to maintain an acceptable long-term level of function within the basin and fulfills any remaining mitigation requirements outside the basin.
- The mitigation site is outside the impact basin, but close enough to the impact basin that certain functions “spill over” and offset impacts in the impact basin to an acceptable level.
- Mitigation is for activities which will have an individual effect or a short-term effect, but are not expected to contribute to any impact of

Recommendations

long-term significance. One example might be mitigation for temporary impacts. Another example might be mitigation for impacts to habitats, which are increasing within the basin and are expected to be more common in the future, even if mitigation outside the basin is allowed. (This might include certain disturbed habitats such as cattail ponds.)

- The proposed impact is of a nature that makes it unlikely to be a recurrent practice within the basin so no cumulative impacts from future activities are anticipated regardless of where the mitigation is located.
- Activities in the impact basin will cause adverse impacts to the receiving waters, and mitigation in the receiving waters, or in another basin discharging to the same receiving waters, will offset those impacts. (Note that other mitigation also may be required to offset any loss of function in the impact basin.)
- The basin is so highly disturbed that certain areas with remnant functional value are severed and have no functional relationship with the rest of the basin.

Establishment of functional thresholds for drainage basins. The Legislature should direct the department and districts to convene a technical advisory committee to develop a methodology for establishing minimum thresholds for wetland function in drainage basins. The establishment of minimum functional thresholds would provide a means of fully implementing current agency guidance on cumulative impact assessments. Once functional thresholds for drainage basins are established, the Legislature should direct regulatory agencies to use the functional thresholds for cumulative impact considerations in permit conditions. The Legislature should establish a statutory timeframe for reporting and implementing the committee's findings.

Option Two: Simplify Cumulative Impact Assessment

Option Two contains the same recommendations as Option One, redelineation of drainage basins and defines exemptions, but eliminates the establishment of minimum functional thresholds.²¹ Some district staff have argued that minimum functional thresholds for drainage basins are not feasible. Without functional thresholds for drainage basins, we question what standard regulatory agencies would apply in deciding whether an unacceptable cumulative impact from a project exists. While this option avoids the difficulties inherent in a cumulative impact assessment by precluding a permit applicant from performing an in-depth assessment, it has the disadvantage of preventing mitigation outside the

²¹ If the mitigation fully offsets all the direct and secondary impacts within the basin impacted, no cumulative impacts would be anticipated. If the mitigation for a proposed project does not fully offset the impact or mitigation is proposed outside the impacted basin for a project that does not meet an exemption, the permit would be denied.

drainage basin if the applicant does not meet the criteria for one of the exemptions. The Legislature should amend s. 373.414(8), F.S., to reference these changes to be made to the permit basis of review based upon this recommendation.

Option Three: Comprehensive Review of Cumulative Impact Assessment and Wetland Permitting

Option Three is a more comprehensive review of the cumulative impact assessment that involves the Legislature directing that a study of cumulative impacts be conducted. The study would examine the cumulative impact review in concert with larger environmental permitting and growth management issues. The scope of the study should address the justification for the cumulative impact statutory and rule provisions; whether a practical, consistent, and equitable assessment could be developed for cumulative impacts; and how the cumulative impact review fits into broader environmental and growth management goals.

Cumulative impact considerations can directly influence how the state allows development to occur and can potentially work in concert with or against specific types of environmental and growth management priorities. Thus, it is important to citizens, permit applicants, and regulators that it is clear what are acceptable impacts to wetlands and other surface waters and where more stringent protections are needed to protect wetland resources. Given legislative interest in growth management and in creating efficient and effective permitting systems, the Legislature may wish to include in the study scope how cumulative impact considerations best fit into growth management policy. Elements of this study may be incorporated into current legislative and Department of Community Affairs' efforts to review aspects of the growth management and planning laws.²²

The study should allow for the participation of key stakeholders including state and federal regulatory agencies, local government, developers, mitigation bankers, and environmental groups. The Legislature should establish a statutory timeframe for reporting and implementing the study findings. The study could be conducted by the department, the water management districts, or by outside consultants under the direction of the department, the water management districts or the Legislature. The cost of conducting such a review would vary depending upon whom the Legislature selects to conduct the review. The proposed growth management review has a budget of \$250,000. Incorporating the cumulative impact review into the growth management review would reduce costs and avoid duplication of efforts.

²² HB 693 and SB 758 create the Growth-Management Advisory Committee to review the operation and implementation of Florida's growth-management statutes.

Add rules to provide additional mitigation options needed for single-family landowners

To address the concerns of single-family landowners who are limited by mitigation costs and a lack of mitigation options, we recommend that the Legislature amend Chapter 373, F.S. This amendment would require the department to develop rules addressing a new mitigation option for single-family landowners. The department's and districts' rules should be revised to allow the department, the districts, and local governments to create, for single-family landowners only, a mitigation option not subject to the same requirements of other offsite mitigation options. This new option would increase the availability of low-cost mitigation to single-family landowners. If the Legislature implements the previous recommendation for offsite regional mitigation areas, then these areas would be exempt from obtaining an Memorandum of Agreement. This new option will allow some landowners the possibility to mitigate for impacts for which they would not have been able to previously.

