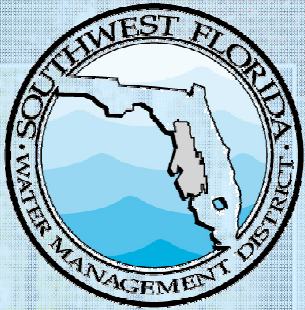


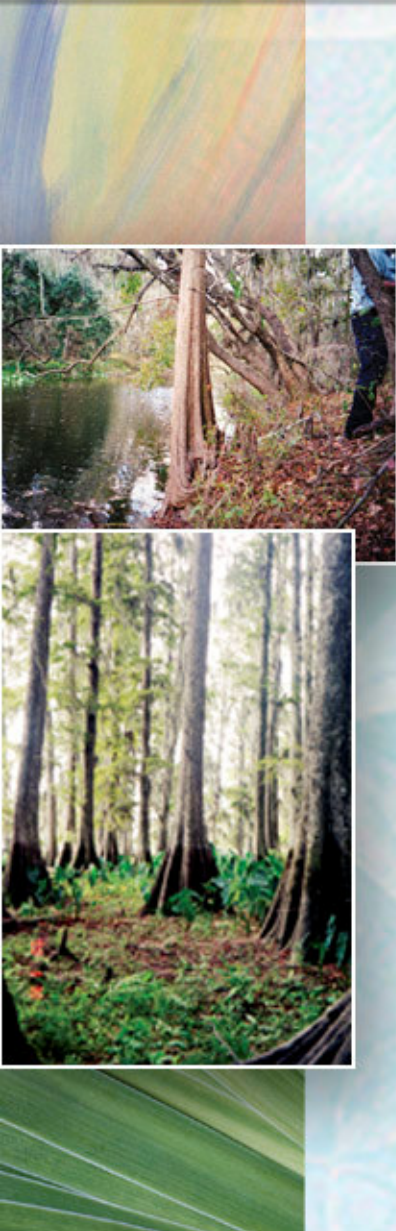
Peace River Cumulative Impact Study



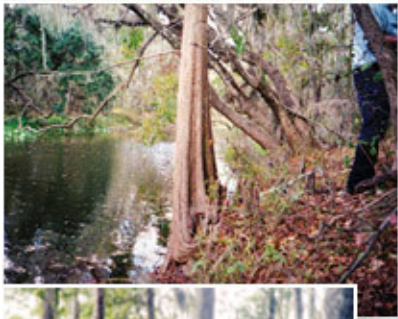
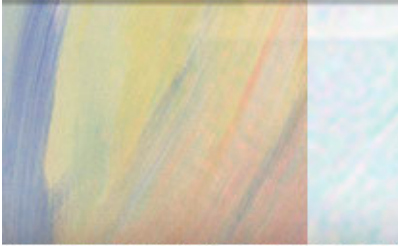
June 21st 2006
Public Information Workshop

Regulatory Effectiveness

What is the scope of this
Cumulative Impact Study?



What are Cumulative Impacts?

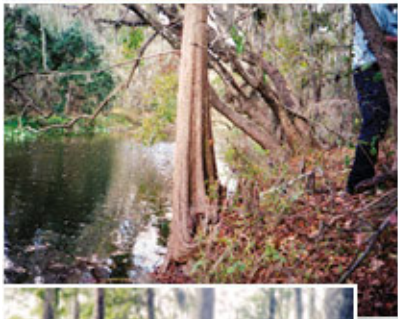
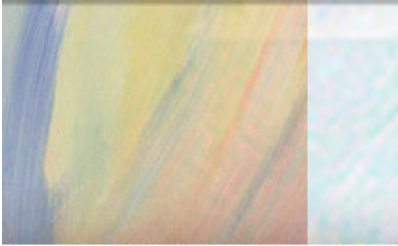


- Cumulative vs. Non-Cumulative
- Reversible vs. Non-Reversible
- Time Lag for Responses

Legislative Mandate

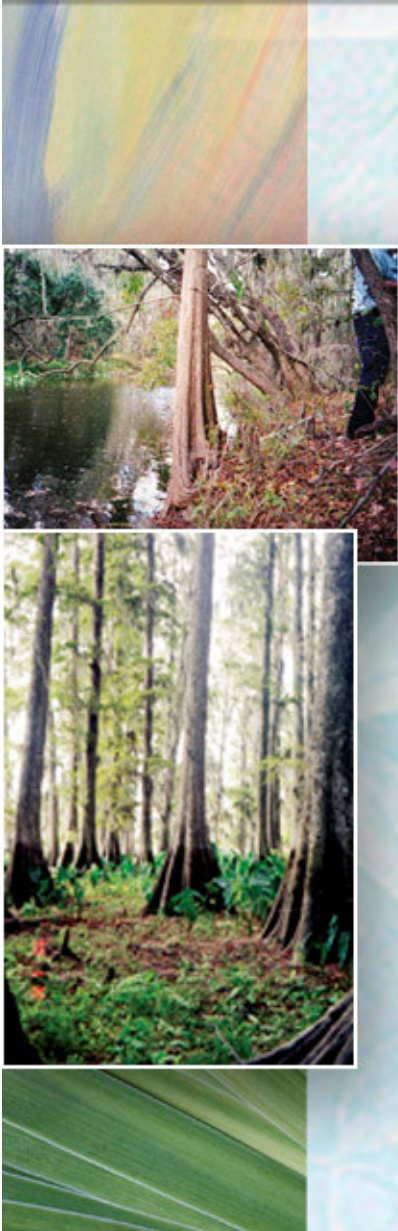
**Address cumulative impacts
from changes in:**

