



# FLORIDA

Original Wetland Acreage	Remaining Wetland Acreage	Acreage Lost	% Lost
20,325,013	11,038,300	9,286,713	-46%

**Florida Wetlands:** Palustrine forested wetlands cover 5.5 million acres, nearly one-half the acreage of all Florida wetlands. These wetlands, which are widely distributed throughout the State, fringe rivers and lakes, line small drainages and sloughs, form in small depressions and ponds, and cover wet flatwoods. Lacustrine and riverine wetlands constitute a relatively small part of Florida's wetlands.

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## SUMMARY

### Overall Program:

Florida has a comprehensive state *regulatory* program that regulates most land (upland, wetland, and other surface water) alterations throughout the state. The regulatory program also includes a federal State Programmatic General Permit (SPGP) and implementation of a statewide National Pollutant Discharge Elimination System (NPDES) program. In addition activities located on or using state-owned sovereign submerged lands also require applicable *proprietary* authorizations (including Consents of Use, Leases, and Easements). Major features of this program are described under Wetland Regulatory Statutes.

### Innovative Features and New Programs/Initiatives:

- The comprehensive nature of the state program is broader than the federal program in that it also regulates alterations of uplands that may affect surface water flows, including addressing issues of flooding and stormwater treatment;
- The state program is in addition to, not in place of or superseded by the federal dredge and fill permit programs. There are no thresholds wherein some activities are reviewed by the state and others by the federal government. In essence applicants must get all applicable permits and authorizations from both the state and the federal government before beginning work;
- The division of responsibilities between the state Department of Environmental Protection (DEP) and the water management districts (who have regional ad valorem taxing authority);
- The linkage of the state regulatory and proprietary programs discussed above;

- A wetland delineation methodology ratified under state law that is binding on all state, regional, and local governments throughout Florida. This methodology is specific to Florida, and differs from the federal wetland delineation methodology (see below);
- A statewide mitigation banking program implemented by the DEP and three of the state's five water management districts;
- Environmental Resource Permits (ERP) are permits that are valid for the life of the system (includes all structures and works authorized for construction or land alteration). The ERP permit does not automatically expire after the construction phase (typically a five-year period), and continues to cover operation (use of) of the system;
- A program to authorize regional mitigation for Florida Department of Transportation (FDOT) Projects (see below);
- A joint permit application form, wherein applicants for a federal dredge and fill permit apply directly to either the DEP or the applicable water management district using the same form that is used for the state ERP or wetland resource permit. The DEP and the water management districts then forward the application to the U.S. Army Corps of Engineers (Corps) for concurrent federal permit processing (which can only be issued after issuance of the applicable state permit that grants or waives water quality certification);
- A program that regulates the trimming or alteration of mangroves;
- The issuance of a (SPGP) from the Corps to the DEP that provides that certain activities (such as docks, seawalls, dredging, and activities that qualify for state exemptions or general permits) that qualify under the state regulatory program also will receive the associated federal dredge and fill permit; and
- A limited delegation of the ERP program from the DEP and the South Florida Water Management District (SFWMD) to Broward County.

### **State Wetland Conservation Plan**

Florida has its independent statutes and rules governing activities in wetlands, as described above. Although Florida's program essentially contains all the required elements of a State Wetland Conservation Plan, Florida has never packaged the program for the U.S. Environmental Protection Agency (EPA) review and sign-off. Therefore, Florida does not operate under an EPA-approved State Wetland Conservation plan at this time.

### **No Net Loss/Net Gain Goal**

Florida does not have a goal of no net loss or gain of wetland *acreage*. However, the regulatory rules are written so as to be implemented in a manner that achieves a programmatic goal, and a project permitting goal, of no net loss in wetland or other surface water *functions* (not including activities that are exempt from regulation or that are authorized through a noticed general permit). An ERP permit standard is that activities must not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters. The wetland resource permit program does not actually contain the above stated goals, but operates such that an activity must not be contrary to the public interest, which typically includes offsetting wetland impacts. The applicable evaluation criteria will be discussed below.

## INDIVIDUAL FEATURES:

### Regulation

#### State Regulatory

Florida implements an independent *state* permit program that operates *in addition to* the federal dredge and fill permit program. The state regulatory permit program is implemented differently, depending on the location of the activity. As described below, this includes a statewide regulatory environmental resource and wetland resource permit under part IV of chapter 373 of the Florida Statutes. It also includes a mangrove trimming and alteration program under chapter 403 of the Florida Statutes. These are further described as follows:

In peninsular Florida (encompassing the geographic territory of four water management districts, beginning south and east of mid-Jefferson County):

An environmental resource permit “ERP” program regulates virtually all alterations to the landscape, including all tidal and freshwater wetlands and other surface waters (including isolated wetlands) *and* uplands. The ERP addresses dredging and filling in wetlands and other surface waters, as well as stormwater runoff *quality* (i.e. stormwater treatment) and *quantity* (i.e. stormwater attenuation and flooding of other properties) including that resulting from alterations of uplands. This program regulates everything from construction of single family residences in wetlands, convenience stores in the uplands, dredging and filling for any purpose in wetlands and other surface waters (including maintenance dredging), construction of roads located in uplands and wetlands, and agricultural alterations that impede or divert the flow of surface waters. Issuance of the ERP also constitutes a water quality certification or waiver thereto under section 401 of the Clean Water Act, 33 U.S.C. 1341. In addition, issuance of an ERP in coastal counties constitutes a finding of consistency under Florida Coastal Zone Management Program under Section 307 (Coastal Zone Management Act). The ERP program is implemented jointly by the Department of Environmental Protection and the four water management districts, in accordance with an operating agreement that identifies the respective division of responsibilities.

In the panhandle (encompassing the geographic territory of the Northwest Florida Water Management District, west of and including mid-Jefferson County):

A wetland resource permit program under chapter 62-312 of the Florida Administrative Code. This program regulates dredging and filling in all tidal and freshwater wetlands and other surface waters that are connected (by one or more natural or artificial waters) to other bays, bayous, streams, rivers, lakes, estuaries, or the Gulf of Mexico. It does not regulate dredging or filling in isolated wetlands. Issuance of a wetland resource permit also constitutes a water quality certification or waiver thereto under section 401 of the Clean Water Act (CWA), 33 U.S.C. 1341, and a finding of consistency under Florida Coastal Zone Management Program under Section 307 (Coastal Zone Management Act). This program is implemented solely by the DEP.

A separate stormwater permit program under chapter 62-25 of the Florida Administrative Code. This program regulates construction and land alterations (typically in uplands) that collect, convey, channel, hold, inhibit or divert the movement of stormwater and that discharge into surface water waters. This program only addresses the *quality* of water discharged from stormwater systems, not the *quantity* of water (i.e. it does not address flooding issues as does the ERP permit program in the rest of the state.) This program is implemented solely by the DEP, except the City of Tallahassee has received a delegation to review and take agency action on stormwater general permits within their geographic limits—see below.

An agricultural and dam safety program was implemented by the Northwest Florida Water Management District, under chapter 40A-4 of the Florida Administrative Code. This includes regulating the management, storage, and drainage of surface waters associated with agricultural and forestry projects. This program has jurisdiction over impacts to isolated wetlands in agricultural lands, and issuance of this permit constitutes water quality certification under section 401 of the Clean Water Act, 33 U.S.C. 1341. The dam safety program regulates the construction, alteration or abandonment of dams or levees utilized in non-agricultural settings.

The trimming or alteration of mangroves (a tropical tree species growing in the estuaries of middle and south Florida, including the red mangrove *Rhizophora mangle*; black mangrove *Avicennia germinans*; and white mangrove *Laguncularia racemosa*) is regulated in accordance with the Mangrove Protection Act of 1996 (sections 403.9321-403.9334, F.S. Levels of regulation include exemptions, general permits, and individual permits, depending on the number and extent of trimming or alteration.  
Proprietary (Sovereign Submerged Lands)

In addition to the above *regulatory* permit programs, activities that are located on submerged lands that are owned by the state of Florida (otherwise called sovereign submerged lands) also require a *proprietary* authorization for such use under chapter 253 of the Florida Statutes. Such lands generally extend waterward from the mean high water line (of tidal waters) or the ordinary high water line (of fresh waters) both inland and out to the state's territorial limit (approximately three miles into the Atlantic Ocean, and ten miles in the Gulf of Mexico). If such lands are located within certain designated Aquatic Preserves, the authorization also must meet the requirements of chapter 258 of the Florida Statutes. Such authorization considers issues such as riparian rights, impacts to submerged land resources, and preemption of other uses of the water by the public. Authorizations typically are in the form of consents of use, easements, and leases. This program is implemented jointly by the DEP and four of the state's five water management districts in accordance with the same operating agreement that governs the ERP program. The program is structured such that applicants who do not qualify at the time of the permit application for *both* the regulatory permit and the proprietary authorization cannot receive either permit or authorization.

#### Federal Coordination/Delegation

As described above, issuance of a state environmental resource or wetland resource permit also constitutes a state water quality certification or waiver thereto under section 401 of the Clean Water Act, 33 U.S.C. 1341, and, in coastal counties, a finding of consistency under Florida Coastal Zone Management Program under Section 307 (Coastal Zone Management Act). When a corresponding federal dredge and fill permit is required, it is issued independently from the state permit by the Corps after issuance or waiver of the state water quality certification and applicable coastal zone consistency concurrence.

NPDES — In addition to the above state regulatory programs, Florida has statewide authorization to implement the federal NPDES permit program for stormwater. Areas of regulation include municipal separate storm sewer systems, certain industrial activities, and construction activities. The municipal program has jurisdiction over large and medium municipalities. The industrial program covers selected industries and are identified by Standard Industrial Code. New construction may also require a stormwater permit if the clearing, grading, or excavation work disturbs five or more acres of land and discharges to either a surface water of the state or to a Municipal Separate Storm Sewer System "MS4". The NPDES stormwater permit needed is called the Generic Permit for Stormwater Discharge from Construction Activities that Disturb Five or More Acres of Land. Copies of the permit, application forms, guidance materials, and other information about the permit and NPDES stormwater program can be downloaded from the following website: <http://www.dep.state.fl.us/water/stormwater/npdes/>.

SPGP — the Corps has delegated to the DEP the ability to issue the federal dredge and fill permit under section 404 of the Clean Water Act for certain activities that qualify for an ERP or wetland resource permit or exemption (see below).

## **Wetland Regulatory Statutes and Administrative Rules (More)**

The regulatory program is authorized under Part IV of chapter 373 of the Florida Statutes governs the environmental resource permit program. Section 373.4145 more specifically governs the wetland resource permit program in the panhandle.