Install information systems to facilitate reporting on effectiveness of the mitigation program

We recommend that the Legislature amend Chapter 373, F.S., to include a wetlands reporting requirement to direct the department and the districts to each file an annual report of permitted wetland activities. The report should include

- the number of Environmental Resource Permits issued, denied, and withdrawn;
- the amount of wetlands impacted;
- the amount of wetland mitigation conducted by mitigation type and option;
- the amount of wetland function lost and gained (depends on the adoption of a functional assessment methodology);
- the number of Environmental Resource Permits in compliance; and
- the number of Environmental Resource Permits for which mitigation has been released from monitoring and deemed successful.

The department and the districts should establish a consistent data collection and reporting format. The department should be responsible for consolidating data into a central shared database. The wetland inventory data should be incorporated into existing Geographic Information System applications and regional land use comprehensive plans to identify drainage basins that require special protections.

Appendix A

Mitigation Banks in Florida

Mitigation Bank	Permitting Agency	Issue date	Acreage	Credits
Florida Wetlandsbank	SFWMD	2/9/95	344.46	300.57
Split Oak Mitigation Bank	SFWMD	6/13/96	1,049.26	287.70
Lake Okeechobee Mitigation Bank/conceptual ¹	SFWMD	1/16/97	1,200.00	631.00
American Equities Mitigation Bank/conceptual ¹	SFWMD	2/13/97	3,572.16	977.68
American Equities Mitigation Bank	SFWMD	2/13/97	2,992.98	502.12
Panther Island Mitigation Bank	SFWMD	3/11/99	2,788.15	934.67
Big Cypress	SFWMD	9/9/99	1,280.00	1,010.80
Lake Monroe/conceptual ¹	SJRWMD	9/29/94	950.00	279.00
Lake Monroe	SJRWMD	9/12/95	603.00	199.90
Lake Louisa and Green Swamp/conceptual ¹	SJRWMD	10/10/95	1,007.00	297.90
Lake Louisa and Green Swamp, Phase 1	SJRWMD	10/10/95	264.00	90.00
Lake Louisa and Green Swamp, Phase 2	SJRWMD	7/8/97	743.00	207.90
Barberville Conservation Area Mitigation Bank	SJRWMD	6/11/96	365.82	84.30
Colbert-Cameron Mitigation Bank	SJRWMD	10/28/96	2,604.00	718.80
East Central Florida Mitigation Bank, South	SJRWMD	5/14/96	952.00	286.30
Northeast Florida Mitigation Bank	SJRWMD	9/5/97	430.00	316.90
Northeast Florida Mitigation Bank, Phase 2	SJRWMD	7/13/99	200.00	54.70
Tosahatchee State Reserve	SJRWMD	10/10/95	1,312.00	185.00
CGW Mitigation Bank	SJRWMD	6/10/98	150.00	63.10
Boran Ranch/ conceptual ¹	SWFWMD	8/26/97	404.67	211.12
Boran Ranch, Phase 1	SWFWMD	8/26/97	236.76	108.59
Twin Lakes	SWFWMD	9/28/99	45.10	16.10
Hole in the Donut	FDEP	2/15/95	6,250.00	6,250.00
Avatar Mitigation Bank	FDEP	5/23/95	491.00	87.57
Little Pine island	FDEP	2/6/96	1,565.00	807.00
Everglades Mitigation Bank/conceptual ¹	FDEP	10/1/96	13,455.00	3,140.00
Everglades Mitigation Bank/Phase I	FDEP	10/1/96	4,124.67	424.50
Graham Swamp Mitigation Bank	FDEP	9/5/96	65.90	32.50
Florida Mitigation Bank	FDEP	5/28/97	1,582.00	847.20
Foster Wheeler/Loxahatchee	FDEP	2/18/00	1,264.00	647.50
Total / Construction Permits	24			
Total / Conceptual Permits ¹	6			

¹ Conceptual permits do not grant the authority to do work, accrue credits, or use credits; they provide a basic work scheme without a set time schedule and are viewed as a preliminary step in obtaining full permit status.

Source: Department of Environmental Protection and St. Johns River Water Management District.

Appendix B

Program Resources for the Environmental Resource Permit Program

Water Management Districts

District	Number of Full-Time Employees	Budget for ERP (FY 2000) ¹	Revenue from State Sources	Revenue from Other Sources (i.e., ad valorem, and permit fees)
St. Johns River ^{2,3,4}	109.7	\$ 6,492,341.00	\$ 0.00	\$ 6,492,341.00
South Florida ⁴	115.5	7,608,645.00	0.00	7,608,645.00
Southwest Florida ⁴	115.6	6,770,432.00	0.00	6,770,432.00
Suwannee River	16.0	602,993.69	700,000.00	120,000.00
Total for Water Management Districts	356.8	\$21,474,411.69	\$700,000.00	\$20,991,418.00

Department of Environmental Protection

District	Number of Full-Time Employees	Budget for ERP (FY 2000) ¹	Revenue from State Sources	Revenue from Other Sources (i.e., permit fees trust funds)
All Districts	68.0	\$4,443,441.00	\$4,322,795.00	\$120,646.00
Total for Department of Environmental Protection	68.0	\$4,443,441.00	\$4,322,795.00	\$120,646.00

State Environmental Resource Permit Total

District	Number of Full-Time Employees	Budget for ERP (FY 2000) ¹	Revenue from State Sources	Revenue from Other Sources (i.e., ad valorem, and permit fees)
Total for all state regulatory agencies	424.8	\$25,917,852.69	\$5,022,795.00	\$20,992,064.00

¹ Overhead costs are not included.

² Budgeted amount for some activities pro-rated after removal of staff not involved with ERP Program.