- **Land Form**
- **Hydrology**



Some Things We Haven't Included

- Air pollution regulation
- Point source pollutant loading
- Solid waste management
- Hazardous waste issues
- Risks associated with unlikely or episodic events
 - Dam breaks, spills, etc.
 - Weather events
- Stormwater treatment per se

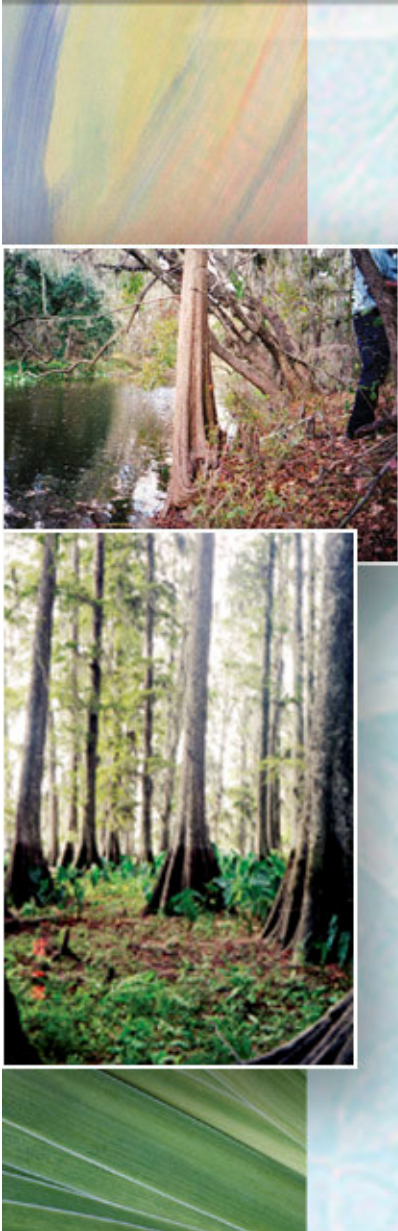


Time Period for Evaluation Regulatory Effectiveness:

- **Prior to** state legislation

- After legislation **pursuant to** exemption, permit or reclamation plan

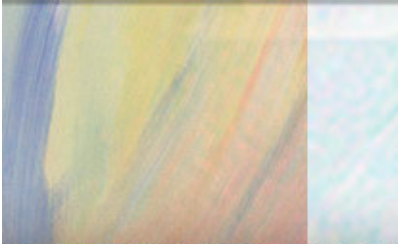
No bright line distinction between “prior to” and “pursuant to”



Study to Look at . . .

Cumulative Effects on:

- **Surface waters**
- **Ground waters**
- **Fisheries**
- **Aquatic & estuarine habitats**
- **Water supplies**



The Legislature said . . .

Study to Evaluate Regulatory Effectiveness of Existing

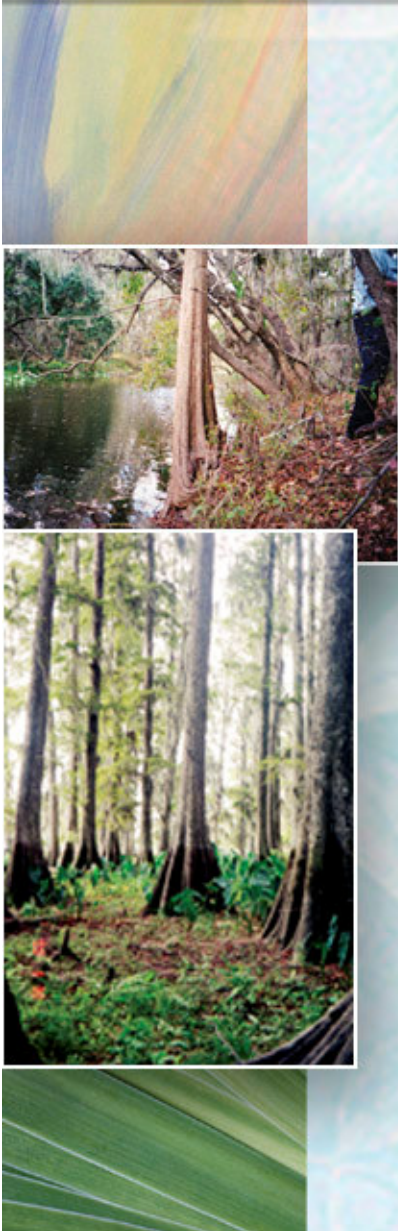
Programs in:

- Avoiding**
 - Minimizing**
 - Mitigating**
 - Compensating**
- . . . for cumulative impacts on water resources**



What is a Regulatory Program?

- Use of police powers to control individual activity for collective good
- Example: Permits are required to use groundwater or change drainage
- Typically, regulatory programs focus on an *activity*.



Resource Management Programs

Regulatory programs are not the only government response to perceived impacts

Agencies develop *Resource Management Programs* to augment regulation.

