



## **Inequities between Different Stakeholders within the SFWMD Service Area**

Document prepared by:

**James Evans, City of Sanibel and Rae Ann Wessel, SCCF**

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The South Florida Water Management District (SFWMD) Service Area covers 16 counties from Orlando to the Florida Keys. The total land area managed by the District includes 18,000 mi<sup>2</sup>. The Lower West Coast Service Area includes approximately 2,216 mi<sup>2</sup> and includes the Caloosahatchee and Estero Bay watersheds.

The Lower West Coast Service area experiences a number of inequities when compared to other regions of the SFWMD. These inequities include high regulatory releases to the Caloosahatchee from Lake Okeechobee, annual violations of the Caloosahatchee Minimum Flows and Levels rule (MFL), uneven economic investment in storage projects and infrastructure favoring east coast and southern interests, and reduced research and monitoring efforts in the Caloosahatchee Estuary as compared to other parts of the District's service area. The overall inequities to the Caloosahatchee River and Estuary are the result of decisions made by SFWMD staff and the Governing Board that favor agricultural and urban water supply interests over natural resource needs and protection. The deep rooted operational bias has resulted in years of impacts to the Caloosahatchee while municipal and agricultural interests have enjoyed near-perfect year-round hydrological conditions.

While the Army Corps of Engineers is responsible for operating the lake according to the Lake Okeechobee Release Schedule (LORS) 2008, this document focuses on the inequities resulting from management decisions made by the SFWMD. Below is a list of the inequities in the management of water for the Lower West Coast Service area as compared with other regions within the SFWMD service area.

There is a fundamental policy bias used by the District that favors permitted water users at the expense of natural systems. For years water release inequities pitted one natural system against another i.e. Lake O vs. estuaries or east coast vs. west coast estuaries. In more recent years we have strived, and succeeded, in working together with various stakeholders to focus the issue on the policy of managing water for the natural system and permitted water consumers. The current reevaluation of the adaptive protocol process has brought this policy issue into focus and we need to continue to push for equity in water supply for natural systems.



Following is an outline of issues that create inequities for the Caloosahatchee followed by brief discussion of each issue.

1. High Flows
  - a. Caloosahatchee Estuary receives the largest flows of excess water
  - b. Rate of Lake O water level rise and recession
  - c. Water management favors permitted users at the expense of natural systems
  - d. Agricultural backpumping for flood control vs ag water supply
  - e. Legal constraints directing water discharges
  - f. Modified Water Delivery – Tamiami Trail
  - g. Conveyance and capacity limitations/flexibility
2. Low Flows
  - a. Competition for water resources
  - b. Consumptive Use permitting
  - c. Caloosahatchee Minimum Flow and Levels (MFL)
  - d. Caloosahatchee Recovery Plan
  - e. Backflowing Caloosahatchee basin water into Lake O
  - f. Water reservation for the Caloosahatchee
  - g. Endangered Species Issues
3. Reduced Investment in infrastructure of western basin vs. others
4. Reduced investment in services provided to the Caloosahatchee

### High flows

The Caloosahatchee receives a disproportionately large share of regulatory discharges of excess water from Lake Okeechobee, higher than any other part of the system.

- High water levels in Lake Okeechobee are managed for the public safety of the communities around the lake and for the health of the lake. Although this is the responsibility of the Army Corps of Engineers, the District provides guidance on how to manage lake levels for the health of the lake. Once the dike was constructed around the lake in the 1930s, all of the flow that once went south was redirected to the two coasts. With the dike in a status of potential imminent failure, water is released to keep the lake below 15.5 ft (<17.25 per LORS 2008). The Caloosahatchee is the larger of the two outlets so it receives up to 70% of unwanted excess water.