³ Dollar figures for support staff pro-rated after estimates made.

⁴ Costs for administering Management and Storage of Surface Waters permits included as well. Budgeted amount for mitigation activities cannot be broken out due to the nature of the work; hence money spent on mitigation cannot be easily estimated.

Agency Responses

In accordance with the provisions of s. 11.45(7)(d), F.S., a draft of our report was submitted to the Secretary of the Department of Environmental Protection and to the executive directors of the St. Johns River Water Management District, the South Florida Water Management District, the Southwest Florida Water Management District, and the Suwannee River Water Management District for their review and comment.

These written responses along with a response from the U.S. Army Corps of Engineers are reprinted herein beginning on page 34. Where necessary and appropriate, OPPAGA comments have been inserted into the body of the responses.



Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

February 24, 2000

John W. Turcotte
Director
Office of Program Policy Analysis and Government Accountability
111 West Madison St. Suite 312
Tallahassee, FL 32399-1475

Dear Mr. Turcotte:

Thank you for the opportunity to comment on OPPAGA's final draft report on Wetland Mitigation. Overall, we feel the report does a good job of identifying the current critical issues related to mitigation and provides thoughtful recommendations for action. We appreciate the numerous opportunities we have had to interact with your staff during the development of the report.

Our comments are provided below, following the main topics included in the report's recommendations.

Mitigation Assessment Methodology

We concur that the development of a statewide mitigation assessment methodology would be beneficial, and that this method should include both a functional assessment method for wetlands, as well as a consideration of factors such as time lag, risk and location. It is important to note that for any such methodology to truly be useful it must be able to adapt to the different types of ecosystems found in the state, be easy to use, and be able to be conducted within the time frames allowed for a permitting review. It should be understood that any methodology developed will include, to some extent, the application of best professional judgement. We also feel that it may be appropriate to allow for circumstances when a formal functional assessment is not needed, such as small project size or lack of complexity. Finally, we need to strive for consistency with the Army Corps of Engineers permitting program in any functional assessment developed.

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Accountability For Public Offsite Regional Mitigation Areas

We concur with the report's conclusion that increased accountability is needed to ensure that mitigation conducted at public offsite regional mitigation areas (ROMAs) adequately offsets the impacts of permitted activities. Execution of Memoranda of Agreement (MOAs) by a third party, such as the Department for Water Management District ROMAs, or a water management district for a county ROMA, could be one way to achieve this accountability.

Another method would simply be for these public ROMA's to obtain mitigation bank permits, since the elements the report lists for inclusion in an MOU are the same as the requirements for a mitigation bank permit. The mitigation banking rules were originally written with the expectation that public entities, as well as private entities, would apply for mitigation bank permits. The statute provides provisions that the Department and WMDs may adopt different rules for public bank applicants with respect to financial responsibility and sufficient legal interest, and the Department has adopted different rule provisions for these issues where the WMD is the applicant. This rule could be expanded to include other public entities as well.

Mitigation bank permits would be easier to track for compliance purposes than MOAs. While the current data base tracking systems need improvement (as noted in the report), there is currently no data base or process in place to ensure compliance with MOAs.

Cumulative Impacts

The report recommends three potential options for improving the cumulative impacts analysis. The Department believes that option 2 would be the most productive in resolving the conflicts regarding the cumulative impact analysis. This option includes redefining the drainage basins in some districts using environmental and hydrological criteria to achieve drainage basins statewide that are of a more consistent size and nature. This is currently in process in the SJRWMD and SFWMD. Additional definition should be provided regarding when mitigation could be conducted outside the drainage basin without causing unacceptable cumulative impacts. In addition, a clear statement in rule that mitigation that offsets the impact and is conducted within the basin will not result in unacceptable impacts would also help both the applicant and permit reviewers. This is currently being pursued as a rule change in the SJRWMD, and we anticipate adding this provision to all the agency rules.

Option one recommends the establishment of a minimum threshold for wetland function in each drainage basin. We are concerned that the lack of scientific consensus on this topic, the nature of wetlands and the multiple functions different wetlands serve depending on their location in the landscape, the extensive need for data acquisition and development, and the cost and time necessary to analyze the data for every drainage basin, render this an impractical solution to the problem. In reality, cumulative

impacts should become an issue in a limited number of applications, and it may not be a worthwhile effort to develop a standard methodology since each drainage basin, and the type of impact anticipated, will be unique. We suggest that the enhancements discussed above be implemented, and the effect on the process evaluated, prior to pursuing option one, or option three regarding a more comprehensive review of the cumulative impact assessment.

Single Family Homeowners

We concur that additional mitigation options need to be provided to single family homeowners. However, we are concerned that the report recommends that there does not need to be an MOA, and therefore accountability, for this type of mitigation. Frequently, single family homeowners do not have the resources or expertise to identify and conduct mitigation for the impacts on their single family lot. This can result in severe compliance and enforcement problems, as well as takings cases against the agencies. We believe that the agencies should take a more proactive role in identifying and managing centralized mitigation areas for single family homeowners, and that these options should be as simple and streamlined as possible without compromising the accountability of the mitigation work to be performed. For older, platted subdivisions that were created prior to wetland regulation, we have been exploring the possibility of the agencies being allowed to “subsidize” some of the cost of the mitigation, or that the counties be allowed to assist in paying for the mitigation by using mitigation contributions to match funding programs such as the Florida Communities Trust. These types of approaches would require statutory changes.