Examples include:

- Surface Water Improvement and Management (SWIM) program
- Comprehensive Watershed Management (CWM)
- Facilitating Agricultural Resource Management Systems (FARMS)



Combination Programs

**Many Programs Combine
Regulation with Incentives**

Examples:

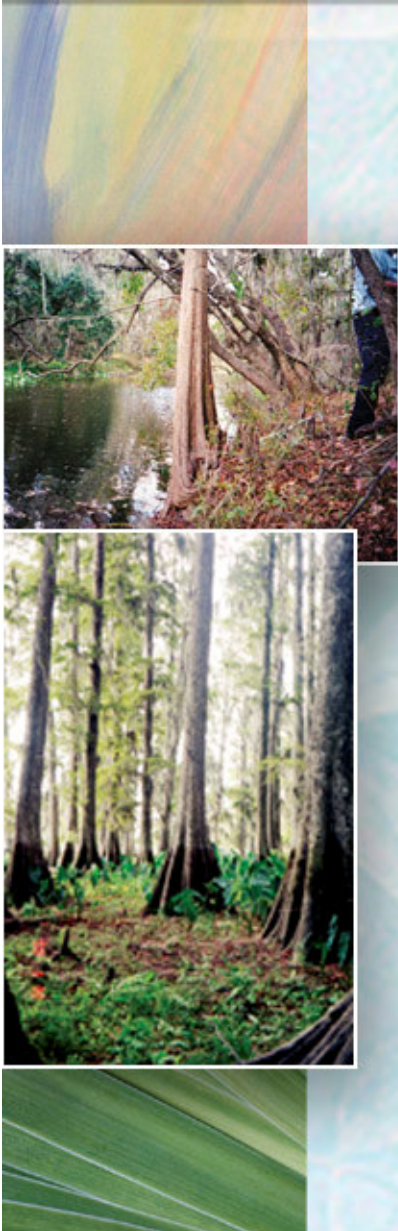
- **Southern Water Use Caution
Area Recovery Strategy**
- **Shell and Prairie Creek
Watersheds Management Plans**



Next Step: The Resource Management Plan

The Peace River Basin Resource Management Plan:

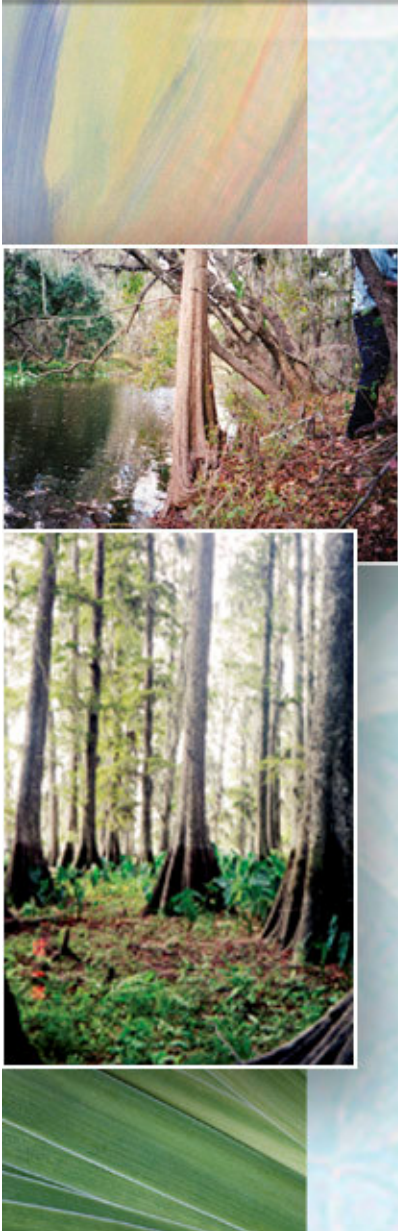
- Must identify **both regulatory and non-regulatory** actions to minimize cumulative impact.
- There is no bright line distinction between regulatory and resource management programs.
- This study considers relevant **regulatory and non-regulatory** programs.



Buffers within 100-Year Floodplain

Study will consider:

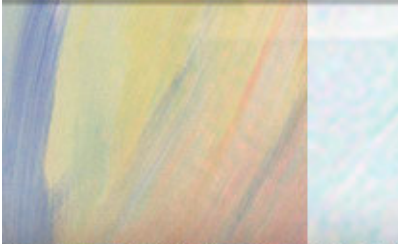
- **Environmental benefits**
- **Legal issues**
- **Economic impacts**
- **Use of buffers as mitigation**



Approach to Evaluate Regulatory Effectiveness

Three Steps:

- 1. Develop historical timeline of regulatory changes**
- 2. Develop historical timeline of land form & hydrology changes**
- 3. Compare and draw inferences**



Objective Measures for Land Form

Potential indicators of land form changes are:

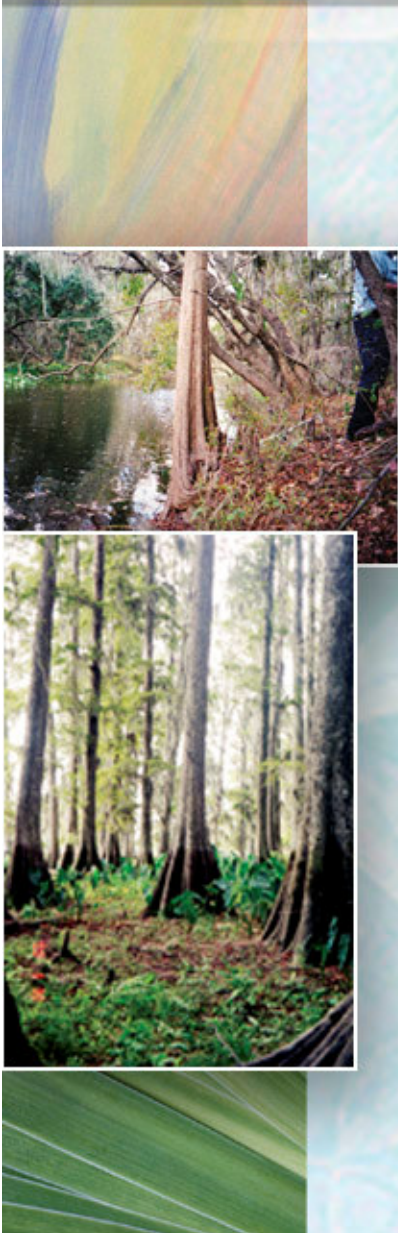
- Changes in wetland acreage
- Changes in streambed length
- Changes in acreage of publicly owned land
- Changes in key habitats



Objective Measures of Hydrology

Potential indicators of hydrological change include:

- **Changes in contributing basin baseflow**
- **Changes in potentiometer surface evaluations**
- **Changes in water quality**
- **Changes in artesian spring discharges**



Fisheries and Aquatic Habitat

Potential indicators of fisheries and aquatic habitat change include:

- **Changes in structure and diversity of indicator fish species.**
- **Changes in abundance and distribution of indicator fish species.**
- **Changes in water quality characteristic affecting fish communities.**



Data Inadequacies

We already know . . .

- Historical data incomplete
- Regulatory history sketchy
- Inferences will not be air tight

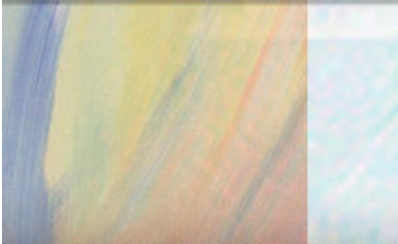
Nevertheless, the study can
provide good **direction** for the
Resource Management Plan



HISTORICAL TIMELINE

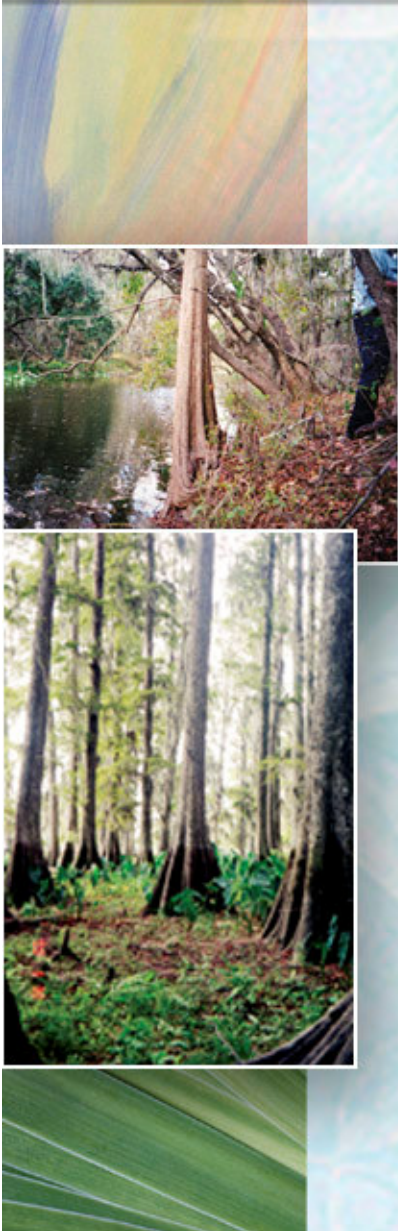
Regulatory Programs Through the 1980's

**(The 1990's will be addressed on
July 26 in Punta Gorda.)**



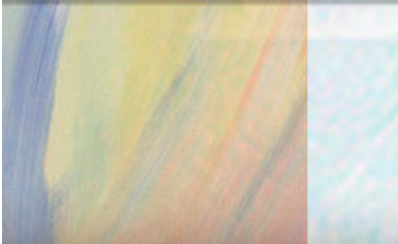
Early Regulation

- 1953 Artesian Well Act
- 1955 Florida Water Resources Study Commission
- 1957 Water Resources Act
 - Prevent waste & unreasonable uses
 - Not to restrict “existing water rights”
 - Exempted diversions from springs, domestic or livestock use, and “control of water-borne wastes from municipalities or industries”



Turbulent Sixties

- **1960 Hurricane Donna**
- **1961 SWFWMD created for flood control**
- **1962 Silent Spring – Rachel Carson**
- **1967 Florida Air & Water Pollution Control Commission & Department**
- **1968 Article X, Section II Florida Constitution placed sovereign submerged lands in public trust**
- **1969 Department of Natural Resources**
- **1969 Department of Air & Water Pollution Control**