Florida Administrative Code regulatory rules of general applicability include chapters:

- 62-4 (including general permitting criteria, fee requirements, water quality protection criteria for special waters, and anti-degradation criteria)
- 62-40 (State Resource Implementation Rule)
- 62-340 (statewide delineation of the landward extent of wetlands and other surface waters)
- 62-342 (mitigation banking)

Florida Administrative Code rules implementing the ERP permit program include chapters:

- 62-330 (which adopts the various rules of the water management districts listed below)
- 62-312 (only part IV—additional criteria within Monroe County)
- 62-341 (standards and criteria for noticed general permits)
- 62-343 (general application and review criteria)
- 62-344 (delegation of the ERP permit program to local governments)
- 40B-4, 40B-400, & ERP Applicant's Handbook (within the Suwannee River Water Management District)
- 40C-1, 40C-4, 40C-8, 40C-40, 40C-41, 40C-42, 40C-400, Stormwater Applicant's Handbook, and Management and Storage of Surface Waters Applicant's Handbook (within the St. Johns River Water Management District)
- 40D-1, 40D-4, 40D-40, 40D-400, and Basis of Review (within the Southwest Florida Water Management District (SWFWMD))
- 40E-1, 40E-4, 40E-40, 40E-41, 40E-400, and Basis of Review (within the SFWMD)

Florida Administrative Code rules implementing the wetland resource permit program (applicable only in the panhandle and for certain grandfathered projects in the rest of the state):

- Chapter 62-312

Florida Administrative Code rules implementing the stormwater treatment permit program in the panhandle:

- Chapter 62-25

The proprietary program is authorized under chapter 253 of the Florida Statutes. Activities on sovereign submerged lands in Aquatic Preserves are further authorized by chapter 258 of the Florida Statutes.

Florida Administrative Code rules implementing the proprietary program include chapters:

- 18-14 (Administrative Fines)
- 18-18 (Biscayne Bay Aquatic Preserve)
- 18-20 (Aquatic Preserves)
- 18-21 (Sovereignty Submerged Lands Management)

All licensing and agency action determinations under the above statutes and rules are further governed by the Administrative Procedures Act chapter 120 of the Florida Statutes and by the rules of uniform procedures under chapter 28 of the Florida Administrative Code.

## **Wetland Definition and/or Delineation; Comparability With Federal Definition**

Under section 373.421 of the Florida Statutes, Florida has adopted a wetland delineation methodology that is binding on all state, regional, and local governments throughout Florida. This methodology was adopted as chapter 62-340 of the Florida Administrative Code, which was then ratified in section 373.4211 of the Florida Statutes for statewide applicability. It became effective on July 1, 1994. This

methodology is a unified statewide approach to wetland and other surface water delineation and is specific to Florida, in recognition of the vegetation, hydrologic, and soil features that specifically exist in Florida.

Florida's methodology differs from the Corps 1987 manual methodology in many respects, although the Corps methodology continues to be used separately by the federal permitting agencies in Florida. In real-world application, the state and federal wetland lines typically are very close or identical with one another, although, in certain areas of the state, significant differences do exist.

Florida has not produced a map of the wetlands as they would be delineated using the state methodology in s. 373.421 and 373.4211, F.S. Instead, staff in the Tallahassee office of the Department's Bureau of Beaches and Wetland Systems and District offices, as well as staff in the Suwannee River, St. Johns River, Southwest Florida, and SFWMD performs wetland delineations for a specific parcel of property on request or as part of a permit application review. There are three ways such requests for wetland delineations may occur:

- By formal petition for a formal determination of the landward extent of wetlands and other surface waters (in accordance with section 62-343.040, F.A.C.) in peninsular Florida, or by formal petition for Jurisdictional Declaratory Statement (in accordance with section 62-312.040, F.A.C.) in the northwest DEP district. These determinations are done for a fee, depending on the size of the total parcel, are subject to specified time frames, typically require the petitioner to produce a survey of the wetlands so delineated, and are binding on the petitioner and the state agencies for a period of five years (which may be extended).
- As part of a permit application. There is no additional charge for this service above that required to process the permit application.
- Through an informal determination. These are normally done only for private single family landowners. There is no fee for these determinations, but they are done on an "as-resources allow" basis, are not subject to any time frames, and are not binding on any of the parties. Due to staffing limitations, there is increased reluctance of the district staff to do these, and property owners usually are encouraged to file a petition for a formal determination.

All of the above delineations are done using the state methodology in chapter 62-340 of the Florida Administrative Code.

If a federal dredge and fill permit is required for an activity, it is up to the Corps to separately delineate the wetlands on the parcel using the applicable federal methodology. While the Corps determination may be done coincident with the state delineation, the two methodologies are not interchangeable, and often the wetlands delineated by each methodology is different, as mentioned above.

## **Evaluation Methodology**

### All Environmental and Wetland Resource Permits

The first step in the review of all environmental and wetland resource permit applications involves a consideration of eliminating and reducing otherwise unpermittable adverse impacts (note that this is a different test than the "Alternatives Analysis" used by federal agencies; it does not provide for considering an alternate site).

Staff from the DEP or from the applicable water management districts (in accordance with the Department/Water Management District Operating agreements described above) evaluate (using their best professional judgement) whether an activity will adversely affect fish, wildlife, listed species, and their habitats. Upon receipt, a copy of each application also is initially copied to the Florida's Fish and Wildlife Conservation Commission (FWC). Comments and suggestions regarding listed species and other wildlife impacts from the FWC are considered during processing of the

application. The FWC also may object to issuance of an ERP or wetland resource permit under Florida's Approved Coastal Zone Management Act coordination process. The DEP and water management districts do not rely on, but will also consider, comments from the federal resources agencies (U.S. Fish and Wildlife Service and the National Marine Fisheries Service) when such comments are made in a timely manner during the processing of a state permit. Consideration is given under the environmental resource permit program to upland buffers that are designed to protect the functions that uplands provide to wetlands and other surface waters. When considering impacts to the listed (endangered, threatened and special concern) species under the environmental resource permit program, the agencies may only consider adverse impacts to aquatic or wetland dependent listed species that use wetlands and other surface waters or that use upland habitats for nesting and denning.

All activities must be found to not result in violations of state surface and groundwater water quality standards (there are no separate water quality criteria for wetlands—see discussion on water quality). In addition, for projects located in Outstanding Florida Waters (these waters are identified in chapter 62-302, F.A.C.), the activity must be found to not cause degradation of ambient water quality. The siting of marinas and other activities that may affect the flow of waters includes hydrographic evaluations that are useful in predicting whether water quality standards will be met. The rules also provide for mitigation in the form of net improvement when an activity will cause or contribute to discharges in waters that do not currently meet state water quality standards for the constituents of those discharges.

When evaluating the value and functions that wetlands and other surface waters provide for fish, wildlife, listed species, and water quality, the state does not rely on Hydrogeomorphic (HGM) analysis, although such analyses will be considered if submitted as part of a permit application. There are no HGM models finalized yet in the state, but several drafts are in development. Instead, the permitting tests described below for "Environmental Resource Permits" and "Wetland Resource Permits" are used. The evaluation is largely based on "best professional judgment." When an analysis determines that an activity is likely to adversely affect wetland and other surface water functions, the rules include provisions, after first considering ways to reduce or eliminate those adverse affects, for wetland and other surface water mitigation. Mitigation considerations are discussed in the "Mitigation" section, below. In addition, many applicants and the agencies (including the Corps regional office in Florida) also use a Wetland Rapid Assessment Procedure (WRAP) to assist in analyzing wetland functions. WRAP was originally developed by the SFWMD as a tool to analyze compliance at mitigation sites and is now informally used in the evaluation of ERP, wetland resource, and mitigation bank applications.

Section 373.414(18) of the Florida Statutes, adopted by Florida's legislature in 2000, requires the Department, in consultation with the water management districts, to develop a uniform wetland mitigation assessment method by October 1, 2001, and for such method to be adopted by rule no later than January 31, 2002. Once adopted, this method is to be binding on the DEP, the water management districts, local government, and any other governmental agencies, and shall be the sole means to determine mitigation needed to offset adverse impacts and to award and deduct mitigation bank credits. The DEP currently is continuing to work on adoption of this rule methodology; as of January, 2002, is not yet in effect, and legislation is being developed to extend the deadline for adoption of this rule.

In addition to evaluating direct, construction-related impacts to wetlands and other surface waters, the ERP and wetland resource rules and associated case law require a consideration of secondary and cumulative impacts when evaluating adverse impacts of an activity.

- Secondary impacts are those actions or actions that are very closely related and directly linked to the activity under review that may affect wetlands and other surface waters and that would not occur but for the proposed activity. Secondary impacts to the habitat functions of wetlands associated with adjacent upland activities are not considered adverse under the environmental

resource permit program if buffers of a certain minimum size are provided abutting the wetlands (with some exclusionary provisions).

- Cumulative impacts are residual adverse impacts to wetlands and other surface waters in the same drainage basin that have or are likely to result from similar activities (to that under review) that have been built in the past, that are under current review, or that can reasonably be expected to be located in the same drainage basin as the activity under review.

### ERP Permits

In addition to the above, the Environmental Section in each of the Water Management District's Applicant's Handbooks and Basis of Review (these are adopted for use by the Department in chapter 62-330, F.A.C.) contains a detailed explanation of the criteria that are used to evaluate permissible and unpermissible impacts to wetlands and other surface waters. This section includes criteria for:

- All projects requiring a permit must be found to:
  - Not cause adverse water quantity impacts to receiving waters and adjacent lands;
  - Not cause adverse flooding to on-site or off-site property;
  - Not cause adverse impacts to existing surface water storage and conveyance capabilities;
  - Not adversely impact the value of functions provided to fish and wildlife and listed species by wetlands and other surface waters;
  - Not adversely affect the quality of receiving waters such that state water quality standards will be violated;
  - Not cause adverse secondary impacts to water resources;
  - Not adversely impact the maintenance of surface or ground water levels or surface water flows;
  - Not adversely impact a work of a water management district;
  - Be capable, based on generally accepted engineering and scientific principles, of being performed and of functioning as proposed;
  - Will be conducted by an entity with the financial, legal, and administrative capability of ensuring that the activity will be undertaken in accordance with the terms and conditions of the permit, if issued; and
  - Will comply with applicable special basin or geographic area criteria adopted by rule.
- In addition, activities in wetlands and other surface waters must not be contrary to the public interest, or, if the activity is located in an Outstanding Florida Water (these waters are listed in chapter 62-302, F.A.C.), the activity must be clearly in the public interest. This test is based on a weighing a balancing of the following criteria:
  - Whether the regulated activity will adversely affect public health, safety, or welfare, or the property of others (based solely on environmental, not economic, considerations);
  - Whether the regulated activity will adversely affect the conservation of fish and wildlife, including endangered and threatened species, or their habitats;
  - Whether the regulated activity will adversely affect navigation or the flow of water, or will cause harmful erosion or shoaling;
  - Whether the regulated activity will adversely affect fishing or recreational values or marine productivity in the vicinity of the activity;
  - Whether the regulated activity will be of a temporary or permanent nature;
  - Whether the regulated activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of section 267.061, F.S.; and
  - The current condition and relative value of the functions being performed by areas affected by the proposed regulated activity.
- Direct, secondary, and cumulative impacts are considered for all activities in wetlands and other surface waters.
- In addition to considering impacts to wetlands and other surface waters, development or other alteration of the uplands that affects surface water flow or that generates new sources of stormwater

runoff also is evaluated. There are certain exemptions from the need for an ERP permit for these activities, such as for individual, private single family residences constructed in the uplands that are not part of a larger plan of common development, and projects that are below certain size thresholds, depending on the water management district.