Information System Deficiencies

We concur with the report’s finding that significant improvements are needed to the agency data bases to allow effective management of the ERP program and to ensure that permitted wetland losses are being offset. Page 4 of the report states that 98% of permits issued by the Department in the past four years do not require mitigation. As we have previously discussed with your staff, due to the data base problem, this information is simply not accurate and should not be relied upon for program analysis.

The statement in the report that there is no uniform statewide database on mitigation activities is somewhat misleading. The ERP Datashare program, maintained at DEP, does provide a statewide database using standard statewide data definitions agreed to by DEP and the five WMDs. To the extent that the agencies are able to track this agreed upon information, it is housed in the ERP Datashare system. The real underlying problem is that while the agencies have agreed on a standard set of basic and ideal information that should be collected about each permit, including losses and gains by habitat types, the various agency data management systems are at different points in making progress to reach the statewide goal. Obviously, funds and resources are the limiting factors in making the Datashare system function as intended.

The Department is actively working to upgrade its database system, with grant funding from the Environmental Protection Agency, to be able to report much of the information recommended in the report. This information would also be added to the ERP Datashare.

The draft report suggests tracking and reporting of the number of ERP Permits in compliance. Since most ERP permits are perpetual operating permits, a more realistic measure would be percent of ERP permits inspected in any given year that are in compliance.

Thank you again for this opportunity to provide comments on the final draft report on Wetland Mitigation. In you have any questions regarding our comments, please contact Janet Llewellyn, Deputy Directory of the Division of Water Resource Management, at 850/488-0130.

Sincerely,

/s/
David B. Struhs
Secretary

DBS/jgl



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February 29, 2000

John W. Turcotte, Director
111 West Madison Street
Room 312, Claude Pepper Building
Tallahassee, Florida 32399-1475

Re: Response comments on Draft OPPAGA Report

Dear Mr. Turcotte: *John*

The St. Johns River Water Management District (SJRWMD) welcomes the opportunity to offer comments on the Wetland Mitigation report drafted by the Office of Program Policy Analysis and Government Accountability (OPPAGA). We recognize the difficulties this project has presented and found the OPPAGA staff very responsive and approachable. Many editorial changes recommended by SJRWMD have already been incorporated into this document. There remain a few substantive issues, which are addressed in the remainder of this letter.

Kindest personal regards.

Sincerely,

Henry Dean
Executive Director

William Kerr, CHAIRMAN Ometrias D. Long, VICE CHAIRMAN Jeff K. Jennings, SECRETARY Duane Ottenstroer, TREASURER
MELBOURNE BEACH APOPKA MATLAND SWITZERLAND

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FERNANDINA BEACH MATLAND ST. AUGUSTINE EAST LAKE WEIR DAYTONA BEACH

Agency Response:

Functional Assessment

SJRWMD staff believe that the report incorrectly concludes that wetland functions and values, a project's effects on wetlands, and the value of mitigation plans are not determined by functional assessment but instead by a "ratio method", and that these ratios are not explicit and do not consider time lag or risk (of being unsuccessful). The report also states "the current use of ratios does not allow the department and the districts to determine to what extent mitigation offsets wetland functions lost due to adverse impacts", and that this method does not consider time and risk when assessing mitigation.

OPPAGA Comment: The district seems to have overlooked some very clear statements in our report indicating that wetland functions are considered in determining mitigation ratios (see pages 5, 12-13). The fact that wetland functions are considered should not be confused with conducting an actual functional assessment. In order to measure the programmatic goal of "no net loss" of wetland functions, the methodology used by the districts and department should quantitatively measure the wetland function of both the impacted site and the wetland function of the mitigation site. This cannot be determined by the ratios used by the district nor by examination of its permit files.

The confusion in assessing wetland policy results from the lack of a consistent and defensible methodology. Our primary point concerning the methodology used for making a mitigation assessment is that the method used should provide some quantitative measure of wetland functions. SJRWMD cannot provide data that shows what level of wetland functional loss has occurred. Rather, it can provide a listing of acreage for impacted and mitigated wetlands.

Mitigation ratios are outlined and discussed in the ERP rule; however, the provisions make it clear that these ratios are guidelines only - the amount and type of mitigation actually needed to offset a specific impact is determined by a functional analysis, the ratios are a result of this analysis. Section 12.2.2.3 (Applicant's Handbook) provides a detailed framework (methodology) for the evaluation of wetland functions. This functional assessment method is a comparison of the ecological values lost to the ecological values gained. One way of expressing this comparison is a ratio. The following are excerpts from SJRWMD rules setting forth the functions to be assessed when evaluating wetland impacts and related mitigation measures.

12.2.2.3 The assessment of impacts expected as a result of proposed activities on the values of functions will be based on a review of pertinent scientific literature, ecological and hydrologic information, and field inspection. When assessing the value of functions that any wetland or other surface water provides to fish, wildlife, and listed species, the factors which the District will consider are:

- (a) conditions - this factor addresses whether the wetland or other surface water is in a high quality state or has been the subject of past alterations in

hydrology, water quality, or vegetative composition. However, areas impacted by activities in violation of a District or Department rule, order, or permit adopted or issued pursuant to chapter 373, F.S., or part VIII of chapter 403, F.S. (1984 Supp.) as amended, will be evaluated as if the activity had not occurred.

