

WALK-ON

ATY

Lee County Board Of County Commissioners Agenda Item Summary

Blue Sheet No. 20061279

1. ACTION REQUESTED/PURPOSE: Request Board consider and approve the County's comments to the U.S. Army Corps of Engineers' Draft Supplemental Environmental Impact Statement: Lake Okeechobee Regulation Schedule Study ("LORSS") pursuant to the comment period for the Draft Supplemental Environmental Impact Statement ("SEIS"), which concludes on October 2, 2006. If approved by the Board, authorize the Chairwoman to sign same and direct staff to timely transmit to the Corps.

2. WHAT ACTION ACCOMPLISHES: Provides Lee County's formal, written comments to the Corps of Engineers concerning the proposed draft EIS for their operations of Lake Okeechobee.

3. MANAGEMENT RECOMMENDATION: Approve the comments, authorize the Chairwoman to sign same on behalf of the Board and direct staff to transmit the comments to the Corps prior to October 2, 2006.

4. Departmental Category:

NO #3

5. Meeting Date: September 26, 2006

6. Agenda:

7. Requirement/Purpose: (specify)

8. Request Initiated:

Consent

Administrative

Appeals

Public

Statute

Ordinance

Admin. Code

Other

Federal
Admin.
Process

Commissioner

Department

Division

County Attorney

By: David M. Owen

County Attorney



Walk-On

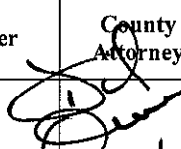
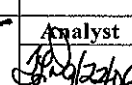
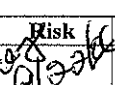
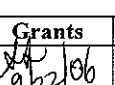
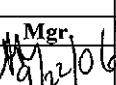

9. Background: In August, 2006, the Corps of Engineers proposed a new Regulation Schedule for the operations of Lake Okeechobee through a Draft Supplemental Environmental Impact Statement. During August and September, 2006, the Corps has held a series of public meetings taking public comment on the proposed, new Regulation Schedule.

Additionally, and as a part of the public review process, written comments are also solicited by the Corps pursuant to federal Administrative Rule. The County has been represented and has provided comments (both verbal and written) at the public meetings previously held by the Corps.

As a continuation of its participation in the process for the adoption of a new Regulation Schedule for Lake Okeechobee, the County is now prepared to provide its formal, written comments to the Corps concerning the proposed new Regulation Schedule prior to the comment period closing on October 2, 2006.

Request the Board's consideration and approval of the comments, authorize the Chair to sign same on behalf of the Board and direct staff to transmit the comments to the Corps prior to October 2, 2006.

10. Review for Scheduling:

Department Director	Purchasing or Contracts	Human Resources	Other	County Attorney	Budget Services				County Manager/P.W. Director
					Analyst	Risk	Grants	Mgr.	
				 9/22/06					

11. Commission Action:

- Approved AS AMENDED J/A
- Deferred
- Denied
- Other

RECEIVED BY
COUNTY ADMIN:
9/22/06 11:50 AM

COUNTY ADMIN
FORWARDED TO: J/C
9/22/06
3pm

CO. ATTY: J/C
FORWARDED
TO CO. ADMIN.
11:30 AM

**MEMORANDUM
FROM THE
OFFICE OF COUNTY ATTORNEY**

DATE: September 22, 2006

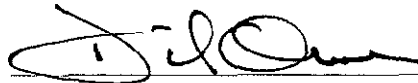
TO: Elizabeth Walker, Director

Public Resources

and

Molly Schweers, Administrative Asst.
Public Resources

FROM:



David M. Owen
County Attorney

**RE: SEPTEMBER 26, 2006 WALK-ON ITEM; BLUESHEET NO. 2061279
RELATING TO LEE COUNTY'S COMMENTS TO THE DRAFT ENVIRONMENTAL
IMPACT STATEMENT ("EIS") FOR THE NEW LAKE OKEECHOBEE
REGULATION SCHEDULE ("LORSS")**

Ladies;

Please schedule the above bluesheet as a Walk-On item for the Board's regular, Tuesday meeting of September 26, 2006.

The reasons for the Walk-On are; first, the comment period for the draft EIS closes on Monday, October 2, 2006 and second, at Tuesday's meeting (September 19, 2006), the Board Chair advised that the County's comments would be presented to the Board of County Commissioners prior to their being transmitted to the Corps.

Your prompt attention to this matter will be greatly appreciated.

Thanks.

DMO/dm
Attachment

xc: Donald D. Stilwell, County Manager
Wayne Daltry, Director, Smart Growth
Roland Ottolini, P.E., Director, Natural Resources
Kurt Harclerode, Natural Resources
Lisa Pierce, Supervisor, Minutes Department

**MEMORANDUM
FROM THE
OFFICE OF COUNTY ATTORNEY**

DATE: September 25, 2006

To: Elizabeth Walker, Director

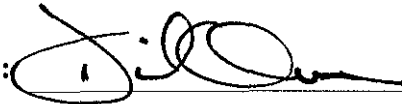
Public Resources

and

Molly Schweers, Administrative Asst.