### Wetland Resource Permits

To qualify for a permit, a wetland resource permit applications must be found to not be contrary to the public interest, or, if the activity is located in an Outstanding Florida Water (these waters are listed in chapter 62-302, F.A.C.), the activity must be clearly in the public interest. This test is based on a weighing a balancing of the following criteria:

- Whether the regulated activity will adversely affect public health, safety, or welfare, or the property of others (based solely on environmental, not economic, considerations);
  - Whether the regulated activity will adversely affect the conservation of fish and wildlife, including endangered and threatened species, or their habitats;
  - Whether the regulated activity will adversely affect navigation or the flow of water, or will cause harmful erosion or shoaling;
  - Whether the regulated activity will adversely affect fishing or recreational values or marine productivity in the vicinity of the activity;
  - Whether the regulated activity will be of a temporary or permanent nature;
  - Whether the regulated activity will adversely affect or will enhance significant historical and archaeological resources under the provisions of section 267.061, F.S.; and
  - The current condition and relative value of the functions being performed by areas affected by the proposed regulated activity.
- Direct, secondary, and cumulative impacts are considered for all activities in wetlands and other surface waters.

### Stormwater

- With the implementation of the state stormwater rule (chapter 62-25, F.A.C.) in February 1982, Florida was the first state in the country to require the treatment of stormwater from all new stormwater discharges. This technology based rule requires stormwater systems to remove at least 80% of the post-development total suspended solids (TSS) loading (95% removal of TSSs if the stormwater system directly discharges to an OFW).
- Stormwater runoff can significantly affect wetland and other surface water quality and functions.
- Evaluation of stormwater quality and quantity is a component of the Environmental Resource Permit program in peninsular Florida, as described above.
- In the panhandle, a separate stormwater permit under chapter 62-25, F.A.C., is required for activities that result in the creation of systems that convey, channel, hold, inhibit, or divert the movement of stormwater and the discharge of stormwater into surface waters of the state. Chapter 62-25 contains various exemptions and general permits; for activities that do not qualify for the exemptions or general permits, the rule also contains provisions for issuance of individual permits, and permits for wetland stormwater discharge systems.

### Sovereign Submerged Lands

- Activities located in whole or in part in, on, or over sovereign submerged lands will also require an applicable proprietary authorization to use such lands. The review criteria include a requirement that an activity not be contrary to the public interest, and, in aquatic preserves, that the activity be clearly in the public interest. Evaluation factors are contained in chapter 18-21, F.A.C., and, if in an aquatic preserve, additional factors in chapter 18-20, F.A.C., also apply. Considerations will include whether the activity will adversely affect sovereign submerged lands resources (such as grassbeds and

oyster bars), the rights of riparian property owners, navigation, and preemption of uses of the waters by the public-at-large. Many of the evaluation factors are very prescriptive, with specific limitations on the sizes, types, and designs of activities that can be authorized. Only uses that are water dependent can be approved, except for certain non-water dependent activities have been “grandfathered” and incidental uses that may be approved on a case-by-case basis for public projects. Dredging of submerged lands typically requires payment to the state for “severing” dredged material from public ownership. Commercial uses of sovereign submerged lands (such as for marinas) require a lease, with annual lease fee payments to the state. Utilities and certain other activities must obtain public or private easements. Private easements require a one-time payment of easement fees, based on the appraised value of the easement.

- Florida’s regulatory programs are not affected by the recent SWANCC decision affecting the identification of isolated wetlands under the federal dredge and fill permit program.
- As will be discussed below, many local governments in Florida have their own environmental regulatory program that requires compliance with local regulatory ordinances and Acts. These local requirements are in addition to the above state and federal requirements, and do not replace or supersede state and federal permitting requirements.

### **Regulated and Exempted Activities**

- Certain activities have been exempted by statute and rule from the need for regulatory permits under state law or by agency rule. To be exempt by rule, the activities have been previously determined by the agencies to be capable of causing no more than minimal individual and cumulative adverse impacts to wetlands and other surface waters.
- Examples (by no means inclusive) of exempt activities include:
  - construction, repair, and replacement of certain private docking facilities below certain size thresholds;
  - maintenance dredging of existing navigational channels and canals;
  - construction and alteration of boat ramps within certain size limits;
  - construction, repair, and replacement of seawalls and rip rap in artificial waters;
  - repair and replacement of structures; and
  - construction of certain agricultural activities (see below).
- In addition, the state has issued a number of “noticed general permits” for activities that are slightly larger than those that qualify for the above exemptions and that otherwise have been determined to have the potential for no more than minimal individual direct and secondary impacts. These include (by no means comprehensive):
  - construction and modification of boat ramps of certain sizes;
  - installation and repair of riprap at the base of existing seawalls;
  - installation of culverts associated with stormwater discharge facilities; and
  - construction and modification of certain utility and public roadway construction activities.
- Anything that does not specifically qualify for an exemption or noticed general permit generally requires an ERP permit. Activities that are not specifically exempt and that involve dredging or filling in connected wetlands and other surface waters in the panhandle generally requires a wetland resource permit.

### **Special Provisions for Agriculture and Forestry**

- Sections 373.406 and 403.927, F.S., exempt certain agricultural activities from the need for Environmental Resource and Wetland Resource permits. These include the rights of any person engaged in the occupation of agriculture, silviculture, floriculture, or horticulture to alter the topography for purposes consistent with the practice of such occupation, provided the alteration is not

for the sole or predominant purpose of impounding or obstructing surface waters. All five water management districts in the state have adopted specific rules to regulate other agricultural activities, including the adoption of noticed general permits. The review of all agricultural activities, including permitting, compliance, and enforcement, is the responsibility of the water management districts. Florida's Department of Agriculture and Consumer Services (FDACS), in cooperation with the DEP and the water management districts also have developed various Best Management Practices handbooks to assist the agriculture community in working in a manner that will minimize adverse impacts to wetlands and other surface waters.

- Certified aquaculture activities that apply appropriate best management practices adopted under section 597.004 are exempt from the need for permits under part IV of chapter 373, F.S. Compliance, enforcement, and permitting of such aquacultural activities are the responsibility of FDACS. Compliance, enforcement, and permitting of activities that are not so certified continue to be the responsibility of the DEP.
- The SWFWMD has developed a unique Agricultural Ground and Surface Water Management (AGSWM) program.
  - "Ag-team" staff have been established in local service offices to provide full service water management regulation for agriculture. This initiative has been underway for nearly eight years.
  - SWFWMD's four principle service offices have assigned and trained Ag-Team staff who specialize in Water Use, Surface Water and Environmental regulation for agriculture. The Technical Services Department has an Ag-Team "facilitator" who works with local Ag-Team staff to provide technical oversight and direction, and to foster cooperation on a regional or state basis. Also, TSV has an irrigation engineer who works with agricultural water management research and on other special projects to assist the regulated public.
  - AGSWM was developed by District staff and members of the agriculture community. AGSWM is an alternative regulatory process for agricultural operations that uses field visits, site specific conservation management planning and technical provisions to foster agricultural production and environmental resource protection. SWFWMD staff encourages farmers who are planning activities that are subject to Environmental Resource Permitting (ERP) or Water Use Permitting (WUP) regulation to use the AGSWM pre-application review process, which can help facilitate exemption determination or permitting review. In addition, a few years ago a Senate report, entitled "A Bridge Over Troubled Waters," cited the District's alternative agricultural regulatory process as a model for future practices.
  - Since 1991, the SWFWMD has provided about \$200,000 per year for USDA Natural Resources Conservation Service to support technical assistance that helps farmers and SWFWMD staff to implement site specific ecosystem based conservation management planning. Agricultural projects that qualify for an ERP/AGSWM exemption letter must be planned and implemented according to prescribed conservation management planning practices.
  - The AGSWM process, using local Ag-teams, encourages a "customer service" based approach to ERP and WUP regulation. This can result in better understanding and faster processing of applications, which in turn, helps growers reduce production delays and helps the SWFWMD avoid compliance and enforcement procedures.

## **Penalties and Enforcement**

- Florida employs a combination of the authorities listed below to address civil, administrative, and criminal actions. The great majority of violations are resolved using civil or administrative procedures, with criminal actions used only in the most serious cases or cases that staff can not resolve through other available avenues and for which criminal sanctions are provided.

- Staff from the DEP and water management districts (or, where applicable, the delegated local government) that have responsibility for an activity under the respective Operating Agreements are responsible for compliance and enforcement of both the regulatory and the proprietary aspects of a permit and applicable sovereign submerged lands authorization.
- Enforcement is authorized under s. 373.129 of the Florida Statutes to be administered in the same manner and to the same extent as provided in sections 373.430, 403.121(1), 403.121(2), 403.131, 403.141, and 403.161, F.S. Remedies include:
  - Judicial (civil) actions in a court of competent jurisdiction; (provisions under 403.121(1)):
    - can recover damages for injury to air, waters, or property, including plants, animals and aquatic life;
    - civil penalties up to \$10,000 per offense; each day constitutes a separate offense;
  - Administrative (provisions under 403.121, 253.04 and rule 18-14, F.A.C.):
    - can recover damages and in addition assess penalties up to \$5,000 depending on type and extent of violation;
    - can recover damages to sovereign submerged lands, can also assess fines up to \$10,000 per offense; each day constitutes a separate offense. When violator upon notice ceases the activity and applies for appropriate authorization, fines shall not exceed \$2500.00 per offense (rule 18-14);
  - Injunctive Relief:
    - may seek injunctive relief in court (s. 403.131, F.S.);
  - Criminal provisions ( 403.161 ):
    - willful violation of wetlands regulations—fine of not more than \$50,000 and/or imprisonment for up to 5 years for each offense; each day constitutes a separate offense;
    - reckless indifference or gross careless disregard causing violations of wetlands regulations—fine of not more than \$10,000 and/or 6 months in jail for each offense;
    - conducting aquaculture on sovereign submerged lands without proper authorization—fine of not more than \$1,000.00 and/or up to 6 months in jail and forfeiture of property on sovereign submerged lands (253.74 FS);
    - trespass and theft of property from sovereign submerged lands—imprisonment as provided by law;
- Criminal provisions may only be enforced by Office of the State Attorney (prosecutor).