- (b) hydrologic connection - this factor addresses the nature and degree of off-site connection which may provide benefits to the off-site water resources through detrital export, base flow maintenance, water quality enhancement or the provision of nursery habitat.
- (c) uniqueness - this factor addresses the relative rarity of the wetland or other surface water and its floral and faunal components in relation to the surrounding regional landscape.
- (d) location - this factor addresses the location of the wetland or other surface water in relation to its surroundings. In making this assessment, the District will consult reference materials including the Florida Natural Areas Inventory, Comprehensive Plans, and maps created by governmental agencies identifying land with high ecological values.
- (e) fish and wildlife utilization - this factor addresses use of the wetland or other surface water for resting, feeding, breeding, nesting or denning by fish and wildlife, particularly those which are listed species.

12.3.2.1 Creation, Restoration and Enhancement

When considering creation, restoration and enhancement as mitigation, the following factors will be considered to determine whether the mitigation proposal will offset the proposed impacts and to determine the appropriate mitigation ratio:

- (a) The reduction in quality and relative value of the function of the areas adversely impacted, including the factors listed in subsection 12.2.2.3, as compared to the proposed improvement in quality and value of the functions of the area to be created, restored or enhanced.
- (b) Any special designation or classification of the affected area.
- (c) The presence and abundance of nuisance and exotic plants within the area to be adversely impacted.
- (d) The hydrologic condition of the area to be adversely impacted and the degree to which it has been altered relative to the historic condition.
- (e) The length of time expected to elapse before the functions of the area adversely impacted will be offset.
- (f) The likelihood of mitigation success.
- (g) For mine reclamation activities subject to chapter 211, F.S., part II, whether the ratio is consistent with the mine reclamation plan submitted pursuant to chapter 378, F.S.

Since the current SJRWMD rules involve the use of a functional assessment methodology, your recommendation that the agencies adopt a functional assessment methodology could be confusing to the Legislature.

We also disagree with the report's conclusions regarding the use of mitigation banks. The report states that "mitigation bank credits are determined using a functional assessment

methodology that measures the degree of improvement in ecological value due to the mitigation bank operation". This implies that mitigation banks are assessed using a different, but more accurate method than that which is used when assessing other mitigation options. The report concludes "the amount of mitigation required when using a bank may be overstated or understated since both the impact and mitigation sites were not assessed using a functional assessment methodology."

OPPAGA Comment: The report does not state that the method used to assess credits for mitigation banks is more accurate. We state that "Mitigation bank credits are determined using a functional assessment methodology and are equivalent to one acre of successful wetland creation. Due to a lack of a functional assessment on the impact site, the ERP ratio range for creation is used to determine the amount of mitigation credits required from a bank for an applicant to offset the proposed impact."

In fact, SJRWMD uses the same method when evaluating any mitigation, including mitigation from a mitigation bank. The only difference is that the environmental benefits that are determined, using the standard ERP assessment method, to result from a mitigation bank, are converted into mitigation "credits." A mitigation "credit" is defined as the equivalent of creation of an acre of wetland.

State agencies have long recognized that it would be beneficial to use an assessment tool that provides more guidance and certainty in the permitting process and that reduces real or perceived subjectivity. Over the last 20 years, the water management districts and FDEP have worked with all of the existing and developing functional assessment methodologies and have participated in work groups to evaluate the potential of using them within Florida's regulatory framework. To date, none of them have been adopted because they would not be an improvement over the existing method. So, while it is misleading to represent that the current ERP rule does not include functional assessment provisions, SJRWMD will continue to work towards either improving the currently used assessment method or developing a new one.

OPPAGA Comment: The general conclusion of our review is that a consistent statewide assessment methodology needs to be developed. The current ratio method does not quantitatively measure functions at either the impact or the mitigation sites. A wetland assessment methodology, which includes a functional assessment, would allow a more accurate measurement of wetland functions lost and gained. Without the application of such a methodology to all mitigation options, there may be inconsistency among mitigation options in the amount of mitigation required. Although it may consider wetland functions, the current *acreage* based methodology does not measure the extent to which mitigation offsets the loss of wetland functions.

Public Mitigation Areas

SJRWMD staff do not see the need for the proposed requirements for the Memorandum of Agreement for public offsite regional mitigation areas. Particularly if these requirements also apply to agency environmental projects which are not established specifically for mitigation purposes, but which can, under the proper circumstances, be

used by applicants as a mitigation option. This will further increase the time and cost needed to implement such projects, which currently are one of the most cost effective mitigation options for the regulated public. In fact, the increase in costs and red tape could eliminate this mitigation option altogether as a reasonably priced and timely mitigation option. This would be detrimental to both permit applicants and the environment.

OPPAGA Comment: We recognize that additional requirements for public offsite regional mitigation areas are needed to ensure the same level of ecological success as other mitigation options. We disagree with the district assertion that stronger accountability would significantly increase costs. The MOA for Unit 11 has not significantly, if at all, affected the mitigation costs for permittees. Our report strongly endorses the concept of providing as many mitigation options as possible and this should in no way conflict with ensuring accountability for environmental results.

Single Family Projects

SJRWMD staff agree that increased options for mitigation result in decreased costs and that it would be good if more options could be made available to single family residence applicants.

Develop Improved Information Systems

SJRWMD staff are in basic agreement with this recommendation.



