Water Issues in the Suwannee River Basin

Suwannee River Water Management District
Glenn Horvath
THE FUTURE OF WATER
COSTLY • DIRTY • SCARCE
Improving Florida’s Water Supply Management Structure

September 2003
Remember these headlines?

WAR OVER YOUR WATER

Water wars are here, and your water is in the middle

State water wars pit North vs. South

Impact of shifting water debated

Report renews water wars

Regions fight over who gets how much

By Marcia Mattson
Times Union staff writer

Florida's water management districts

Source: Summary of Water Projects, 2002

The Times-Union, Jacksonville, Tuesday, October 7, 2003

The Gainesville Sun, Sunday, August 17, 2003

It's a deadly concern.

MR DAISY
Member of Florida Springs Task Force
FIRE NEARS U.S. 441
Winds could push Bugabooboe blaze across road

By KAREN VOYLES
Sun staff writer

Winds could push the blaze east of the highway.

By NATHAN CRABBE

Lake County residents concern the area.

By RIVER OF DOUBT

Bottled water is being consumed.

By KAREN VOYLES

Sewage is being released.

FLOODING FOLLOWS AREA STORMS

Rain flooded off Fairview Road in Columbia County on Sunday.

By KAREN VOYLES

The storms that soaked Gainesville and other parts of North Central Florida caused widespread flooding in the area.
Water is a high profile issue and there are concerns about the transfer and allocation of water.
Florida's Five Water Management Districts

- Northwest Florida Water Management District
- Suwannee River Water Management District
- St. Johns River Water Management District
- Southwest Florida Water Management District
- South Florida Water Management District
Florida Water Law (373, F.S.)

- Water is a public resource
- WMD Board is “trustee” of this resource
- Water Use Permit system allocates this resource
Total Water Allocated to WU Permits in 2000 (Surface Water and Ground Water)

- NWFWMD: 685 mgd
- SFWMD: 4,000 mgd
- SJ RWMD: 1,677 mgd
- SRWMD: 323 mgd
- SWFWMD: 1,569 mgd
Water allocated by use types

SRWMD

51% Industrial/Comm.

30% Irrigation

11% Power Production

4% Public Supply

4% Others
Minimum Flows And Levels
Chapter 373.042, F.S.

(1) Minimum flow...shall be the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area.
(2) Minimum water level...shall be the level of ground water in an aquifer and the level of surface water at which further withdrawals would be significantly harmful to the water resources of the area.
...shall be calculated...using the best information available.
MFL Establishment Process
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Nitrate-N Load and Discharge

WY 1998 to 2001

- **Nitrate-N Load (tons/yr)**
  - 1998: 7,113 tons
  - 1999: 4,745 tons
  - 2000: 2,620 tons
  - 2001: 2,999 tons

- **Total Discharge (cfs)**
  - 1998: 2,620 cfs
  - 1999: 2,999 cfs
  - 2000: 7,113 cfs
  - 2001: 4,745 cfs
Groundwater is the major source of water during base flow conditions in the Suwannee River System.
The SRWMD has the greatest concentration of fresh-water springs in Florida.

50% of all Florida springs

21 of 33 first magnitude springs (64 mgd)
Average Flow

100 cfs or more (64 mgd)
10-100 cfs (6.4-64 mgd)
1-10 cfs (0.64-6.4 mgd)
0.1-1 cfs (0.064-0.64 mgd)

Magnitude

1
2
3
4

100 cfs or more (64 mgd)
10-100 cfs (6.4-64 mgd)
1-10 cfs (0.64-6.4 mgd)
0.1-1 cfs (0.064-0.64 mgd)
MFL Establishment Process

Data Assessment → Data Analysis
MFL will be an acceptable alternative hydrologic regime that approximates the natural regime and is adequate to meet ecological needs.
MFL Establishment Process

Data Assessment → Data Analysis → Select Target Criteria
MFL Target Criteria
Chapter 60-40.473 Florida Administrative Code

- Recreation
- Fish and wildlife habitats and passage of fish
- Transfer of detrital material
- Sediment loads
- Estuarine Resources
- Freshwater storage and supply
- Aesthetic and scenic attributes
- Water quality
- Navigation
- Filtration and absorption of nutrients and pollutants
Habitat based MFLs will protect water resources and ecology from significant harm caused by withdrawals or diversions and...

Protect existing legal users.
TARGET HABITATS

Floodplain aquatic habitats
(ponds, tributary creeks, sloughs)
TARGET HABITATS

Riverine shoals habitat
TARGET HABITATS

Riparian snag habitat
TARGET HABITATS

Submerged aquatic vegetation beds
TARGET HABITATS

Tidal marshes (fresh, brackish & salt)
TARGET HABITATS

Tidal freshwater swamps

Tidal marshes
TARGET HABITATS

Low-Salinity Submerged Aquatic Vegetation Beds
TARGET HABITATS

Oyster reefs and bars
MFL Establishment Process

1. Data Assessment
2. Data Analysis
3. Select Target Criteria
4. Select MFL
“...the establishment of MFLs is highly infused with policy considerations.”

Charlotte County vs. Southwest Florida WMD
FISHBONZ

BAIT RENTAL
LIVE & FROZEN KAYAKS
QUALITY FISHING TACKLE
MFL Establishment Process

1. Data Assessment
2. Data Analysis
3. Select Target Criteria
4. Select MFL
5. Board Adoption
MFL Adoption Process

- Adopted by rule by the SRWMD Governing Board
- Adoption is preceded by:
  - Voluntary technical peer review
  - Public Notice
  - Workshops
  - Website information
  - Public Meetings
  - Review by Department of Environmental Protection
MFL Establishment Process

1. Data Assessment
2. Data Analysis
3. Select Target Criteria
4. Select MFL
5. Board Adoption
6. Implementation
Implementation
Tools

- **Regulatory**
  - Consumptive Use Rule
  - Environmental Resource Permitting
  - Water Shortage Rule

- **Technical tools**
  - Monitoring
  - Ground and surfacewater models

- **Non-regulatory**
  - Public education on MFLs
  - Water conservation education
Can an MFL change over time?

- 373.042 F.S. allows use of best information available
- Data will improve and change with time
- Analytical tools will improve with time
Questions?

mysuwanneeriver.com
Schedule

- The Suwannee River Basin rivers and springs completed by 2008
- Other rivers and springs completed by 2011
- Lakes completed by 2011
“Reach Method”

Suwannee River Water Management District
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Questions?

mysuwanneeriver.com
MFL Establishment Process

Data Assessment → Data Analysis → Select Target Criteria

Implementation ← Board Adoption ← Select MFL