## Permit Tracking

The DEP and each water management district have their own tracking system to record the progress of each permit application and all enforcement cases. However, some common data are tracked, reviewed, and reported statewide.

The DEP's permit tracking system is called Permit Application. It keeps track of permit application numbers, processors, time clocks (date received, dates of requested information, date application became complete, date of agency action), agency action (issued, denied, withdrawn, exempt, general permit), and geographic locators (including section, township and range). Enforcement and compliance tracking in the DEP is performed by the Compliance and Enforcement Tracking system.

Each water management district has its own tracking system that, at a minimum, also tracks the above information. Some, such as in the SFWMD automatically generate a staff report based on information inputted; that system also includes extensive pre- and post-project water level and other engineering data. Others include extensive tracking information on such things as permit condition compliance and mitigation success status, and are fully integrated with a Geographic Information System (GIS) linkages.

For example, the SWFWMD permit tracking system is called the Resource Regulation Database (RRDB). The RRDB tracks permit applications as they are processed as well as compile selected project details. A GIS is used to collect selected location information. Compliance and enforcement activities are tracked from when action is initiated until the action is resolved.

### **State General Permit (PGP or SPGP) for 404**

A pilot SPGP was issued to the Jacksonville District office of the DEP in August, 1995; that pilot was expanded to other district offices of the DEP in 1996. On September 24, 1997, the Jacksonville District of the Corps issued an SPGP III to the DEP that replaced the previous SPGP. SPGP III extended the geographic coverage throughout Florida, excluding Monroe County and those counties within the jurisdiction of the Northwest Florida Water Management District. The purpose of the SPGP III is to avoid duplication of permitting between the Corps and the DEP for minor work located in waters of the United States, including navigable waters. This has the effect of eliminating the need for separate approval from the Corps for certain activities. Activities covered by the SPGP include:

- construction of shoreline stabilization activities (such as riprap and seawalls; groins, jetties, breakwaters, and beach nourishment/re-nourishment are excluded);
- boat ramps and boat launch areas and structures associated with such ramps or launch areas;
- docks, piers, marinas, and associated facilities;
- maintenance dredging of canals and channels;
- selected regulatory exemptions; and
- selected ERP noticed general permits.

Applications that are received for the above activities are first reviewed to determine if they meet all the conditions of the SPGP. Those that do are processed as “green,” in which case issuance of the DEP permit constitutes issues of the corresponding federal dredge and fill permit. Those that do not are processed as “yellow,” in which case a copy of the application is forwarded to the Corps. These applications are reviewed by the Corps and are either:

- Returned to the state for processing with or without additional federal conditions; or
- Retained for processing by the Corps.

At this time, permits processed by the water management districts are not included in the SPGP. However, negotiations continue on expanding the SPGP to include ERP permits processed by the water management districts and Broward County.

### **Assumption of Section 404 Powers**

Florida investigated the possibility of assuming the section 404 several years ago. Substantial impediments would exist with such an assumption. These include:

- Most of Florida’s waters are non-assumable waters because they are navigable, navigable in fact, or navigable with improvement, and hence are covered by section 10 of the Rivers and Harbors Act. Considerable confusion would exist at both the public and the staff level with a permitting system that would require a determination of the status of such waters and the wetlands associated with them.
- There are differences between the methodology used by the state of Florida to delineate the landward extent of wetlands and other surface waters and the federal methodology (see discussion above). While in many areas those differences are not significant, in other areas there are significant differences. Florida has identified two key species (slash pine and gallberry) that are primarily responsible for these differences. Florida does not consider areas dominated by these species (in the absence of other indicators, such as hydric soils) to be wetlands although those areas may be classified as wetlands under the federal methodology. The Florida legislature would have to expand the state methodology to include those areas. At this time it does not appear the federal government has the authority to make regional adjustments to the 1987 manual. Absent an ability to use “one line” in Florida, considerable confusion would exist with the public and the agencies in identifying

such areas, and developing a workable solution to authorize activities in such areas that are claimed as wetlands by one agency and not the other.

## **Joint Permitting**

The Corps and Florida have adopted joint ERP and wetland resource application booklets and forms, and coordinate under an Operating Agreement. Under this agreement, the DEP or water management district initially receives all ERP and wetland resource permit applications. Copies of those applications that do not qualify under the SPGP (see above) are forwarded to the Corps within five working days. At that point, both the Corps and the DEP or water management district independently process their respective applications. The Corps cannot act on applications that require a federal dredge and fill permit until the state ERP or wetland resource permit has been issued, which permit contains the federal water quality certification and coastal zone consistency concurrence determination (or waiver thereto).

## **Special Area Management Plans and Advanced Identification Plans**

A Special Area Management Plan was developed by the Corps for Bird Drive Basin in Dade County in between 1992 and June 1995, and is still in effect. The DEP and Metropolitan Dade County (Department of Environmental Resources Management) entered into a Memorandum of Understanding dated April 27, 1993, that directs that applicants requiring mitigation within the basin will contribute a specified amount of money to Miami-Dade County, which is in turn used to implement the Hole in the Donut Mitigation Bank within Everglades National Park.

ADIDs have been developed for western Biscayne Bay (for the shoreline east of Cutler Ridge), the Florida Keys (Monroe County), the Loxahatchee River (Palm Beach County), Eastern Everglades (near the 8 1/2 square mile area), and Rookery Bay (Collier County). These help applicants identify areas where permitting difficulties can be expected, but they do not otherwise directly affect the state permitting process. An ADID for western Broward County was developed but never approved by EPA.

In addition to the above, the Jacksonville office of the Corps has developed an innovative Comprehensive Conservation, Mitigation and Permitting Strategy that targets areas around the state that are experiencing significant development pressure with concurrent concerns with long term habitat and water quality impacts, or where large scale projects are underway that can be expected to result in significant regional impacts. These include the Dade County Lake Belt, Santa Rosa County, St. Joe Development (in the panhandle), Walt Disney World, and an Environmental Impact Statement for South West Florida. Each of these has involved coordination with the DEP and the water management districts.

## **Role of Local Governments**

Section 373.441, F.S., and its implementing rule chapter 62-344, F.A.C., provide the procedures and considerations for the DEP and the water management districts to delegate the ERP program to local governments. Delegations can be granted only where:

- the local government can demonstrate that delegation would further the goal of providing an efficient, effective, and streamlined permitting program; and
- the local government can demonstrate that it has the financial, technical, and administrative capabilities and desire to effectively and efficiently implement and enforce the program, and protection of environmental resources will be maintained.

To date, only one local government (Broward County) has received a comprehensive, albeit limited geographically and to certain project types, delegation of the ERP program from the DEP and the SFWMD. Their responsibilities include permitting, compliance, and enforcement of activities for which they have been given responsibility under a Delegation Agreement adopted in chapter 62-113, F.A.C.

Miami-Dade County has a limited delegation from the DEP to confirm sovereign submerged lands consents of use under chapter 253, F.S., for activities that qualify for the s. 403.813(2)(b), F.S., regulatory exemption for private single-family docks.

The City of Tallahassee has a delegation from the DEP to review, take agency action on, and perform compliance and enforcement of stormwater general permits under chapter 62-25, F.A.C., in accordance with a Delegation Agreement adopted in chapter 62-113, F.A.C.

## Staffing

Department of Environmental Protection

Primary Responsibility	# Full Time Staff
Permitting	104*
Compliance & Enforcement	62*
Administrative	22

\*Many staff share responsibilities for permitting, compliance, and enforcement. Numbers shown for compliance and enforcement are staff who are primarily assigned this responsibility.

## Water Management Districts

Primary Responsibility	# Full Time Staff
Permitting	149
Compliance & Enforcement	86
Administrative	79

## Broward County (Delegated Program)

Primary Responsibility	# Full Time Staff
Permitting	15
Compliance & Enforcement	Incl. with Above
Administrative	3

## Water Quality Standards

### Wetlands and Water Quality Standards

Florida's surface water quality standards are authorized under Section 403.061, Florida Statutes, and adopted in chapter 62-302 of the Florida Administrative Code. This chapter includes antidegradation policies, water classifications, specific narrative and numeric standards, and an identification of Outstanding Florida Waters (which receive the highest water quality protection).

Additional water quality standards for Outstanding Florida Waters, including antidegradation standards for all waters are contained in section 62-4.242, F.A.C. Standards for granting mixing zones of water quality standards are contained in section 62-4.244, F.A.C. Chapter 62-4 contains additional provisions for exemptions from water quality standards, and for sampling, testing, and method detection limits for water pollution sources. An antidegradation policy is applied to wetlands, based upon designated use classifications. Special standards have been adopted for discharge of treated stormwater and wastewater into wetlands.

ERP permits also must consider whether a regulated activity will adversely affect the groundwater standards contained in chapters 62-520, 62-522, and 62-550, F.A.C.

## **Wetland Definition**

Wetlands are considered waters of the state.

## **Designated Uses**

All surface waters in Florida fall into one of five classifications based upon their present and future most beneficial use (designated use). The five classifications include:

<u>Class</u>	<u>Designated Use</u>
I	Potable Water Supplies
II	Shellfish Propagation or Harvesting
III	Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife
IV	Agricultural Water Supplies
V	Navigation, Utility and Industrial Use

## **Narrative and/or Numeric Criteria**

Narrative and numeric water quality criteria as listed in Chapter 62-302, F.A.C., are designed to support the aforementioned designated uses. More stringent criteria apply to waters in a “higher” classification (e.g., Class I waters have more stringent criteria than Class III waters). There are a number of biological water quality criteria contained in Chapter 62-302, F.A.C., including bacteriological quality, biological integrity, nuisance species, and nutrients.

Wetlands are considered as “waters of the State,” and are included in the five classes of waters above. Most waterbodies in Florida, including most wetlands, are classified as Class III waters.