South Florida Water Management District

February 28, 2000

John Turcotte, Director
Office of Program Policy Analysis and Government Accountability
111 W. Madison Street, Suite 312
Tallahassee, Florida 32399-1475

Dear Mr. Turcotte:

Subject: Wetland Mitigation Report

Thank you for the opportunity to provide a response to the Office of Program Policy Analysis and Government Accountability (OPPAGA) Revised Draft Report entitled 'Wetland Mitigation, Department of Environmental Protection and the Water Management Districts' (Report). I understand that your staff have worked with staff of the South Florida Water Management District (SFWMD) as well as the other water management districts and the Department of Environmental Protection and I appreciate your consideration of their contributions. Following is SFWMD's response to the Recommendations of Chapter 3 of the Report and some general responses to information contained in the report.

Chapter Three of the Report makes five recommendations, including;

- 1) Develop a methodology to assess wetland function;
- 2) Require a memorandum of agreement for public offsite regional mitigation areas to increase accountability;
- 3) Consider additional guidance and re-delineation of drainage basins for cumulative impacts;
- 4) Add rules to provide additional mitigation options needed for single-family landowners; and
- 5) Install information systems to facilitate reporting on effectiveness of the mitigation program.

In summary, SFWMD concurs with these recommendations. Our response to each recommendation is discussed in more detail below.

Develop a methodology to assess wetland function

The SFWMD concurs that a wetland functional assessment methodology can and should be put into practice. The water management districts and DEP have already begun a working group to develop such a methodology. We believe the end result can be most expeditiously accomplished by directing the districts and the Department to develop a methodology for later presentation to the legislature.

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Trudi K. Williams

Frank R. Finch, P.E., *Executive Director*
Michael Slayton, *Deputy Executive Director*
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Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416 4680

John Turcotte
February 28, 2000
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It must be recognized that any such methodology will be complex in order to accommodate varying habitat types in the State. The methodology will have to retain some flexibility and there will always be an element of judgement in applying the methodology. A state methodology should also be acceptable to the Army Corps of Engineers to be practical for the development community.

Require a memorandum of agreement for public offsite regional mitigation areas to increase accountability

We concur with this recommendation. The SFWMD and Palm Beach County Board of County Commissioners recently entered into an agreement for the Unit 11 mitigation area. The SFWMD is currently working with other agencies toward similar agreements for the CREW and Pennsuco mitigation areas.

Some question arises as to which forms of mitigation constitute a 'regional offsite mitigation area'. SFWMD believes that any mitigation area which combines monetary contributions from several permitted projects, to the point that each permitted project's mitigation becomes indiscernible from another's, should require a memorandum of agreement.

Consider additional guidance and re-delineation of drainage basins for cumulative impacts

The report recommends three options for redefining drainage basins. SFWMD is already in the process of pursuing solutions or already implements solutions similar to some of those found in options one and two. Our Cumulative Impact & Mitigation Service Area Committee has made some progress in revising drainage basins for purposes of wetland cumulative impacts. However, as a result of the Central and South Florida Flood Control Project and the extensive secondary canal network in our District, there are numerous recognized "drainage" basins, the boundaries of which must remain for purposes of flood protection and water supply. The differences in the number of basins in water management districts is a function of the extent of ditching and drainage in a district as opposed to a different interpretation of drainage basins as stated in the report.

Although we may develop different basin boundaries based on ecological similarities, the need for hydrological boundaries will remain. As result, we suggest that districts develop ecological basins and critical natural resource boundaries separate from the hydrological basins used to evaluate flood protection and water supply.

Also, "establishing minimum thresholds for wetland functions for each drainage basin" as suggested in option one, is a sizeable undertaking. The Army Corps of Engineers is two years into a similar effort in portions of Lee and Collier Counties. Pursuit of minimum thresholds statewide would take considerably longer. It may be more appropriate to identify critical resource basins that would be subject to more specific cumulative impact analysis.

Add rules to provide additional mitigation options needed for single-family landowners

Due to the split of permitting responsibilities, the SFWMD has relatively little experience with single-family landowner issues compared to the Department. However, we recognize the difficulty in providing cost-effective mitigation that offsets the wetland impact. We will assist the Department in any way we can in providing low cost mitigation opportunities. However, we do not believe that accountability has to add significant cost to a mitigation option and would recommend we explore low cost alternatives that do not compromise accountability.

Install information systems to facilitate reporting on effectiveness of the mitigation program

The SFWMD concurs with the recommendation of a statewide wetland reporting database. Previously, each water management district and the Department contributed to the Henderson Report, an annual wetland accounting report to the Legislature. We could modify this report to include any functional assessment methodology.

In addition to the comments provided above on the recommendations of the Report, we feel compelled to provide the following comments on some of the findings of the Report.

Mitigation Ratios

The report implies that current mitigation ratios have no basis in wetland function. This is not the case. The various mitigation ratios were developed and are applied as a way to implement the legislative direction of no net loss of wetland function. The sliding scale of mitigation ratios is predicated on the fact that wetland function correlates with wetland quality factors described in the rule. Such factors include hydrology, size, setting, uniqueness and extent of exotic vegetation. Similar presumptions would be made in the development of future functional assessment methodologies.

OPPAGA Comment: The report clearly states that wetland functions are considered in the assignment of a mitigation ratio (see pages 5, 13, and 14).

The report describes mitigation ratios as applied by SFWMD as being too low. We do not believe this conclusion can be reached by performing a file review. Each of the projects receives a detailed review from District field staff. Supervisors and managers ensure consistency of review and consistency with rule criteria. For each permit, all determined that the mitigation offset the impact at the time of permit issuance. To counter that conclusion from reading a file is inappropriate.

