

SFWMD C-111 Project  
Monitoring Plan

Draft

11/04/02

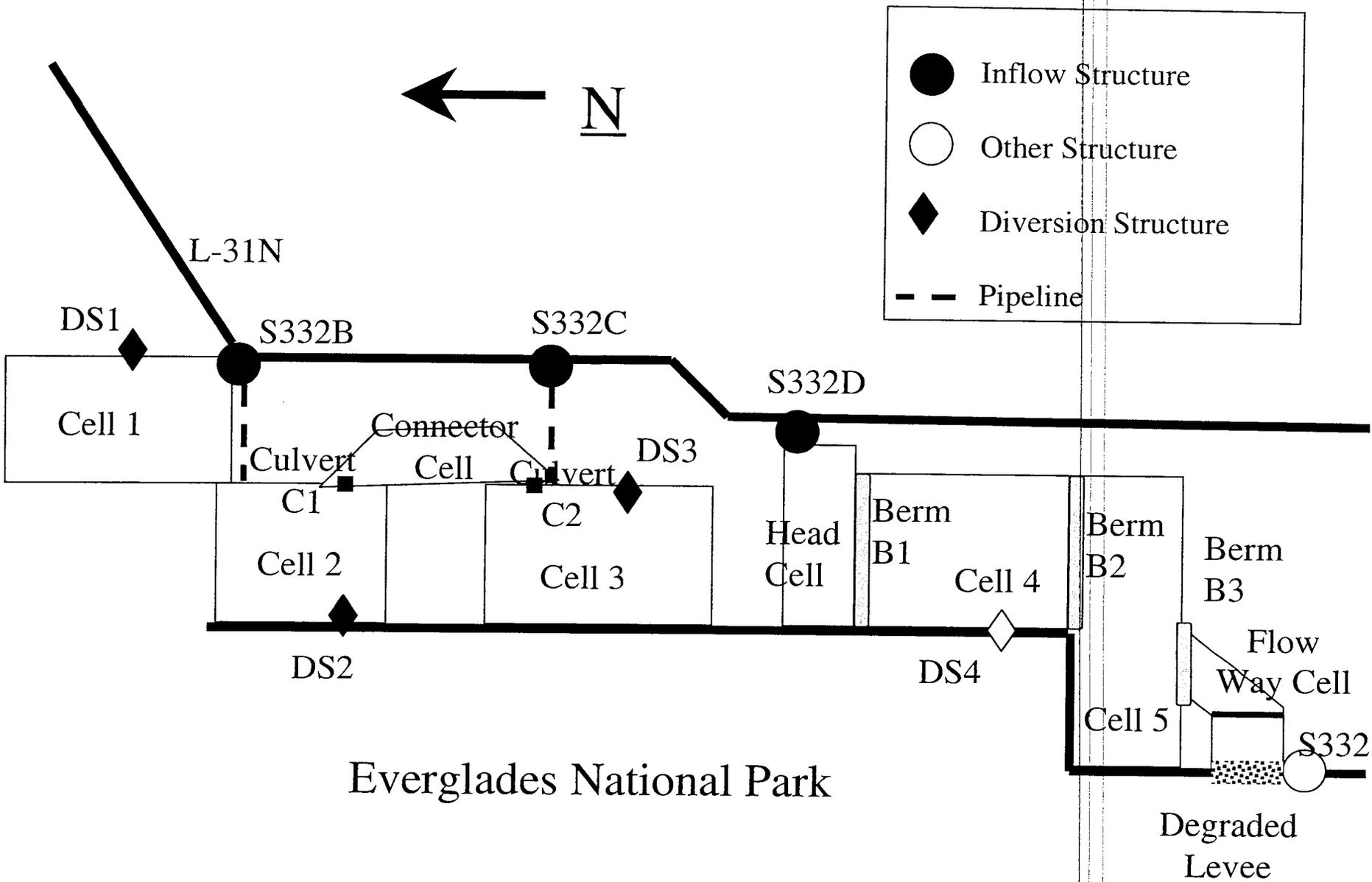
# **SFWMD C-111 Project Monitoring Plan**

- Draft Monitoring Plan in progress since 5/02**
- Reviewed and revised by District Staff**
- Provided to ENP, ACOE, FDEP, USFWS 10/02**
- Interagency conference call 10/24/02**
- Minor comments received back**
- Some conflicting comments received**

**Requesting technical assistance from the TOC to  
resolve conflicts**

# Five Functional Sections

- Hydrologic Monitoring of Detention Areas
- Permit Compliance Monitoring of Detention Areas
- Standards Compliance Monitoring of ENP
- Ecological Response Monitoring in ENP
- Monitoring of Surrounding Lands



## Hydrologic Monitoring of Detention Areas

- Meteorological Parameters and Evapotranspiration (S332, S331W and Joe Bay) .
- Surface water flow to be measured at all three inflows (S332B, S332C, S332D).
- Estimate seepage from cells.