Section 373.414(10), F.S., provides the authority for the DEP, in consultation with the water management districts, to establish by rule water quality criteria for wetlands, giving appropriate recognition to the water quality of such wetlands in their natural state. However, to date, no rules governing specifically the water quality in wetlands have been adopted.

Natural background conditions (condition of waters in the absence of man-induced alterations based on the best scientific information available to the DEP), such as those that exist naturally in wetlands, are considered. For example, notwithstanding specific numeric criteria, dissolved oxygen levels, which are naturally low in wetlands, that can be attributed to natural background conditions and man-induced conditions that cannot be controlled or abated may be established as alternative dissolved oxygen criteria for a waterbody or portion of a waterbody.

## **Antidegradation Policy**

Florida's antidegradation policy is contained in and implement by sections 62-302.300, 62-302.700, and 62-4.242, F.A.C. It generally provides that permit applicants demonstrate that lowering of water quality is necessary or desirable under federal standards and under circumstances that are clearly in the public interest. Paragraph 62-302.300(17), F.A.C., specifically provides that projects permitted under part IV of chapter 373, F.S., shall be considered to be in compliance with the antidegradation policy.

## **Other**

There are several relief mechanisms in place in Florida's permitting rules and statutes that allow for limited lowering of water quality, including Site Specific Alternative Criteria, mixing zones, variances, and exemptions, provided certain conditions are met. Certain portions of Chapter 62-611, F.A.C., are

considered as water quality standards. This chapter allows for the use of some wetlands for treatment of wastewater in very limited cases.

## **Staffing**

All states are required by the Federal Clean Water Act to conduct a periodic comprehensive review of their surface water quality standards every three years (“triennial review”). Past triennial reviews have resulted in significant changes to antidegradation policies, water classifications, and water quality criteria.

Florida’s water quality standards program consists of five staff who review and revise, when necessary, existing surface water quality standards. These staff are continually involved in revising the State’s surface water quality standards as needed, including the revision of water quality criteria, reclassifications of surface waters based upon their present and future most beneficial use, and provision of additional water quality protection through designation of certain waterbodies as Outstanding Florida Waters. However, these staff do not review water quality certifications for specific projects.

The review of water quality certifications for specific applications is done by the wetland resource and environmental resource permit permitting staff (see above staffing numbers). The ability for an activity to meet applicable state water quality standards is determined as part of the permit application review, and the water quality certification is issued, waived, or denied in the same document that issues or denies the wetland resource or environmental resource permit.

## **Mitigation**

### **Mitigation Policy**

It is the intent of the state’s environmental resource permitting program that there be a “no net loss” in wetland and other surface water functions (note: this is different from acreage). Furthermore, protection of wetlands and surface waters is preferred to destruction and mitigation.

Mitigation may be considered only after practicable modifications have been made to eliminate or reduce otherwise unpermissible adverse impacts. The environmental resource and wetland resource permit rules recognize that, in some cases, mitigation may not be able to offset impacts sufficiently to yield a permissible project.

Mitigation is best accomplished through restoration, creation, enhancement or preservation of ecological communities similar to those being impacted. However, other means or communities may be acceptable and can be considered on a case-by-case basis, as long as the impacts are offset.

Mitigation may be off-site if on-site mitigation is not expected to have long-term viability or if off-site mitigation would provide greater ecological value. Mitigation is typically located within the same basin as the impacts to avoid potential unacceptable cumulative impacts within the basin.

Cash donation is not considered mitigation, unless specified for use in an endorsed environmental project that will serve to offset the impacts.

Mitigation banks and “in-lieu-fee” programs are allowed, given that they are already authorized by the state and serve to offset the impacts.

The environmental resource and wetland resource permit rules currently provide recommended guidelines for mitigation ratios:

- creation--1:1-6:1
- enhancement--4:1-20:1
- preservation--10:1-60:1

However, the above recommended ratios may be adjusted to account for the relative ecological value of the impacts and proposed mitigation, the time lag between impacts and offsetting those impacts, and likelihood of mitigation success on an individual basis.

Section 373.414(18) of the Florida Statutes, adopted by Florida's legislature in 2000, requires the DEP, in consultation with the water management districts, to develop a uniform wetland mitigation assessment method by October 1, 2001, and for such method to be adopted by rule no later than January 31, 2002. Once adopted, this method is to be binding on the DEP, the water management districts, local government, and any other governmental agencies, and shall be the sole means to determine mitigation needed to offset adverse impacts and to award and deduct mitigation bank credits. The DEP currently is continuing to work on adoption of this rule methodology; as of January, 2002, is not yet in effect, and legislation is being developed to extend the deadline for adoption of this rule.

## **Mitigation Banks**

In response to a legislative directive, Florida adopted a mitigation banking rule in 1994 (Chapter 62-342 of the Florida Administrative Code). This rule establishes guidelines for the operation of public or private banks. Each bank must obtain an environmental resource/mitigation bank permit, from the DEP or water management district, that provides for the following requirements:

- The banker must have sufficient legal interest in the property to preserve it by a perpetual conservation easement or donation to the state prior to any release of credits;
- A detailed mitigation plan to support viable and sustainable functional improvements for the regional watershed;
- The number and type of potential mitigation credits must be established, as well as the environmental criteria and schedule for the release of those credits for use;
- The mitigation bank must maintain a ledger to track the number and type of credits released and used;
- A mitigation service area, based on watersheds and other ecological criteria, must be established;
- A long-term management plan must be established to maintain the mitigation success in perpetuity;
- Financial assurance must be established for both the implementation and perpetual management of the bank.

Currently, 27 mitigation banks have been permitted by the state, with a total of 20,974 potential credits and over 61,000 acres. Of these, 18 banks (10,200 credits/32,000 ac.) have had credits released for use, and one has sold out of credits. Thus far, about 2,560 credits have been used as mitigation. Seven of these banks are on public lands and are implemented by either a public agency or are in a public/private partnership.

## **In Lieu Fee Program**

- In 2000, legislation was passed that stipulated the requirements by which the department, water management district or local government could sponsor a Regional Offsite Mitigation Area (ROMA) project that is paid for by monies accepted as mitigation.
- A Memorandum of Agreement (MOA) is required between the sponsoring agency, and the DEP or Water Management District, as appropriate, for any ROMA used for five or more projects or for more than 35 acres of impact. The MOA must address most of the same requirements required by mitigation bank permits, including: the mitigation plan and timeline, success criteria, mitigation credit and tracking, service area, acquisition, preservation and long-term management provisions. In addition, the sponsoring agency must provide a full cost accounting of the monies received to ensure that all monies were used in the purchase, preservation, permitting, implementation and management of the mitigation area.

- The major differences between a ROMA and a mitigation bank is that a ROMA can include an acquisition element and do not have to provide the same financial assurance as is required in a mitigation bank permit.

### **Ad Hoc Arrangements**

- In 1995, the state established a mitigation program specific to meet the FDOT mitigation needs (Section 373.4137, F.S.), whereby FDOT annually provides an inventory of anticipated wetland impacts to each of the regional water management districts.
- The state's five water management districts develop mitigation plans that would serve to offset those impacts, in coordination with other state and federal regulatory agencies. The plan is presented to the water management district's governing board for conceptual approval, and then submitted to the DEP for state authorization and approval. Once approved, the mitigation work may commence.
- This program does not relieve FDOT from eliminating or reducing impacts to the extent practicable or obtaining permits for the impacts.
- FDOT appropriates a specified amount of money (adjusted annually) for the mitigation needed to offset each acre of impact, and this money is disbursed to the water management districts to conduct the mitigation work.

### **Mitigation Database**

- Mitigation bank credit releases and uses are tracked by means of a required ledger identified in the mitigation banking section above. Credits used are attributed to specific permits or agency actions.
- At this time, the DEP does not maintain a central database of mitigation projects permitted, or the success thereof.
- Each water management district has its own tracking system:
  - The SWFWMD maintains a central database tracking the acres of wetlands affected by the issuance of Environmental Resource Permits. In addition to the acreage of wetlands impacted, the database tracks wetland acreage created, wetland acreage improved, wetland acreage preserved, and "other mitigation" acreage.

### **Staffing**

The DEP has two staff in the Bureau of Beaches and Wetland Resources who are responsible for:

- Developing mitigation rules and providing guidance on mitigation issues
- Developing the wetland mitigation assessment method
- Reviewing and taking agency action on mitigation bank permits for the DEP
- Statewide coordination on mitigation banking
- Reviewing and taking agency action on proposed regional offsite mitigation areas ROMA
- Reviewing and taking agency action on the water management districts' regional mitigation plans for the FDOT

In addition, the staff in the DEP and the state's five water management districts who review wetland resource and environmental resource permits also review mitigation proposals as part of reviewing the permit application. Depending on the organization of each office these staff also review the mitigation work for compliance and enforcement. In other offices, additional staff are dedicated to compliance and enforcement of permitted actions (including those that authorize mitigation) and unauthorized actions.

## **Monitoring and Assessment**

### **Mapping/Inventory**

- Florida has not produced a statewide map of the wetlands, as they would be delineated using the state methodology in s. 373.421 and 373.4211, F.S. Instead, as discussed above, wetlands are delineated on an “as requested” basis. Although maps of wetlands in Florida have been prepared by the National Wetlands Inventory (NWI), such maps are typically not at a level of detail that is sufficient for state and federal permitting purposes; the maps are subject to ground truthing; and the maps are not binding on either the state or the Corps. Nonetheless, they may provide a general picture of the potential presence of wetlands on a parcel of property.
- Because such maps have not been produced using the state methodology, there is no current statewide status and trends report of wetland gains or losses, based on Florida’s wetland delineation methodology. However, historic data is available (see below).
- Through a specialized GIS called ERAtools (Environmental Resource Analysis tools), staff has access to NWI maps and numerous other data sources, including jurisdictional boundaries, land use, fish and wildlife resources, inter-agency permitted activities, water resources, and statewide aerial photographs.

### **Wetland Classification and Assessment**

- Florida does not use a wetland classification system. The “status” of wetlands, and the functions they provide, are determined on a project-by-project basis through the permit application review process.

