

TO: Myakka River Coordinating Council

FROM: Environmental Confederation of Southwest Florida (ECOSWF)

ECOSWF'S BRIEF HISTORY:

The Environmental Confederation of Southwest Florida (ECOSWF) is an umbrella organization for groups that share in the same mission of preserving and protecting the natural and historical resources of Florida. ECOSWF has individual members as well.

For over 30 years, ECOSWF has endeavored to assist in protecting the water resources of the State.

Representing ECOSWF, I was a member of the Eastern Tampa Bay Water Use Caution Area and the Southern Water Use Caution Area and SWUCA public work groups updates. ECOSWF challenged the SWUCA RULES and I attended every day of the almost 9- month Hearing. Working with Jeffery Tobias and supported by Governing Board member Rebecca Eger, I created SWFWMD's Environmental Advisory Committee. I attended monthly, 2 -day, Governing Board meetings for over 25 years. I brought the dead trees in Flatford Swamp to the Board's attention when they were discussing a management plan for the Swamp. This resulted in the District's study of Flatford Swamp and the conclusion it was lateral seepage from vegetable row crops during bed preparation. The excess water during the DRY time going into the Swamp drowned the trees.

THE MYAKKA RIVER

In 1985, the Florida Legislature adopted the Myakka River Wild and Scenic Designation and Preservation Act, which designated a 34-mile segment of the Myakka River within Sarasota County as a "Florida wild and scenic" river. The water bodies of the Myakka River were granted the designation of Outstanding Florida Waters (OFW) in 1988. Both of these designations are intended to provide additional protection to special waters recognized for their ecological significance, by providing the highest degree of protection under state permitting policies.

An Outstanding Florida Waters designation requires that water quality must not be degraded below the level that existed at the time of the OFW designation. However, significant degradation of the Myakka River has occurred since its original designation as a wild and scenic river. (above information provided by Chris Oliver).

MYAKKA RIVER HYDROLOGICAL PROBLEMS.

There are two immediate hydrological problems facing the Myakka River:

1. Anthropogenic hydrological alterations due to excess water run off from row crops and tree farms.
Row crops prepare the beds for planting crops by raising the water table, from the water table up. Sometimes this is as much as 3'. Agricultural operations have shown that bed preparation can be achieved by watering from the top down.
2. The Myakka River has been identified in SWFWMD's *Needs and Sources and Future Water Supply* as a source for future potable water supply.

It has been proposed that “excess” water during the rainy season can be diverted. The water would be harvested at Flatford Swamp.

Tree Mortality Assessment of the Upper Myakka River Watershed. June 1998

EXECUTIVE SUMMARY

Starting in the mid-1990’s, the District began receiving inquiries concerning potentially abnormal levels of tree mortality in the Flatford Swamp and adjacent areas.¹

In addition, similar tree mortality patterns were being simultaneously reported in other portions of the Myakka River basin south of State Road 70.²

Geographic Extent of Tree Mortality

Zone of Potentially Abnormal Mortality and Stress (ZPAMS), it is concluded that the acreage of both the Upland/ZPAMS and Wetland/ZPAMS strata has increased over the period 1990-1997. The acreage of the upland/ZPAMS strata has increased from zero in 1990, to approximately 31 acres in 1997, whereas, the acreage of the Wetland/ZPAMS strata has increased from about 473 acres to 1,002 acres over this period... The rate of increase in the Wetland/ZPAMS acreage has also risen from about 68 acres/year from 1990 to 1995, to 95 acres/year from 1995 to 1997.³

Likely Causes of Tree Mortality

Numerous lines of evidence discovered in this study indicate that the primary cause of the observed tree mortality in the study area is hydrologic stress related to higher seasonal high-water elevations, longer seasonal hydroperiods, or both. Anthropogenic influences related to increased baseflow contributions from groundwater are suspected since no meteorologic anomalies were discovered that would account for the observed trends. No evidence of any other anomalous events such as chemical spills or discharges, fire damage, or diversions of streamflows was discovered during this study.⁴

Recommendations

...it is recommended that the District adopt the following two management goals for the Upper Myakka River watershed:

1. Prevent further tree die-off, and reverse tree decline, in the affected areas: and
2. Reduce the volume of water in the upper Myakka River system.