Data Collection

Beginning in 1992, the SFWMD has greatly increased permitting data collection. We maintain an extensive electronic permitting database. Nearly all information relative to permit issuance is captured and is retrievable. The report's finding of "...a general lack of documentation..." seems inappropriate with respect to SFWMD.

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Cumulative Impact Basins

A contradiction exists with respect to the Report's description of the application of drainage basins for purposes of cumulative impacts. Page 18 of the revised draft report indicates that applicants in smaller drainage basins are restricted to performing most of their mitigation onsite within the drainage basin. This is not the case. Page 16 of the revised report describes a White Paper on Cumulative Impacts, developed by the water management districts and the Department, which provides for mitigation outside of the drainage basin.

OPPAGA Comment: Changes have been made to the report to clarify this issue (see page 19).

Again, thank you for the opportunity to respond to the Report. If you require any further assistance of SFWMD, please contact Mr. Robert Robbins, Director of our Natural Resource Management Division at (561) 682-6951 or Suncom 229-6951.

Sincerely,

/s/
Frank R. Finch, P.E., Executive Director
South Florida Water Management District
FRF/rr



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Southwest Florida Water Management District

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February 25, 2000

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Mr. John W. Turcotte, Director
Office of Program Policy Analysis and Government Accountability
111 West Madison Street, Room 312
Claude Pepper Building
Tallahassee, Florida 32399-1475

Subject: Agency Response to Wetland Mitigation Report

Dear Mr. Turcotte:

This letter represents the agency response from the Southwest Florida Water Management District regarding the revised draft of the report entitled "Policy Review: Wetland Mitigation" which we received on February 18, 2000. The report contains five recommendations. A specific response to each recommendation is provided below:

Recommendation #1 - Develop a methodology to assess wetland function.

The Southwest Florida Water Management District agrees that a more structured wetland mitigation assessment method could provide greater certainty in the permitting process. Prior to the initiation of the OPPAGA study, we began a statewide effort to develop such a method with the Department of Environmental Protection, the water management districts and federal permitting agencies. We will continue working with this group but we have not determined when these efforts will be completed.

Recommendation #2 - Require a memorandum of agreement for public offsite regional mitigation areas to increase accountability.

This recommendation does not directly apply to the Southwest Florida Water Management District. This district has not established, and does not currently plan to establish, any public regional offsite mitigation areas of the type referenced in your report.

Recommendation #3 - Consider additional guidance and redelineation of drainage basins for cumulative impacts.

We do not believe that it is necessary to redelineate drainage basins in this district. Environmental Resource Permitting rules of the Southwest Florida Water Management District identify sixteen drainage basins used for cumulative impact analysis. Our drainage basins are delineated based on hydrologic criteria and represent the primary watersheds of the rivers in this district (e.g. Hillsborough River Basin, Peace River Basin). Due to their relatively large size, we have experienced few problems preventing unacceptable cumulative impacts in these drainage basins.

We agree that further clarification of cumulative impact evaluation criteria (Option Two) could be useful to permit applicants and regulators. We are currently discussing proposed rule revisions with the Department of Environmental Protection and the water management districts to provide this clarification.

It should be recognized that the Department of Environmental Protection and the water management districts have already established minimum thresholds below which cumulative impacts are not considered significant under Environmental Resource Permitting rules. These thresholds are expressed through the establishment of exemptions, various categories of Noticed General Permits which include no mitigation requirements, and through permitting criteria which require no mitigation for impacts to most wetlands below one half acre in size. These thresholds are applied consistently across the state. Establishing different minimum thresholds in each drainage basin (Option 1) would need to be based on a comprehensive understanding of the ecosystems in each basin and substantial input from the various stakeholders affected by these thresholds. This would be an extensive undertaking comparable to, and perhaps similar to, the comprehensive review contemplated in Option Three.

Recommendation #4 - Add rules to provide additional mitigation options needed for single-family landowners.

This recommendation does not directly apply to the Southwest Florida Water Management District. Under our existing Operating Agreement with the Department of Environmental Protection, the department evaluates Environmental Resource Permit applications from single-family landowners located in this district.

Recommendation #5 - Install information systems to facilitate reporting on effectiveness of the mitigation program.

We agree to the annual reporting requirement and consistent reporting format recommended by OPPAGA. The Southwest Florida Water Management District

Mr. John Turcotte
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continues to provide a monthly and annual cumulative summary of wetland impacts and mitigation to the public at each of our monthly Governing Board meetings. This is the same information that was reported to the Legislature prior to the deletion of this statutory requirement in 1993. We will continue to improve on our data base capabilities including the use of Geographic Information Systems. We intend to continue exploring further improvements as better technology becomes available.

The Southwest Florida Water Management District appreciates the opportunity to participate in the mitigation study performed by OPPAGA. We would like to express our appreciation in particular to the OPPAGA staff, and to recognize their competency and professionalism in conducting this study. If you have any questions, please feel free to contact me at (352)796-7211, Extension 4604 or (Suncom)628-4604.

Sincerely,

/s/

E. D. "Sonny" Vergara
Executive Director

EDV:hch



SUWANNEE RIVER WATER MANAGEMENT DISTRICT

February 29, 2000

Mr. John W. Turcotte, Director
Office of Program Policy Analysis and Government Accountability
111 West Madison Street, Suite 312
Tallahassee, Florida 32399-1475

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Asst. Executive Director
Gainesville, Florida

Subject: Response to Wetland Mitigation Report

Dear Mr. Turcotte:

The Suwannee River Water Management District (District) has completed reviewing the revised draft of the Wetland Mitigation report produced by your office. In response to your request for comments, we would like to stress the fact that much of this report does not apply to our District due to the fact that we do not participate in complex mitigation. Our District is still currently able to encourage applicants to avoid wetland impacts and minimize as much as possible. However, knowing that our future permitting activities will include more mitigation, we recognize and encourage the recommendations made in this report.