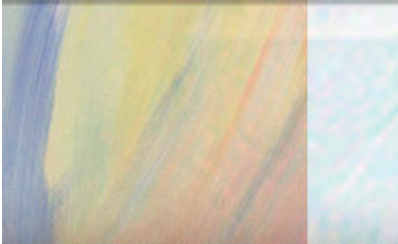
Water Resources Act of 1972

- **Legislative Foundation for Chapter 373, F.S.**
- **Based on Model Water Code**
- **Designated Water Management Districts (originally six)**
- **Required establishment of minimum flow and levels**
- **Required permits and established criteria for consumptive use and alteration to surface waters**
- **Provided exemptions**
- **One year delay taking effect**



Chapter 373 Amended in 1974

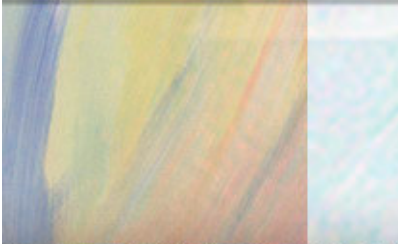
- **Authorized water supply authorities.**
- **Authorized water management districts to assist counties and municipalities in establishing water production and transmission facilities.**



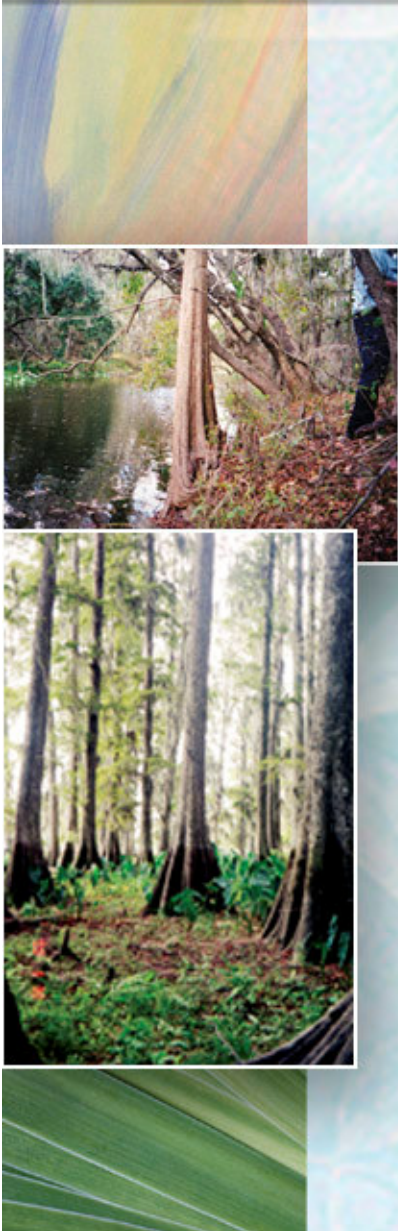
Early Mining Statute

Severance Tax on Solid Minerals Enacted – 1972

- As an incentive for reclamation refunds were offered for qualified reclamation (25%).
- Refunds up to 50% of the severance tax were offered if title was transferred to the state.



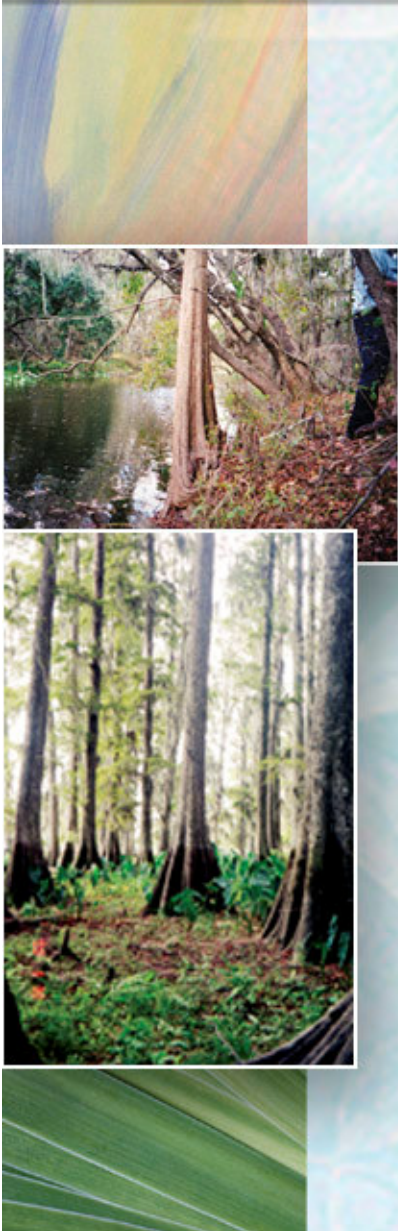
SWFWMD Adopted Rules in 1974



- **16J-0 required permits and established generic minimum flows and levels.**
- **16J-1 regulated activities in Works of the District.**
- **16J-2 regulated the consumptive use of water.**
- **16J-3 regulated well construction and adopted procedures for establishing water use caution areas.**
- **16J-4 regulated management & storage of surface waters.**