It is further recommended that the district address these goals through a four-tiered response including:

- Implement reasonable regulatory controls.⁵

A decrease in surface and/or groundwater contributions to streamflow and/or baseflow could be achieved through numerous means including:

- Decreasing the pumping and use of groundwater for irrigation.

In addition to the resource management actions discussed above, regulatory measures should also be considered to meet the recommended basin management goals. Possible regulatory actions are:

- Designation of the upper Myakka River basin as a *Volume Sensitive* basin, followed by formal rule making; and

- Amendment of existing water use permits to require greater water conservation and irrigation efficiencies, or increased surface water storage volumes.⁶

Final Report on Dendrochronology and Tree mortality within the Flatford Swamp

General Conclusions

- Based on data presented here and other information from the Flatford swamp study, I believe that these trees died from an increase of flooding within the system. Critical factors for flood related mortality are the duration of flooding during the growing season, the flood tolerance of the species and the **number of years** (emphasis added) the flooding stress occurs...
- However, even the most flood tolerant trees will die from flooding if the duration is long enough and it occurs over multiple years. I conclude that flooding duration within the swamp increased within the 1980's so I expect that this mortality will continue until the flooding duration within the swamp is returned to conditions prior to the 1980.⁷

One possible short-term mitigative strategy would be to construct an irrigation pumping station at an appropriate location to remove water from the swamp and deliver it to the adjacent agricultural operations. The effect of this action would be twofold. First, irrigation needs would be met through the use of excess surface water in the swamp and, while permitted groundwater withdrawals would be temporarily reduced or eliminated. Second, the system could be managed to approximate the natural hydroperiod by alternating between surface water and groundwater withdrawals to satisfy the irrigation needs.⁸

The following are applicable excerpts from the SWFWMD's Rule 40D-2.301

40D-2.301 Conditions for Issuance of Permits.

(1) To obtain an individual WUP, renewal, or modification, an applicant must provide reasonable assurance that the proposed consumptive use of water, on an individual and cumulative basis:

(c) Is consistent with the public interest.

(2) In order to provide reasonable assurances that the consumptive use is reasonable-beneficial, an applicant shall demonstrate that the consumptive use:

(a) Is a quantity that is necessary for economic and efficient use;

(b) Is for a purpose and occurs in a manner that is both reasonable and consistent with the public interest;

(c) Will utilize a water source that is suitable for the consumptive use;

(d) Will utilize a water source that is capable of producing the requested amount;

(f) Will not cause harm to existing offsite land uses resulting from hydrologic alterations;

(g) Will not cause harm to the water resources of the area in any of the following ways:

3. Will not cause harmful saline water intrusion or harmful upconing;
4. Will not cause harmful hydrologic alterations to natural systems, including wetlands or other surface waters; and
5. Will not otherwise cause harmful hydrologic alterations to the water resources of the area.

The permits causing the dead trees in Flatford Swamp and down into the Myakka River State Park should be denied or modified to meet the above Conditions.

THE OTHER TROUBLING FLATFORD SWAMP ISSUE is that the Myakka River is identified as a future source of drinking water.

We learned at the Myakka River Coordinating Council that the District wants to take excess water during the rainy season. **THERE IS NO EXCESS WATER DURING THE RAINY SEASON.** The volume of water going down the Myakka river during rainy season is a management tool used to kill off exotic vegetation that grows during the dry season.

The water level is also used to determine the width of the River. Reduce the water flow and the river becomes smaller.

IT IS IMPORTANT OT NOTE, THE SWFWMD PURCHASED FLATFORD SWAMP TO **PROTECT THIS RARE HARDWOOD SWAMP.**



Water flowing in ditch next to a row crop operation during the DRY season.



Dead trees in Flatford Swamp.



Dead trees in Flatford

REFERENCES

1. *Tree Mortality Assessment of The Upper Myakka River Watershed*, June 1998 page *ES-1*.
2. Ibid.
3. Ibid page *ES-4*.
4. Ibid page *ES-6*.
5. Ibid. page 4-5
6. Ibid page *ES-7*.
7. Ibid page 4 J. Renee Brooks, Assistant Professor University of South Florida
8. Ibid. page 4-4

ECOSWF requested the District provide the dollar amount spent in an attempt to restore the hydrology of the Swamp. We do know that an additional amount of \$450,000.00 was just approved to treat the injected water to drinking water standards.

As of 1/16/2022, the dollar amount has not been provided.

The District admits that a cost/benefit analysis has not been conducted.