### **Groundwater wells /seepage meters? Key component of project**

- Surface water flow to be measured at the routine outflow.

**Define the outflow point?**

**Recommend using Berm B3.**

- Four diversion structures (DS1 through DS4).

**Effective to monitor all four for flow?**

**Recommend monitoring 2 sites discharging into ENP.**

# Permit Compliance Monitoring of Detention Areas

## **Inflows and Outflow (S332B, S332C, S332D and outflow)**

- Weekly autosamplers for TP and TN
- Bi-weekly grabs for nutrients
- Quarterly grabs for metals and pesticides

**Autosamplers composites?**

**Recommend flow composites.**

# Permit Compliance Monitoring of Detention Areas

## **Interiors of Detention Areas**

- Quarterly Mosquitofish for THg in all 7 major cells
- Quarterly Bass/Sunfish for THg in all 7 major cells
- Quarterly grabs for THg (C1 and C2)
- Monthly grabs for nutrients and ions (C1 and C2)

## **Monitoring of berms?**

**If B3 is not defined as the outflow, then recommend monitoring B3.**

# Permit Compliance Monitoring of Detention Areas

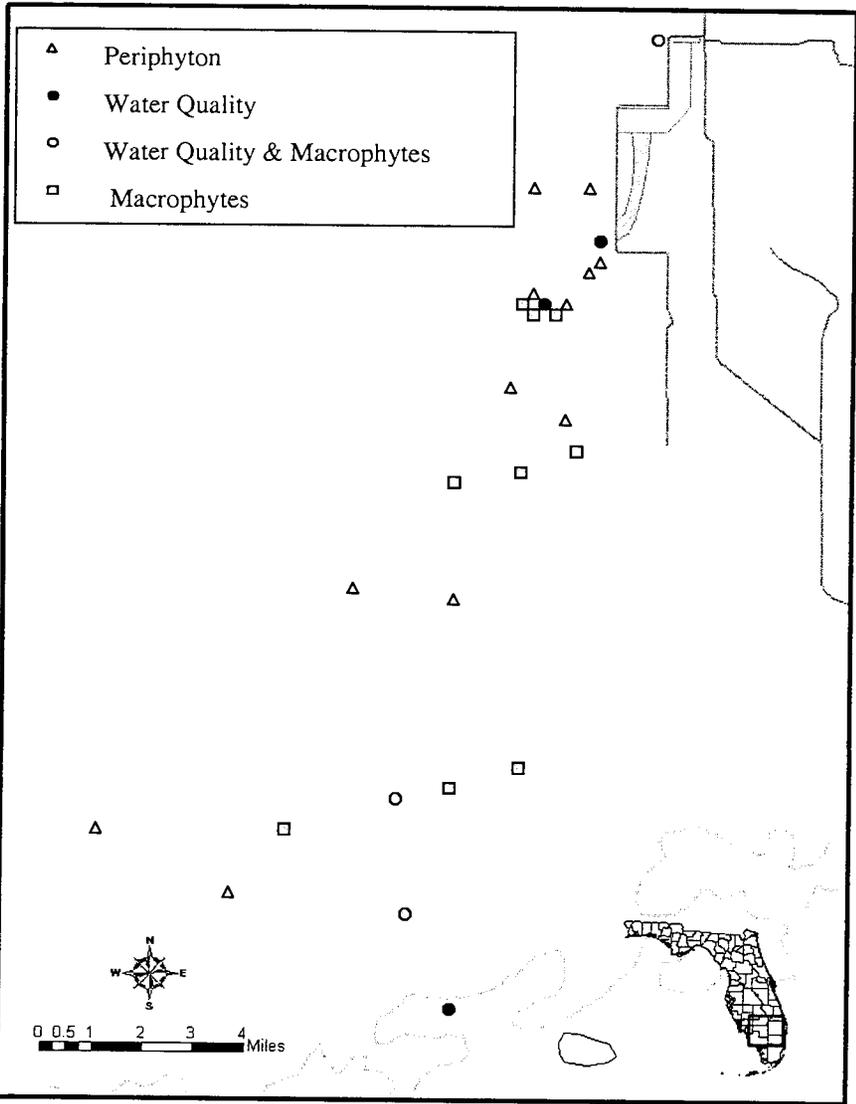
## **Diversion Structures**

- Four diversion structures. Two emergency overflows to the east, one emergency overflow to the west, and one bypass structure to the west.
- Permit monitoring of discharges to the west into ENP (2 sites).
- Data to be compared with S332B and S332D.