### **Overall Wetland Gain and Loss Tracking System**

- The DEP and the water management districts track the acreage of wetlands permitted to be dredged, filled, and mitigated through their permit application tracking systems. Annual wetland status reports were prepared and submitted to Florida’s Legislature for the period 1986-1993, during which time a statewide reporting requirement was part of state law. During the period 1984 – 1995, the DEP authorized the following acreage of wetland impacts:

<b>Category</b>	<b>Acreage</b>
Permanently destroyed	7,476
Temporarily destroyed	10,071
Preserved	22,195
Created	39,131
Improved	204,895 (due to accounting errors this figure actually may only be 28,584)

- The above figures do not account for wetland acreage permitted by the water management districts during that period. Due to limitations on staff resources, statewide report on these figures has not been produced since 1993 (when the requirement for these reports was removed from state law). However, reports can be produced on request by the DEP and water management districts.
- When reviewing the above, it is important to realize that such figures do not account for the true status of Florida’s wetland acreage. This is because those status and trends reports, based on permitting data, did not:
  - account for wetland losses from exempt activities (for which work may occur without notice to the agencies) or activities qualifying for noticed general permits. This is particularly significant considering wetland losses from exempt agricultural activities;
  - account for unauthorized dredging and filling;
  - account for whether the dredging, filling, or mitigation, once permitted, was ever implemented; or
  - account for the success or degree of implementation of any permitted mitigation.

- It is also important to realize that even if such tracking reports did account for the above, they would not account for the gains or losses of wetland functions. They do not, for example, provide status and trends for:
  - wetland acreage degraded by exotic infestation,
  - wetland acreage degraded by drainage or impoundment, or
  - wetland acreage restored or in need of restoration.

## **Staffing**

There is no staff specifically funded to track wetland gains and losses. As stated above, such tracking is done by the same staff that review wetland resource and environmental resource permit applications.

## **Restoration**

### **Program Description**

Florida's legislature established the Florida Forever program in 1998 to enhance land acquisition and restoration efforts. [This program was scheduled to raise \\$300 million each year during the decade beginning in Fiscal Year 2000-01.](#) Nearly a quarter of these funds may be used for facilities development, ecological or hydrological restoration, or other capital improvements to public lands. Most of the ecological and hydrological restoration funds will funnel through the state's five water management districts, which may spend collectively up to \$52.5 million annually from Florida Forever funds for these purposes. Each district has its own governing board and operation rules and policies, but the DEP provides oversight and approves all Florida Forever expenditures. In addition to these funds, approximately \$10.5 million may be available for capital improvements to DEP acquired properties through the Acquisition and Restoration Council, a nine-member board composed of five state agency heads and four governor appointees. The Council has not yet fully developed procedures for awarding these funds. However, both the water management districts and the Council's capital improvement projects must meet goals and measures established in legislation [s. 259.105(4), F.S.].

The state also has a very active invasive plant management program that is critical to its restoration programs. Nearly \$34.8 million was appropriated for this effort in Fiscal Year 2000-01. The amount available for invasive plant management is increased substantially through partnerships with other state agencies, water management districts and local and federal governments such that \$29,725,376 (includes both uplands and aquatic plant control) will be expended this year. These funds are allocated based on a priority schedule developed by regional working groups in concert with the Department's Bureau of Invasive Plant Management.

On January 9, President George W. Bush and Governor Jeb Bush entered into an historic pact between the state and federal government that keeps Everglades restoration on track and ensures long-term protection for the "River of Grass." The agreement, signed nearly one year ahead of schedule, requires Florida to reserve water specifically for environmental purposes in order to receive federal funding for the \$7.8 billion restoration project. The agreement protects 68 endangered and threatened species as well as the natural resources of the Everglades National Park, Loxahatchee National Wildlife Refuge, the 10,000 Islands National Wildlife Refuge and Water Conservation Areas. Everglades restoration is designed to recapture over 1½ billion gallons of water daily that is currently diverted to the Atlantic Ocean and Gulf of Mexico. The majority of water will be used to protect South Florida's system, while providing for other water-related needs of the region, including water supply and flood control.

Federal Conservation Reserve, Conservation Reserve Enhancement, and Wetland Reserve grants have been awarded to the DEP and the water management districts to assist in funding wetland restoration projects.

## Restoration Program Goals

The Florida Forever program [s. 259.105, F.S.] includes the following goals and measures:

- Protect, restore, and maintain the quality and natural functions of land, water, and wetland systems of the state, as measured by:
  - The number of acres of publicly-owned land identified as needing restoration, acres undergoing restoration, and acres with restoration activities completed;
  - The percentage of water segments that fully meet, partially meet, or do not meet their designated uses as reported in the DEP's State Water Quality Assessment 305(b) Report;
  - The percentage completion of targeted capital improvements in surface water improvement and management plans created under s. 373.453(2), regional or master stormwater management system plans, or other adopted restoration plans;
  - The percentage of miles of critically eroding beaches contiguous with public lands that are restored or protected from further erosion;
  - The percentage of public lakes and rivers in which invasive, non-native aquatic plants are under maintenance control; or
  - The number of acres of public conservation lands in which upland invasive, exotic plants are under maintenance control.
- The Legislature has also established performance measures for the DEP's invasive plant management program services:
  - The percent of Florida's public waters where control of hydrilla, water hyacinth, and water lettuce has been achieved and sustained.
  - The number of new acres of public land where invasive, exotic, upland plants are controlled and maintained.
  - The number of acres of public water bodies treated.
  - The number of acres surveyed.

## Eligibility Criteria

Only public lands and water bodies qualify for funding under state-funded restoration programs. Funds available to water management district generally will be allocated to approved Surface Water Improvement and Management projects, while the Acquisition and Restoration Council's funds for restoration from Florida Forever are restricted to projects on state lands that are identified in the land management plan for each unit of management (i.e., each state park, forest, wildlife management area, etc.).

## Restoration Database

The DEP's Florida Wetland Restoration Information Center provides information for a statewide ecological restoration program for wetlands and their associated uplands using ecosystem management and ecological principles. The Center has been developed to aid local governments and community organizations with their restoration efforts by providing online tools and research materials needed for the implementation and management of restoration projects.

A Restoration Guidance Handbook has been developed to provide guidance to local governments and community organizations on the process of wetland restoration, including how to assess the wetland site, determine appropriate restoration measures, as well as state of the science techniques.

The Florida Ecological Restoration Inventory is GIS compilation of the locations of current and proposed restoration activities on conservation lands. The inventory is available on the internet at <http://tlhdwf7.dep.state.fl.us/feri/>.

## **Staffing**

Water management district staff include:

- The SWFWMD has 13 staff dedicated to implementing restoration plans as of Dec 2001.

The DEP does not have any staff specifically dedicated to restoring wetlands, although staff in the DEP's Division of Recreation and Parks, who are responsible for managing state parks and other publicly managed lands, are responsible for developing overall restoration and management plans for such lands, which may include opportunities for wetland mitigation.

Staff in the DEP's Office of Coastal and Aquatic Managed Areas also identifies restoration needs as part of the other duties in the management of the state's 41 aquatic preserves.

Restoration opportunities often are identified as part of mitigation offered to offset otherwise unpermissible impacts identified during the processing of environmental resource and wetland resource permit applications. Restoration sites can be those that have been previously identified on publicly managed lands (lands owned by the Board of Trustees, the DEP.)

The DEP's Division of Recreation & Parks does restoration on tracts they acquire or otherwise have owned for a long time.

The water management districts actively restore and manage lands they own and acquire.

## **Public/Private Partnerships**

### **Acquisition Program**

Florida has one of the largest and most aggressive land acquisition programs in the country, with an excess of \$300 million spent annually to purchase environmentally sensitive lands.

These acquisition programs began in 1981 when the Florida Legislature enacted a program known as Save Our Rivers (SOR), and created the Water Management Lands Trust Fund. The trust fund received revenue from the documentary stamp tax paid when land was sold, and was administered by the DEP. SOR act enabled the water management districts to acquire lands necessary for water management, water supply, and the conservation and protection of water resources. Since that time there have been a number of additional and successor programs, including "Preservation-2000" (P-2000), Conservation and Recreation Lands (CARL), Save Our Rivers (SOR), and Land Acquisition Trust Fund. P-2000 (which largely replaced the former CARL and SOR programs) alone was responsible for the public acquisition and protection of more than 1.25 million acres of land. In 1998, "Florida Forever" replaced the P-2000 Program and became the state's newest blueprint for acquisition and conservation of our unique natural resources. Florida Forever, like most of the programs before it, derives its funding through a percentage of the documentary stamp fees assessed when property is sold. This program is scheduled to raise \$300 million each year from 2000-2010. An annual report, entitled The Florida Forever 5-Year Plan, describes the lands under consideration for purchase under the Florida Forever program.

Florida Forever is more than just an environmental land acquisition mechanism. It encompasses a wider range of goals, including: restoration of damaged environmental systems, water resource development and supply, increased public access, public lands management and maintenance, and increased protection of land by acquisition of conservation easements. Florida Forever emphasizes water resource development and restoration projects as well as land acquisition for nonstructural flood protection and conservation.

In addition to Florida Forever, the Water Management Districts use ad valorem (property taxes) and mitigation funds for land acquisition. Some shift in emphasis is occurring from traditional land acquisition for preservation to acquisition for District construction projects such as stormwater treatment facilities.

In the late 1980's, it was determined that Florida had to do more to protect and restore its surface waters. While "point" sources--sewage and industrial wastes--were being controlled, "nonpoint" sources--pollutants that enter water bodies in less direct ways--were still a major concern. In 1987, the Florida Legislature created the Surface Water Improvement and Management program (SWIM); (Sections 373.451-373-4595 of the Florida Statutes) to address these "nonpoint" pollutant sources," in recognition that water quality in surface water bodies throughout the state had degraded or were in danger of being degraded and important functions, once performed by associated natural systems, were no longer being provided.

The functions to be maintained or improved were identified in the SWIM Act to include providing aesthetic and recreational pleasure for the state's citizens; habitat for native plants and animals, including endangered and threatened species; and safe drinking water for the state's growing population as well as attracting visitors and accruing other economic benefits.

The Act required each water management district identify and maintain a priority list of water bodies of regional or statewide significance, and develop plans and programs for the improvement of those water bodies. Water bodies identified by the district's are approved by the state including the addition of new water bodies or the removal of existing ones.

SWIM is the only program that addressed a waterbody's needs as a system of connected resources, rather than isolated wetlands or water bodies. To accomplish this, SWIM meshes across governmental responsibilities, forging important partnerships in water resource management.

While the state's five water management districts and the DEP are directly responsible for the SWIM program, they also work with federal, state, and local governments and the private sector. All the partners contribute—with funding or in-kind services. Several water management districts have put more resources in SWIM than they receive from the state, and SWIM dollars have been used as a match to secure federal grants.

SWIM develops carefully crafted plans for at-risk water bodies, and directs the work needed to restore damaged ecosystems, prevent pollution from runoff and other sources, and educate the public. SWIM plans are used by other state programs, like Florida Forever, to help make land-buying decisions, and by local governments to help make land-use management decisions. Environmental education efforts are also funded by this program.