- Lake levels are managed to ensure that the **rate of rise** and rate of recession minimize impacts to submerged aquatic vegetation and apple snail populations (snail kite food source) within the lake. To manage for the health of the lake ecosystem, when water levels increase too quickly, water is discharge to the east and west coast estuaries.
- Releases from the lake are limited to the south to preserve **agricultural operations** that are allowed to maintain water levels 18 inches below ground surface even though that results in the Caloosahatchee and St. Lucie estuaries receiving damaging releases that harm estuarine habitats including seagrasses, oysters, and other fisheries, . This could be addressed by requiring agricultural operations to provide water storage for their own excess water/stormwater instead of shunting the water into natural systems and the publicly funded infrastructure such as the Water Conservation Areas that were designed to take in and treat lake water, not agricultural runoff.
- The District allows **backpumping** into Lake Okeechobee for flood control. While the governing board prohibited agricultural backpumping for water supply in 2008, backpumping for flood control purposes is permitted. This effectively allows agricultural interests in the EAA to pump water off of their fields into the canals adjacent to the communities of Clewiston, South Bay and Belle Glade. When the headwaters in the S-2, S-3 and S-4 canals reach elevations of  $>10'$ , backpumping is permitted to prevent flooding the communities.
- There are several legal impediments to moving water south including water quality constraints, insufficient infrastructure, protected species issues and ongoing litigation with the Miccosukee tribe.
  - **Water Quality:** The Forever Everglades Act requires that water discharged to the Everglades National Park (ENP) contain no more than 10 parts per billion (ppb) of phosphorus. The water conservation areas (WCA) and stormwater treatment areas (STA) were designed to provide water quality treatment for lake water but have limited capacity because **agricultural runoff** is directed into these publicly funded treatment areas. This limits the treatment capacity and the amount of water that can be moved south. The less capacity available to treat lake water the more polluted water dumped out the estuaries.
  - **Infrastructure:** Tamiami Trail and canal capacity also limits flow south. **Tamiami Trail** is a dam that prevents flow south. Until it is



raised more flow cannot be directed south even with the U.S. Sugar land purchase because it would flood Miccosukee tribal lands. Capacity of the Miami, North New River and Hillsborough canals, that flow out of the lake through the EAA to the lower east coast, have limited capacity due to both impacts to **water tables in the EAA** but also from **urban development in Miami Dade**. Water that cannot be accommodated to the south because of these limitations comes out the estuaries.

- **Protected species** affect water management decisions as well. The lake and surrounding areas are managed for the protection of the endangered snail kite. The Everglades are managed for the Cape Sable Seaside Sparrow, water storage systems are precluded from being flooded on occasion because of nesting species such as black skimmers. Although the Caloosahatchee supports two federally endangered species, the smalltooth sawfish and the West Indian Manatee, and the endangered habitat of the small tooth sawfish, there are no protections in place for their protection from high flows.
- **Litigation** has had an effect on where water is discharged or not discharged resulting in inequitable impacts and lack of true shared adversity. To the south the Miccosukee tribe has sponsored numerous lawsuits that have limited flows south based on water quality and potential flooding among others. The USFWS has afforded protection for the Cape Sable Seaside Sparrow that has limited volumes and timing of flows. To the east homeowners are suing the Corps over the impacts from Lake releases.

### **Low flows**

A major inequity is the deep rooted and entrenched policy of the SFWMD that benefits permitted water users during low water conditions (dry season and droughts) at the expense of natural systems. This policy sacrifices the public crop (Seagrass, oysters, shrimp, fish and crabs) by allocating the public water resources for the benefit of private users i.e. municipal water supply and agricultural crops. This is a major policy issue that needs to be resolved.

### **Competition for water**

- Currently there is a great deal of inequity between agricultural and urban water supply and water supply for the environment. Policies and decisions made by SFWMD staff and the Governing Board routinely **cut**



**off water for natural systems** while permitted users experience no cut back and continue to receive 100% of their demand even when the natural system is experiencing explicit harm. This inequity impacts the Caloosahatchee by reducing beneficial flows needed to protect freshwater grasses and larval fishes that depend on lower salinities in the upper estuary.

- Inequity is central to the **Consumptive Use Permitting** process. These permits are issued to municipalities and agricultural users for 20 years. The permitting standard is that the withdrawals cause no harm. Over the past two years, the Lake Okeechobee Service Area (LOSA), which includes the Caloosahatchee basin, has been in the process of renewing permits for agricultural and municipal users. The SFWMD has been reissuing permits to existing permittees and bringing in users who have never been permitted (“No farmer left behind”). These permits grant water use volumes despite the fact that the District has demonstrated that they do not know the water budget they are permitting from. One indicator of this problem is that the Caloosahatchee MFL has been exceeded in most years, due to a lack of available water. So without a water budget the SFWMD has been permitting users for water without considering the needs of the natural system first, thereby perpetuating the problem. This **has caused harm** to the natural system in the Caloosahatchee in direct violation of the existing permitting standard that they withdrawals cause no harm.
- The **MFL for the Caloosahatchee** has been violated numerous times since it was established in 2001. The Caloosahatchee MFL was established to create an appropriate salinity regime in the upper Caloosahatchee estuary. When salinity drops below 10 psu in Ft. Myers for extended periods of time (> 30-days) we see impacts to the freshwater grasses and larval fishes that depend on the low salinity zone in the upper estuary.
- The **“Recovery Plan”** is supposed to identify how the MFL will be met. It is part of the water control plan. The recovery plan for the Caloosahatchee is construction of the C43 reservoir. When the plan was written it was presumed that construction of the reservoir would provide the storage needed to meet the MFL. The Caloosahatchee River Watershed Protection Plan published in January, 2009 revealed that the capacity of the C43 reservoir only represents one half of the needed storage. This leaves the “Recovery Plan” as only half a plan but is used by the District to limit storage/ infrastructure needed to resolve flow needs.