**Monitor all four diversion structures? Define 'event' period. Define sampling frequency.**

**Recommend monitoring structures discharging into ENP. An event is one week. Monitor once per event.**

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# Ecological Response Monitoring

## **Periphyton 12 Sites**

- **Periphytometers quarterly.**
- **Surface water TP and TkN before and after periphytometers.**
- **Diel assessments at six sites prior to periphytometers.**
- **Ambient Taxonomy and TP/TkN semi-annually.**
- **Measurement of periphyton productivity (light-dark) quarterly.**

## Ecological Response Monitoring

### **Macrophytes and Sediments 12 Sites**

- **Speciation, biomass and productivity bi-monthly.**
- **Plant nutrients and biomass annually.**
- **Soil C:N:P, bulk density and % organic matter annually.**
- **Soil THg and pesticides at 4 sites semi-annually.**
- **Porewater at 2 depths for salinity, SRP, and DIN, semi-annually.**
- **Surface water TP/TN at 6 sites tri-daily by autosampler.**
- **Surface water nutrients at 6 sites monthly by grab.**
- **Surface water DOP/DON at 6 sites quarterly by grab.**

## Standards Compliance Monitoring

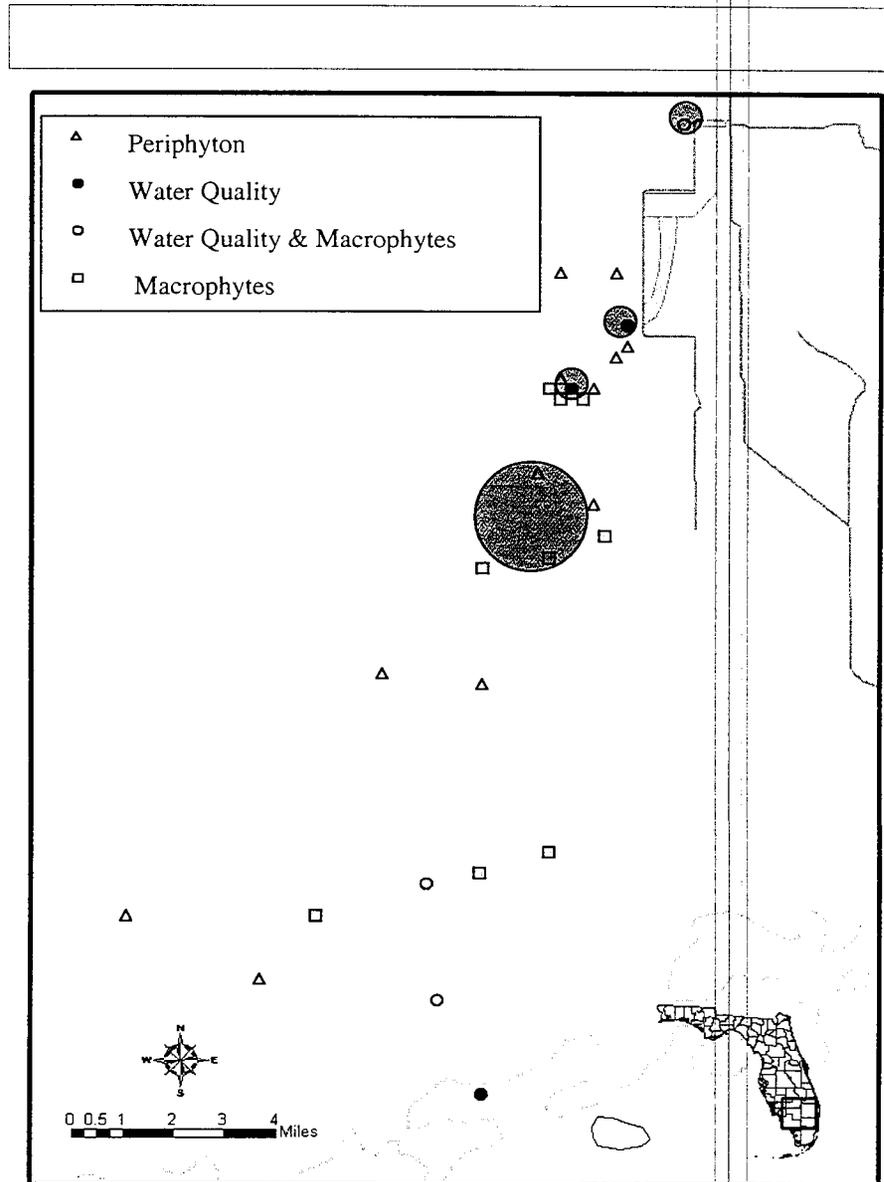
### **Surface water 4 Sites**

- **Surface water TP/TN weekly by autosampler.**
- **Surface water nutrients and ions monthly by grab.**
- **Surface water metals and pesticides quarterly by grab.**

**Site locations not selected.**

**Recommend integrating with ecological response sites.**

# Recommendations for Standards Compliance Sites



## Standards Compliance Monitoring

**Ground water wells at 9 sites with 2 wells each  
in ENP.**

- Dissolved nutrients quarterly.**
- Pesticides semi-annually.**

**Integrate with existing wells?**

**Shallow wells or deep wells?**

## Monitoring of Surrounding Lands

**Ground water wells 8 sites with 2 wells each  
east of the detention areas**

- Water depths quarterly.**

**Integrate with existing wells?**

**Shallow wells or deep wells?**



## Team Members

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