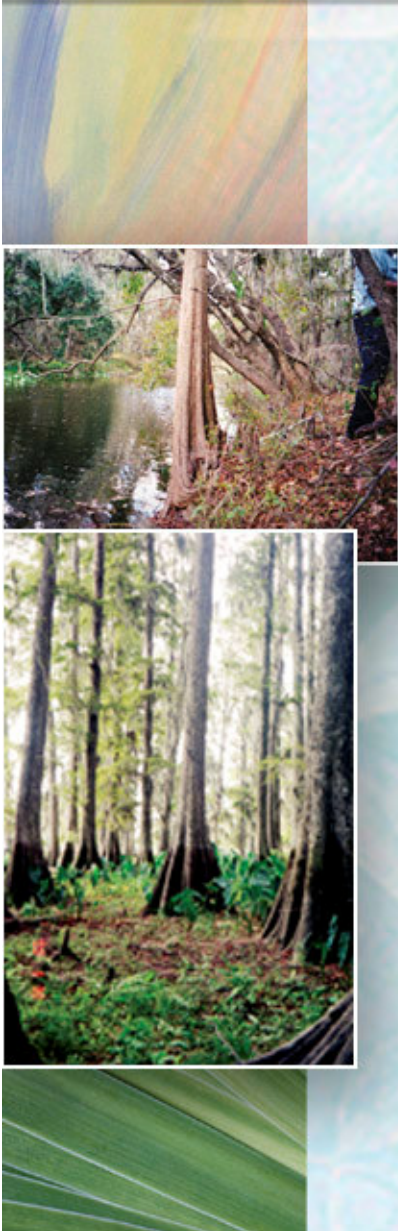
Environmental Reorganization Act 1975

- **Created DER & ERC**
- **DER secretary given broad powers, including ability to delegate to water management districts**
- **ERC given exclusive standard setting authority**
- **Governor & Cabinet given power to rescind or modify any rule or order of a water management district**



Mandatory Reclamation

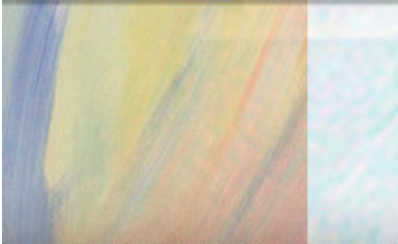
- Tax law amended to require reclamation on lands mined after July 1, 1975
- Severance Tax Law revised in 1978
 - Created Nonmandatory Land Reclamation Trust Fund
 - DNR authorized to develop a master reclamation plan for nonmandatory reclamation
 - Land Use Advisory Committee
 - Directed money to the nonmandatory Reclamation Trust Fund



Minimum Flows and Levels in 1978

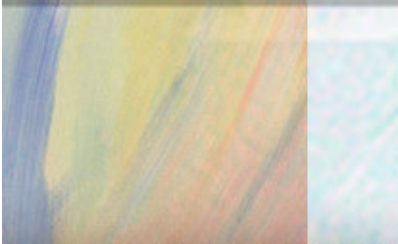
SWFWMD Adopted Rules that:

- Addressed lakes and impoundments.
- Prescribed a process for establishing management levels for lakes and other impoundments with water levels controlled by structures.



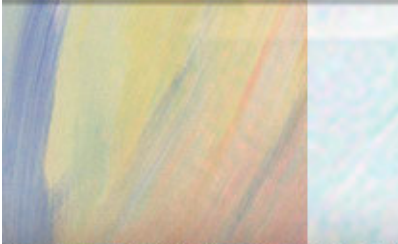
Groundwater Resource Availability Inventory

- **Enacted in 1982**
- **Develop information to share with local governments & RPCs.**
- **Future growth plans should “reflect the limitations of the available groundwater or other available water supplies”.**
- **Initiated Water Resource Assessment Projects (WRAPs).**



Watershed Wetlands Protection Legislation

- Water Quality Assurance Act -- 1983
- Warren Henderson Act – 1984
- Established additional criteria for public interest beyond water quality
- SWFWMD conditionally exempted phosphate mining from rules regulating MSSW -- 1986
- SWFWMD revamped management and storage of surface waters (MSSW) rule to include **isolated** wetlands -- 1987



Nonmandatory Reclamation Program

- **Enacted 1984**
- **Established Nonmandatory Land Reclamation Committee**
- **Directed DNR to adopt rules for program**
- **Required Governor and Cabinet approval of plans**
- **Directed funds to the Nonmandatory Land Reclamation Trust Fund**



Phosphate Land Reclamation Act

- Enacted 1986
- Legislative Intent
 - Achieve a beneficial use
 - Enter into MOU to avoid duplication and “maximize the effectiveness”
- Restoration means
 - Recontouring & re-vegetation
 - Return to the type, nature and function of the ecosystem prior to mining
 - Within technological & economic limitations



Phosphate Land Reclamation Act (cont.)

- Applied to
 - Lands subject to mandatory reclamation
 - Lands initially used as clay settling areas after July 1, 1984
 - Standards do not apply to lands mined before July 1, 1975
 - This Act deals only with reclamation:
“Not to be construed as giving the department *permitting authority* over mining operations.”



Phosphate Land Reclamation Act (cont.)