- During extreme dry seasons and droughts the SFWMD engages in a practice of redirecting or “**back-flowing**” water from the Caloosahatchee basin into Lake Okeechobee. This is done by shutting the lock at Ortona (S-78), allowing water to build up a head and flow east into the lake. This practice steals Caloosahatchee basin water that would otherwise be available to help meet the river’s MFL. This is done primarily to provide for urban and agricultural water supplies in the Lake Okeechobee Service Area (LOSA) and results in direct harm to the Caloosahatchee Estuary by not providing water needed to meet the MFL.
- The solutions to these problems are to establish a **statutory reservation** of water for the Caloosahatchee. A statutory reservation allocates the water needs of the natural system first, before water is permitted away through consumptive use permits. In addition to statutory reservations there are also CERP reservations required for all federal projects funded by the Comprehensive Everglades Restoration Project (CERP). In contrast to the statutory reservation these are designed to set aside only “new water” for the project i.e. the C-43 reservoir project. In preparation for the construction of the C43 reservoir, the SFWMD has initiated planning for a CERP reservation for the Caloosahatchee. However, that will only provide half of the water needed to meet the environmental needs of the estuary, leaving the natural system short resulting in continued MFL exceedences. Additional water to meet the estuary’s needs will need to either come from other water storage projects within the basin or from Lake Okeechobee and can only be assured through a statutory reservation.
- Just as with high flow issues, water is managed for protected species at the low end. The same species and same conflicts exist.
- During water shortage periods there is also competition for water between natural and constructed systems. Stormwater Treatment Areas (STA), the systems we have created to treat water, need to stay wet so that nutrients are not released. These kinds of conflicts will only increase as more storage areas are brought online, increasing challenges for managing where to put water.

### Distribution of Water Storage Projects and Infrastructure

- There is a great deal of economic inequity in the SFWMD. Although west coast tax payers pay the same amount, there is less flood control and



storage infrastructure investment on the west coast compared to the east coast and south. This limits our ability to store water to reduce the impacts of damaging regulatory releases and to provide environmental releases when water is needed to meet the Caloosahatchee MFL.

## Research and Monitoring

- Significantly more investment has been put towards research and monitoring efforts in other parts of the District compared to the Caloosahatchee. For example, SFWMD staff is currently monitoring the biological health of oysters and seagrasses in the St. Lucie Estuary during the recent high discharges from the lake. When we requested additional monitoring on the west coast, staff said that they do not have any funding available for additional monitoring.

## Potential ways to resolve the inequities include:

1. Establish and publish a process for shared adversity during high flows that incorporates high flow management measures for the estuaries. This process should identify all options for distributing water and sharing adversity including public lands. It also should address reasons why any region should not share adversity. This could be done through the Adaptive Protocols process. The SFWMD has preferred to focus the discussion and revisions only on low flows.
2. Establish a policy commitment to not cut off water from natural systems until and unless permitted water users are also cut by an equivalent measure.
3. Commit to completing a statutory reservation for the Caloosahatchee by 2011.
4. Require a water budget for the Caloosahatchee that would first establish the volume of water needed for the natural system off the top and would reevaluate LOSA Consumptive Use permits being reissued against the remaining volume of water available. Revise LOSA consumptive use permits to bring the budget in balance.
5. Enforce water use permit limits during dry seasons and drought.



6. Aggressively pursue and implement distributed storage opportunities within the Caloosahatchee watershed as well as north and south of the lake.
7. Require that property owners in the EAA retain their stormwater (excess water) and provide for their own water supply needs to eliminate backpumping nutrient-rich water into the lake. One of the ways to achieve this would be to incorporate the Recyclable Water Containment Area (RWCA) concept developed by Dr. Ed Hanlon. See link below:  
[http://edis.ifas.ufl.edu/document\\_ss447](http://edis.ifas.ufl.edu/document_ss447)
8. Revise the Caloosahatchee MFL to incorporate updated flow needs and remove loopholes/language that allow SFWMD to take no action even when significant harm is occurring.
9. Complete the C-43 reservoir and other CERP projects in the Lower West Coast Service area that will have water storage benefits.
10. Increase research and monitoring efforts in the Caloosahatchee River and Estuary for oysters, seagrasses, and fisheries, similar to what has occurred in the St. Lucie Estuary, to provide information on the impacts of high-level regulatory releases.