The District agrees that a methodology to assess wetland function and a standard statewide data collection is very much needed. We offer our support and participation in the development of these functions.

When mitigation is required based on our permitting review, we only allow an owner of a permitted project to mitigate within the drainage basin that the wetland impact occurred. Typically, wetland impacts are less than one acre and are dealt with through various existing mitigation options on the existing property or within the basin. At this time, we do not offer public or private offsite regional mitigation (mitigation banks).

District staff would like to commend the Office of Program Policy Analysis and Government Accountability for a job well done. If you have any questions or need additional information, please call me at 904/362-1001 or 800/226-1066.

Sincerely,

Jerry A. Scarborough
Executive Director

JAS/wam

**DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
P.O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019**

Regulatory Division

MAR 07 2000

Mr. John W. Turcotte, Director
The Florida Legislature
Office of Program Policy Analysis
and Government Accountability
111 West Madison Street
Room 312
Claude Pepper Building
Tallahassee, Florida 32399-1475

Dear Mr. Turcotte:

Reference is made to the recent draft report entitled Wetland Mitigation set forth by the Office of Program Policy Analysis and Government Accountability (OPPAGA). The following comments are offered for your consideration and reflect input from the U.S. Environmental Protection Agency (EPA) as well as the U.S. Army Corps of Engineers (Corps).

We recognize the purpose of the study was to report on the various wetland mitigation options defined in the Florida statute. However, the report generally offers minimal reference to Federal agency involvement, with no mention of the EPA, the Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), or the Natural Resources Conservation Service (NRCS). Each of these agencies is charged with specific authorities that assist the Corps in making well-informed and balanced decisions. Multi-agency involvement is critical to the Federal process of establishing appropriate mitigation.

There is also limited reference to the Corps' effect on the State program, and vice versa, and the effects of the State/Federal interaction on the regulated public. There exist several examples of successful Federal and State joint efforts (e.g., the State Programmatic General Permit and the Southwest Florida Environmental Impact Statement) and joint permit reviews (e.g., gypsum stack in Southwest Florida). The Corps is committed to continuing

such efforts. Although the State can make their own decisions in isolation without the Corps' participation and buy-in, such action will most likely lead to decisions that are incompatible with Federal law or policy. This results in the regulated public being torn between two levels of government.

Page 22 of the report offers a brief discussion on Federal delays. Although the Corps is the Federal agency responsible for permitting mitigation banks, the other Federal agencies are integrally involved in this permitting process. Because of the different authorities and responsibilities of each agency, there is a benefit to taking the time necessary to achieve agreement on the Mitigation Banking Instrument. Failure to achieve full Federal recognition of a mitigation bank will have recurring, negative implications for the users of the bank during their permitting process.

State and Federal agency representatives recently met to discuss potential improvements to the Mitigation Bank Review Team process. One topic of discussion was the Federal delays in the review and approval of mitigation banks. We recognize the time lag involved in the process, including the coordination of Federal questions and concerns with the applicant, and the review of Mitigation Banking Instruments by our Office of Counsel. The Corps' Regulatory Division is committed to reviewing this process and working to improve it.

Page 15, paragraph 2, of the report states, "Mitigation bank credits are determined using a functional assessment methodology and are equivalent to one acre of successful wetland creation. Due to a lack of a functional assessment on the impact site, the ERP ratio range for creation is used to determine the amount of mitigation credits required from a bank for an applicant to offset the proposed impact." The Federal guidance has already addressed this issue by requiring the same functional assessment be used on both sides of the equation. This renders moot the "datum" (one acre of successful wetland creation) that is currently included in the State rule.

The OPPAGA recommends the legislature convene a working group to develop a statewide functional assessment. We concur with this recommendation and are currently working with the State on a common approach. However, only the Corps is listed as a Federal participant) we recommend the aforementioned Federal agencies be included also.

It is evident from the report that OPPAGA had difficulty gathering accurate and comprehensive, State data. The Corps and EPA agree with the need for a statewide uniform information system to measure the effectiveness of the State's environmental resource permit program.

The report references the need for inexpensive mitigation options for single-family landowners. However, there is no mention of discouraging development in wetlands nor is there any discussion of how such development impacts the public through cost of services, insurance subsidies, and loss of public resources for the sake of ill-advised investments.

Reference is made to page 16 where the report suggests "formalization" of the public offsite regional mitigation areas. The Corps agrees with the need for an elevated level of review of these areas. We are committed to requiring all future public offsite regional mitigation areas be subject to a more extensive review process. This would certainly assist us in justifying the appropriateness of the mitigation and ensure the work is being completed satisfactorily.

The Corps recognizes the importance of the cumulative impact issue as well as the difficulty in addressing it. We are open to your recommendations and will assist the State where possible.

We commend you on your efforts to study the effectiveness and cost of current wetland mitigation options. We appreciate the opportunity to comment on the draft report and hope our comments will be useful. If you have any questions, please contact Ms. Kelly Enright at 904-232-2050.

Sincerely,

/s/
John R. Hall
Chief, Regulatory Division