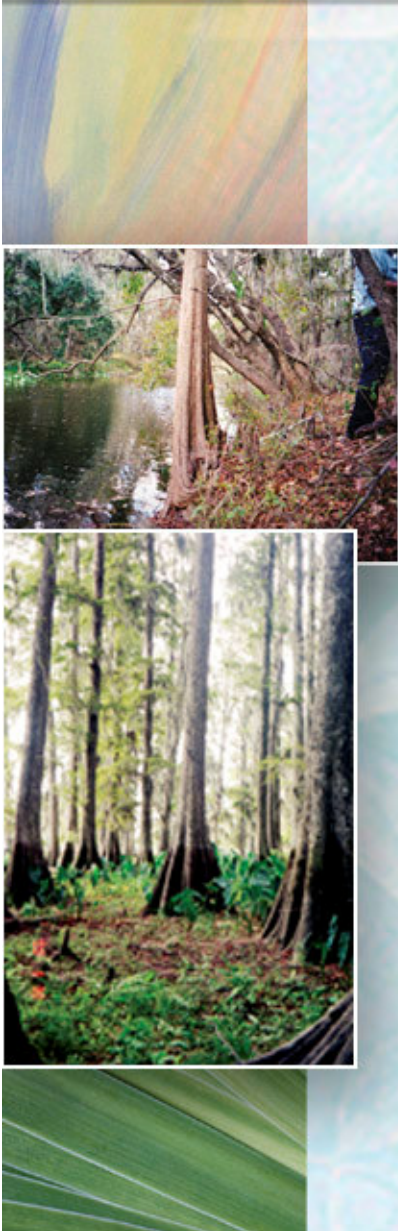
- **Required certain agency actions**
 - MOU between SWFWMD & DNR 1987
 - Adoption of rules implementing the Act by DNR in 1987
- **Specified detailed financial responsibility requirements, but allowed that “compliance with the rate of reclamation established [in the Act] is deemed to be appropriate financial assurance”.**
- **Provided for variances**

DNR Adopts Mandatory Phosphate Reclamation Rule - 1987



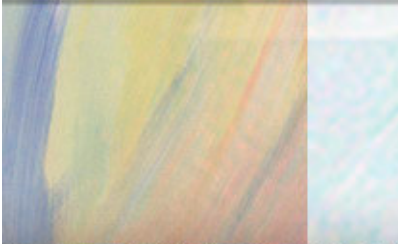
- Added specific requirements for **wetland reclamation type-for-type and acre-for-acre** and allows lake's zone of fluctuation to count as **wetland replacement**.
- Industry challenged rule, but rule withstood challenge.
- Rule does not address phosphate mining *per se*, but only phosphate land reclamation.

DNR/SWFWMD MOU – 1987



- SWFWMD & DNR commit to joining hydrologic analysis of conceptual reclamation plans for mining activities exempted from MSSW review.
- SWFWMD will comment on annual reclamation applications for consistency with CRP for **water quantity issues only.**

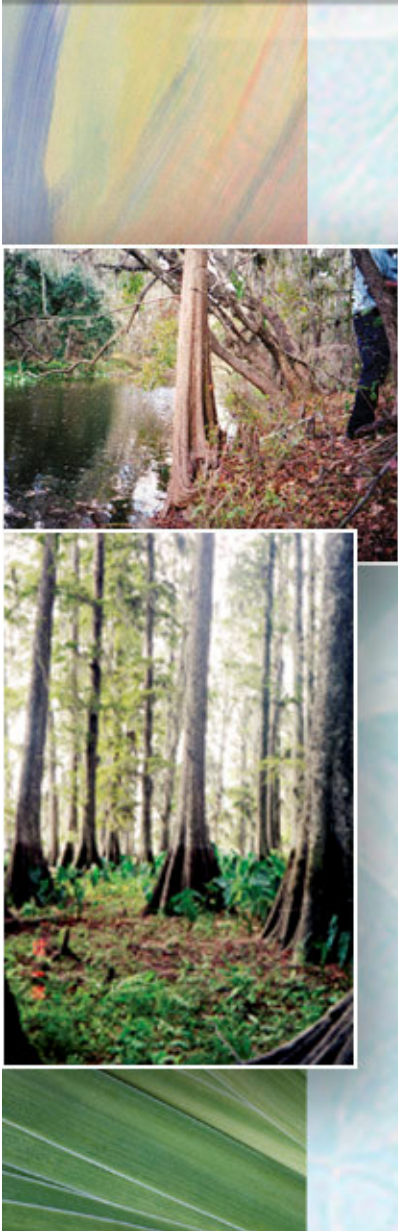
SWFWMD Revised Water Use Permitting Rules – 1989



- **Adopted current 14 criteria**
- **Adopted revisions to take into account on-site environmental impacts of permit decisions.**
- **Required the 14 criteria be met on an “individual and cumulative basis.”**
- **Water use cannot cause “adverse environmental impacts” to wetlands, lakes, streams, estuaries, fish and wildlife, or other natural resources.**