Specific SWIM plans developed by the water management districts include:

- The SWFMD has identified, and the state has approved plans for ten priority water bodies. They are Tampa Bay, Rainbow River, Banana Lake, Crystal River/Kings Bay, Lake Panasoffkee, Charlotte Harbor, Lake Tarpon, Lake Thonotosassa, Winter Haven Chain of Lakes, and Sarasota Bay (Figure 1). Goals and objectives were developed for each water body and are used to guide programs and projects for maintaining or improving water quality, natural systems, and the other functions consistent with the SWIM Act. Essential to carrying out the District's SWIM Program is the cooperation of local governments and agencies in developing and implementing effective SWIM Plans.

## **Public Outreach/Education**

Public outreach and education programs that provide materials on wetlands often also include information related to other surface waters (such as ponds, streams, and estuaries) and about the state's regulatory and proprietary programs. Public Outreach and education programs include:

- Visits to schools to provide interactive information in the classroom or out in the schoolyard;
- Demonstrations involving the use “Enviroscape Models--including “stormwater” (also used for wetland education), and “coastal” models;
- Active programs at specific events, such as scheduled wetland activities at local state park events, fairs or scout jamborees;
- The development of agency speaker pools for requests from the public to come and provide information to the community;
- Development of Internet based activities, some with specific sites for children;
- Involvement in specific programs such as:
  - the Florida Envirothon
  - the Disney Environmental Challenge
  - Technical Reports
  - Science fairs

The development of many of the above programs and program tools are in part cost shared with other organizations and regulated entities capable of supplying funding and materials for wetland outreach efforts.

To aid in training and support for environmental outreach personnel the State Committee on Environmental Education was formed to bring a network of environmental educators together twice a year to share programs, tools and other information useful towards providing environmental education to the public.

Additional outreach education materials may be accessed at:

- St. John’s River Water Management District Programs & Programs website at: <http://sjr.state.fl.us/programs/index.html>.
- SFWMD website at: <http://www.sfwmd.gov/site/index.php?id=1>. The outreach sites are listed in alphabetical order under the “outreach” listings. Information on a training program focused on the Big Cypress Basin is at [http://www.sfwmd.gov/organ/2\\_bcb.html](http://www.sfwmd.gov/organ/2_bcb.html).

## **Tax Incentives**

The state does not provide any tax incentives for owning or conserving wetlands. However, many local governments do provide for a lowered tax rate for properties in a wetland or conservation zoning classification.

## **Technical Assistance**

Florida has extensive ownership of wetlands in public lands such as state parks, state forests, and lands that have been acquired under various land acquisition programs at the state and regional (water management district) level. Many of these lands are actively managed by the state and the water management districts. However, the state does not offer any direct assistance for managing privately owned wetlands.

## **Other Nonregulatory Incentives for Private Landowners**

The Everglades Forever Act (373.4592, F.S.) provides for granting credits to taxes established on farmers in support of the Everglades Restoration if the farmer implements best management practices for reducing phosphorus discharges.

- Tax incentives also may be established under Article VII, Section 4(a) of the Florida Constitution to encourage agricultural land, land producing high water recharge to Florida Aquifers, or land used exclusively for non-commercial, recreational purposes not to develop in aquifer recharge areas.

## Wetland Training and Education

The department and water management districts have regular and active training programs for their staff and staff of associated local governments. These programs concentrate on delineation of wetlands, and implementation of the regulatory and proprietary rules. Due to time (and sometimes funding) constraints, this training is occasionally provided to consultants and other members of the public when appropriate.

Upon request, staff makes presentations covering the wetland regulatory and proprietary programs to professional and private and public organizations. This includes two “short course” conferences per year to consultants and other representatives of the regulated community hosted by the Florida Chamber of Commerce.

All of the department and water management district programs have developed Internet sites with program information and publications concerning wetlands and surface water regulations. See “Guidebooks, Brochures, Websites, Other Educational Materials for outreach materials for the public (and private) sector.”

Specific, targeted training includes:

- The DEP’s Stormwater/Non–Point Source Management Program has developed a formalized Stormwater, Erosion, and Sediment Control Training and Certification Program for inspectors and contractors.
- The SWFWMD has held an annual Soils Identification and Seasonal High Ground Water Table Determination Workshop for the past 13 years.
- The SFWMD has a “Student’s Corner” website at: <http://www.sfwmd.gov/site/index.php?id=33>. This site contains several resources for teaching students about wetland and water issues including intern opportunities.

## Watershed Planning

Like many states, Florida has implemented a watershed management program that is based on the rotating basin concept. This program was authorized by the Florida Watershed Restoration Act of 1999 (403.067, F.S.) which establishes the state’s total maximum daily load program and was started in July 2000. Florida’s 52 major watersheds were divided into 30 groups, five in each of the six DEP District Offices. The watershed approach consists of five phases:

- Preliminary basin status evaluation. This phase uses existing data to evaluate the health of water bodies based on the data sufficiency, quality assurance, and data analyses procedures set forth in the Impaired Waters Rule, Chapter 62-302, F.A.C. The product is a Preliminary Basin Assessment that includes a Planning List of potentially impaired waters and a Strategic Monitoring Plan that outlines a monitoring program to fill in data gaps conducted in cooperation with watershed stakeholders.
- Strategic monitoring. During this phase water quality and biological monitoring is conducted to verify whether waters on the Planning List are truly impaired, to collect additional data on water bodies that had insufficient data to be analyzed using the Impaired Waters Rule methodology, and to conduct intensive surveys to collect data for the establishment of total maximum daily loads. The product is a Basin Assessment that includes more comprehensive assessment of water body health, a revised Planning List of potentially impaired waters, and a Verified List of impaired waters that is adopted by the DEP Secretary and then submitted to EPA as the state’s 303(d) list of impaired waters,
- Total Maximum Daily Load (TMDL) development. During this phase computer modeling and other data analysis techniques to establish the total maximum daily load for waters on the Verified List of impaired waters. A TMDL is the amount of pollutant loading that can be discharged to a water body such that it meets its designated beneficial uses.
- Watershed plan development. During this phase watershed stakeholders work with the DEP to equitably allocate the load reductions needed to achieve the TMDL and develop a watershed

management plan that specifies the roles, responsibilities, actions, schedule, and funding sources that will be used to restore an impaired water body.

- Watershed plan implementation. During this phase, NPDES permits are modified to reflect the load allocations set forth in the plan and interlocal agreements are entered into by the watershed stakeholders to provide assurance that the actions set forth in the watershed plan by the individual entities are done.

The activities being done under the watershed approach are building upon the watershed management efforts by water management districts and local governments such as the SWIM program, the National Estuary Program, and other watershed planning efforts. Further information about Florida's watershed management and TMDL program can be found at: <http://www.dep.state.fl.us/water/watersheds/index.htm>.

## **Special Problems**

Isolated wetlands in the panhandle are not adequately protected by the state at this time. The wetland resource permit program under chapter 62-312, F.A.C., in the panhandle only regulates dredging and filling in "named waters" and wetlands and other surface waters that are connected to those "named" waters. With the recent SWANCC decision, many of those isolated wetlands also are no longer regulated by the Corps. The state is working on rulemaking that would expand the environmental resource permit program that is in place in the rest of the state to the panhandle; an expanded ERP program would regulate works in the panhandle's isolated waters.

Extensive wetland and other surface water acreage in Florida has been, and continues to be, degraded by exotic and invasive species infestations. Florida has a regulatory program for exotic and invasive species, and spends millions of dollars each year on controlling those species. Regulatory permits also often include mitigation that targets removal and control of exotic and invasive species. However, despite those efforts, Florida remains one of the most susceptible states in the nation to continued exotic and invasive species due to a favorable climate and past actions of man that have disturbed historic conditions.

## **Coordination**

There is no one "wetland team" in Florida to guide or control all the programs that regulate, acquire, and manage Florida's wetlands. However, mechanisms are in place to foster communication on issues related by wetlands and other surface waters. These include:

- The DEP and water management districts frequently coordinate on individual permitting actions;
- The DEP and water management districts meet approximately four times per year on statewide issues involving implementation and coordination of the environmental resource permit program;
- The DEP and water management districts meet frequently to discuss issues related to water use and water consumption, both of which may adversely affect wetland and other surface water levels and functions;
- The DEP and water management districts regularly attend permit coordination meetings with the Corps.

## **Contact Person(s)**

Douglas Fry  
Bureau of Beaches and Wetland Systems, MS 2500  
Florida Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400  
(850) 921-9890  
[doug.fry@dep.state.fl.us](mailto:doug.fry@dep.state.fl.us)

## Contact Points

Website: <http://www.dep.state.fl.us/water/wetlands/index.htm>.

Web contact: Kate Grosmaire: (850) 921-9920; [Kate.Grosmaire@dep.state.fl.us](mailto:Kate.Grosmaire@dep.state.fl.us).

## Guidebooks, Brochures, Websites, Other Educational Materials

*This Old Pond* Video (approximately 5,000 copies distributed), available from the Southwest Florida Water Management District at: <http://www.swfwmd.state.fl.us/>.

NPDES Stormwater Construction Permitting brochures (approximately 800 distributed, with 800 more brochures ordered), available from the Southwest Florida Water Management District at:

<http://www.swfwmd.state.fl.us/>.

One Stop Permitting – Permitting Information – available at <http://www.swfwmd.state.fl.us/osp/>.

(\* denotes brochures available in pdf\*):

Getting A Permit: The Steps

\*AGSWM Process

\*ERP Permitting

\*Tips about Agricultural Permitting

How to Operate & Maintain Your Stormwater Management System

Publications of the Northwest Florida Water Management District (NFWFMD) can be accessed by clicking on “Publications” from the district’s home page at <http://sun6.dms.state.fl.us/nwfwmd/>. The NFWFMD also offers the publication “Waterways– Exploring NW Florida’s Water Resources,” and has additional brochures on specific waterways within the district.

Publications of the St. Johns River Water Management District can be accessed from the district’s home page at <http://sjr.state.fl.us/> by selecting “Publications” under “Quick Clicks” at the top of the page.

Publications of the SWFWMD can be viewed at: <http://www.swfwmd.state.fl.us/>. At the bottom of the district website is some outreach information, including websites for children. From the home site, one can click on Publications, Plans & Reports to go to the following site where resource information is listed and may be accessed: <http://www.swfwmd.state.fl.us/ppr/pubplnrpt.htm>.

Publications and reports of the SFWMD, including a link to educational sites can be accessed at: <http://www.sfwmd.gov/site/index.php?id=33>. Additional information from the SFWMD also is available at <http://www.sfwmd.gov/site/index.php?id=1> and click on “site map.”

Publications from the St. Johns River Water Management District (SJRWMD) may be accessed at <http://sjr.state.fl.us/programs/index.html>. Additional available material from the SJRWMD includes: Legacy Program – *Summary*: Water Resource Education. Legacy Program Site Index • Welcome • Governing Board • Programs & Projects • What’s New • Search. What it is The Legacy Environmental Education program is a cooperative educational venture between the St. Johns River Water Management District and high schools in the District’s 19-county service area. The program enlists educators and their students to help the District’s staff make public lands more accessible.

The Department of Environmental Protection’s Office of Environmental Education provides a listing of many of the DEP’s publications at (note-- DEP: For the following publications audience designations are provided as G for general, and E, M, and H for elementary, middle and high school, respectively): <http://www.dep.state.fl.us/secretary/ed/>. A listing of the publications pertinent to wetland education from the DEP education site also is available below. For specific information on the wetland and surface water programs, please refer to the specific web sites provided for each of the programs below:

Stormwater & Non-Point Source Management Program -- <http://www.dep.state.fl.us/water/nonpoint/>. Scroll down to Publications and Reports (<http://www.dep.state.fl.us/water/nonpoint/pubs.htm>). The publications and reports site also provides information on the implementation of "best management practices" (BMPs).

NPDES Stormwater Program-- [http://www.dep.state.fl.us/water/stormwater/npdes/guidance\\_links.htm](http://www.dep.state.fl.us/water/stormwater/npdes/guidance_links.htm). This site provides links to many EPA and DEP NPDES publications and guidance.

Bioassessment of Florida's Aquatic Ecosystems - <http://www.dep.state.fl.us/water/bioassess/index.htm>. This site describes biological approaches to measure and evaluate the consequences of human actions on biological systems. Posters also can be obtained at <http://www.dep.state.fl.us/water/bioassess/posters.htm>.

Mine Reclamation Program-- <http://www.dep.state.fl.us/water/mines/index.htm>. This site provides links to the following aspects of the program: Environmental Resources; Management Plan for the Integrated Habitat Network – Lease Nos. 3963 and 3995; Dam Safety; Mandatory Non-Phosphate; Mandatory Phosphate; Nonmandatory Reimbursement; Mine Safety, Phosphogypsum Management; Technical Section, and Mine Reclamation Rules. For more information, contact: DEP - Mine Reclamation, Collins Building, 2051 E. Dirac Drive, Tallahassee, FL 32310-3760, Phone (850) 487-3894, Fax (850) 488-1254.

Wetland Resource Program (often referred to as the Environmental Resource Program)-- <http://www.dep.state.fl.us/water/wetlands/index.htm>. This site includes information inclusive of the Wetland Resource Permitting program, the Environmental Resource Permitting program, and the Sovereign Submerged Lands Program applicable throughout the state. The program's training and education site is at <http://www.dep.state.fl.us/water/wetlands/>. This site contains access to publications developed for the program.

Sovereign Submerged Lands Program - <http://www.dep.state.fl.us/water/wetlands/erp/ssl.htm>.

Apalachicola National Estuary Research Reserve--850-653-8063

- Educational Opportunities – Outline of available education programs at the ANERR - E-H
- The Oyster Catcher – Quarterly newsletter by the ANERR – G
- Project Estuary Reserve – Middle/High school curriculum, available for checkout from NERR library – M-H
- Estuarine Pathways – Elementary curriculum available for checkout from the ANERR library – E
- Coastal Connections – Educational field trip opportunities from ANERR – G

Florida Keys National Marine Sanctuary--305-743-2437

- Florida Keys Environmental Education Resource Directory – 1997 edition-Provides information on resources for environmental educators in Monroe County – E-M
- Keeping Your Bottom off the Bottom – A grounding prevention brochure – G
- Protecting Paradise-Florida Keys Safe Boating Tips – An eight-minute video on grounding prevention tips – G
- Florida's Coral Reef Ecosystem – A poster depicting the coral reef ecosystem of the Florida Keys – G-E
- FKNMS site Brochure – An overview of the FKNMS includes regulations – G
- FKNMS Upper Region Site Brochure – Provides Information about mooring buoys, tips for divers and snorkelers, and Sanctuary regulations – G
- FKNMS Lower Region Site Brochure – Provides Information about mooring buoys, tips for divers and snorkelers, and Sanctuary regulations – G
- Sounding Line – Quarterly newsletter about the FKNMS – G
- Summary of What You Need To Know to protect Sanctuary Resources – Brochure that summarizes all of the FKNMS regulations – G

#### Rookery Bay Research Reserve--941-775-8845

- Rookery Bay Field Guide – Book on plants and animals found in RBNERR. Costs \$10 – G
- Marine Science Curriculum – Manual includes field, lab and classroom activities for high school students – H
- KEEP IT CLEAN - A Citizen's Guide to Protecting Our Estuary – Describes actions citizens can do to avoid contributing to non-point pollution – G
- Rookery Bay Boater's Guide – A boater's guide to the Bay – G
- Rookery Bay Poster – Clyde Butcher black and white art poster – G

#### Southwest Florida Aquatic and Buffer Preserves--941-575-5861

- Aquatic Preserves of Southwest Florida – Brochure on the aquatic preserves of the region – G
- Pine Island Sound Aquatic Preserve – Brochure on the aquatic preserves – G
- Introduction to Aquatic Preserves in The Charlotte Harbor Estuary – "Do You Know Where Your Aquatic Preserves Are?" – G
- Aquatic & Buffer Preserves of Southwest Florida – Summary Table – G
- Charlotte Harbor Estuaries Volunteer Water Quality Monitoring Network – Background information for interested volunteers – G

#### WATER--850-487-1855

- Florida State of the Environment: Ground Water, Reuse of Reclaimed Water, Stormwater Management – 3 booklets that describe the program areas of stormwater management, ground water and reuse of reclaimed water in Florida – G-H
- Florida Water Quality Assessment – Section 305 (b) Report 1998 for the State of Florida – G
- Florida Ground Water Guidance – Brochure providing numeric screening levels for assessing the ground water concentrations minimum criteria standards believed to affect human health – G
- Pointless Personal Pollution – Brochure on nonpoint sources of pollution and what we can do to reduce nonpoint sources – G
- Save the Swales – Brochure on runoff, purpose and importance of swales and what you can do to reduce runoff – G
- Eastman and Laird's "Teenage Ninja Turtles Storm Drain Savers" – Activity books on purpose of storm drains and how we can keep them clean – E-M-H
- The Waterfront Property Owner's Guide – 58-page brochure describes homeowner tips on how to protect waterbodies and how to maintain your water front property – G
- How to Judge Environmental Planning for Subdivisions – 45-page Citizens guide to help individuals not professionally trained to be able to evaluate land development plans – G
- EnviroScape Training Aid – LOAN ONLY - portable kit with landscape allows hands-on demonstrations of nonpoint and point sources of water pollution and ways to prevent pollution – E-M-H-G

#### Mine Reclamation--850-488-8217

- Ongoing Projects & Programs Which are Interrelated With the Implementation of the Integrated Habitat Network Coordinated Development Area – Information for participants in the State Phosphate Mine Reclamation Program – G
- A Regional Conceptual Reclamation Plan for the South. Phosphate District of Florida – An analysis of environmental, economic & political factors within a 9 county region of central Florida. Includes maps – G

### Wetland Resource Permitting 850-488-0130

- Florida State of the Environment Wetlands Resource Permitting – Describes wetland types, why we should protect our wetlands, and the rules and regulations for permitting – G-H
- Single-Family Dredge and Fill and the DEP, Single-Family Dock Construction and the DEP, Shoreline Stabilization and the DEP – Three brochures that describe single-family dredge & fill dock construction & shoreline stabilization – G
- Take It Back – Video (5 min) on stewardship of the earth – Upper elementary to adult.
- Wetlands Delineation Manual – 98-page manual discussing Wetlands Delineation Methodology followed by examples of practical application of Methodology at nineteen reference sites located throughout the state – G
- Florida Wetland Plants: An Identification Manual – 588-page manual that reveals Florida's wetlands with over 800 colored photographs. Provides description of plants, their habitat and associates plant communities – G

### Environmental Education--850-488-9334

- Florida-State of the Environmental Series – 7 booklet series describes the regulatory programs. -Air Quality, Ground Water, Reuse of Reclaimed Water, Solid Waste Management, Stormwater Management, Wastewater Management, and Wetlands – G-H
- Classroom and Field Experiments for Florida's Environmental Resources – Booklet describes 14 laboratory and field experiments for middle and high school environmental and science classes – M
- Environmental Education Leaflets #1 thru #10 – #1 Wetlands in Florida, #2 Ground Water in Florida, #3 The Automobile and the Environment, #4 Solid Waste and Recycling, #5 The Water You Drink, #6 Mercury in Florida's Environment, #7 Invading Exotic Species in Florida, #8 Global Climate Change & Florida, #9 Making Recycling Work, #10 Watershed and River Basin – M-G
- Your Environment – Booklet aimed at upper elementary/middle school children with information and activities describes Florida's environment and how you can help to protect it – E-M
- Color the Coast With Pelican Pete & Molly Manatee – Activity book for K-3 grades describes beach and coastal environmental problems – E
- Florida's Beaches and Shores – Activity book for 3--5 grades describes the beach and coastal areas – E
- The Indian River-An Exceptional Lagoon – Teacher supplemental guides to developing an understanding of the lagoon and the interdependence of its plants and animals – T
- Aquatic Plants – Activity book for 3-8 grades describes plant life and animal life in aquatic areas – E-M
- Estuarine Habitats-Elementary Teaching Activities Series – A set of seven Supplemental Teaching Activities for Estuarine Habitats – T
- EPA "Wetlands--Reading List" – Reading list for pre-kindergarten through K-12 on Wetlands – E-H
- People, Growth, and Endangered Ecosystems: Exercise in Biodiversity Grades 6-10 – Lesson guide for 6-10 grades describing activities to help students understand ecosystems – M-H
- Surveying and Ecosystem – An exercise for 9-12 grades familiarizing students with an ecosystem – H
- Studying A Piece of an Ecosystem – A class exercise for 9-12 grades familiarizing students with ecosystems – H
- Resort or Resource...Either... Or Both? An Environmental Citizenship Activity Grades 9-11 – Activity book for 9-11 grades describes environmental citizenships and wetlands – H