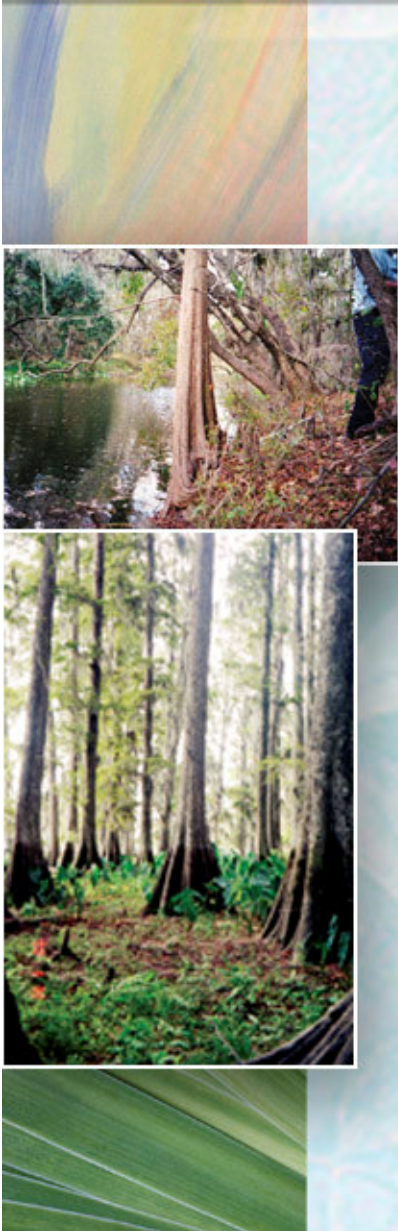
Status Summary Entering the 1990's

- **Regulatory framework in place**
 - Chapters 373, 378, and 403, F.S.
 - SWFWMD, DER, DNR
 - Water Use Permitting, Reclamation, Wetland Resource Permitting, and Management and Storage of Surface Waters
- **Minimum levels established for controlled lakes, but no minimum flows for Peace River**



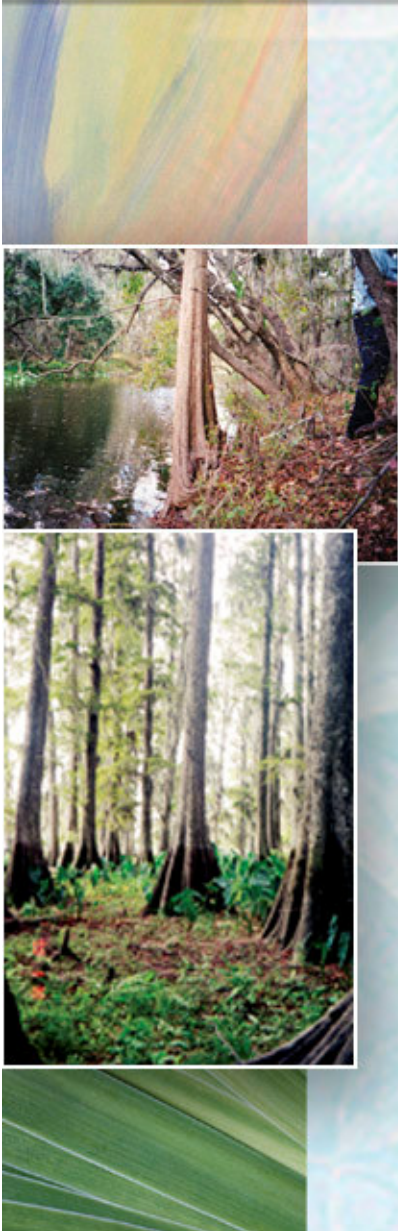
Status Summary Entering the 1990's

- Groundwater Resource Availability Inventories/Southern Water Use Caution Area
- Phosphate Mining Regulations
 - Mandatory Reclamation
 - SWFWMD exemption from MSSW (isolated wetland) permitting
 - DER regulates “waters of the state”
 - No state agency regulates mining operations, *per se*



Change is coming in the 1990's . . .

- **Southern Water Use Caution Area management plan & rules**
- **Environmental Resource Permit legislation and rules**
- **Regulatory Streamlining (new division of responsibilities)**
- **Mitigation rules**
- **Chapter 373 amendments refine the role of WMDs**
- **Phosphate Permitting Litigation**



The Story Continues . . .

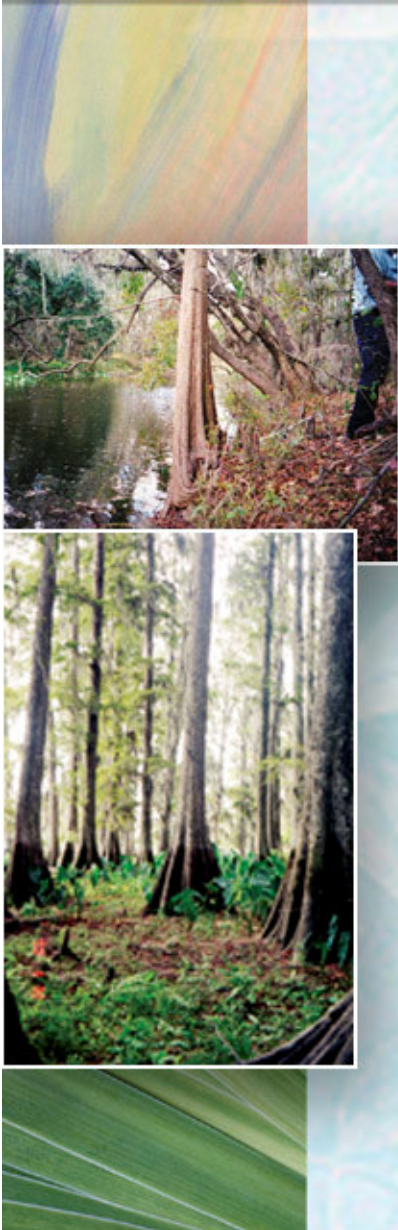
July 26, 2006

6:00 PM

Punta Gorda Isles Civic Association

2001 Shreve Street

Punta Gorda, Florida 33950



Subconsultants

- **HydroGeoLogic**
- **EarthBalance**
- **Longman, Lewis & Walker, P.A.**
- **Avineon**
- **W. Dexter Bender**