Public Resources

FROM:



David M. Owen
County Attorney

RE: WALK-ON ITEM #3 FOR THE REGULAR MEETING OF SEPTEMBER 26, 2006

Ladies;

I am attaching a copy of the back-up to the above Walk-On Item #3 for your information and further distribution.

Thanks.

DMO/dm

Attachment

xc: Lisa Pierce, Supervisor, Minutes Dept.

Owen, David M.

From: Harclerode, Kurt
Sent: Monday, September 25, 2006 1:38 PM
To: Dist1, Janes; Dist2, St. Cerny; Dist3, Judah; Dist4, Hall; Dist5, Albion
Cc: Owen, David M.; Lavender, James H.; Ottolini, Roland E.; Daltry, Wayne E.; Minich, D T.; Pigott, Tamara W.; Schwartz, Holly A.; Winton, Peter
Subject: Lee County comments to US Army Corps
Attachments: Lee County SEIS 092506 Final.doc

Attached please find comments to the US Army Corps of Engineers on the Supplemental Environmental Impact Statement (SEIS) for the Lake Okeechobee Regulation Schedule. Lee County comments will be submitted to the Corps prior to the end of the review and comment period which is October 2, 2006.

Commissioners will be individually briefed on these comments prior to tomorrow's BoCC meeting, and this item will come to the full Board as a walk-on item tomorrow. If you have any questions regarding this document prior to our individual briefing please contact me.

Kurt D. Harclerode
Operations Manager
Natural Resources Division
Lee County Government
239-479-8146
239-839-1329 (cell)
www.lee.gov.com

9/25/2006

September 26, 2006

Yvonne Haberer
U.S. Army Corps of Engineers
701 San Marco Blvd.
Jacksonville FL 32207

Dear Ms. Haberer:

Lee County is pleased to provide the following comments on the *Draft Supplemental Environmental Impact Statement: Lake Okeechobee Regulation Schedule Study ("LORSS")*, August 2006. The County understands the difficult balancing act of managing Lake Okeechobee for its multiple, and sometimes competing, purposes. While the tentatively selected plan, or proposed alternative, for the LORSS may provide some benefits, those benefits are far outweighed by the fact that the alternative increases the highest level of discharges to the Caloosahatchee Estuary.

First, and foremost, the goal of the LORSS is "to implement a new regulation schedule that would improve the health of Lake Okeechobee and the St. Lucie and Caloosahatchee Estuaries, while continuing to ensure public health and safety, and with minimal or no impact to the competing project (lake) purposes." The stated objectives of the LORSS are:

- a. Ensure public health and safety
- b. Manage Lake Okeechobee at optimal lake levels to allow recovery of the lake's environment and natural resources
- c. Reduce high regulatory releases to the estuaries
- d. Continue to meet Congressionally authorized project purposes including, flood control, water supply, navigation, fish and wildlife enhancement, and recreation.

Page 35 of the Supplemental Impact Statement ("SEIS") states, "Alternative 1BS2-m was identified to be effective and proficient at providing for public health and safety, containing flexibility to perform water management operations, and when unavoidable, having a more equal distribution of **shared adversity** than WSE." The County's review of the proposed alternative in the SEIS indicates that it has mixed performance in terms of meeting the goals and stated objectives. In some cases, such as direct impact to the Caloosahatchee and water supply performance, the performance should be termed actually as "increased risk" and "potential harm." This is demonstrated by the increase in high level discharges over 4,500 cubic feet per second ("cfs") to the Caloosahatchee Estuary which is directly contrary to objective (c) listed above. Furthermore, there is no demonstration that the proposed new schedule will improve water quality and the condition of estuarine biota in the estuary, and in fact, may worsen the situation. Because of these reasons, it is the County's position that the currently proposed

alternative does not meet the goals and objectives for LORSS, and as such, is not supportable in its current form.

The County also has reviewed, and provides comments herein, which address many of the assumptions used to develop the various alternative schedules considered. The strength of the alternatives to meet the goal and objectives of LORSS is a function of the viability of the assumptions. We also discuss the specific proposed alternative's impacts and benefits, as well as offer potential changes to the proposed alternative and additional modeling considerations to be incorporated into the SEIS analysis. To save space, the County adopts the comments of other public and private entities concerned with the Caloosahatchee River Estuary.

I. Alternative 1BS2-m

The proposed Alternative, 1BS2-m, is an attempt to correct deficiencies in the current Water Supply and Environment ("WSE") Regulation schedule. This alternative was further modified and took its current form after initial modeling runs indicated inadequate performance in meeting the LORSS goal and objectives primarily, among other attributes, its potential impact to the Caloosahatchee Estuary.

The proposed alternative incorporates several positive attributes that will provide benefits to the Lake, Everglades and estuaries. These include:

- Goal to manage to optimal band (seasonal goal, 12.5 – 15.5);
- Flexibility to make adjustments; and
- Positive Estuary benefits.

Management to an optimum stage. Overall, as a basic feature, Alternative 1BS2-m has a goal to manage the Lake at an optimum stage which is widely recognized and supported as 12.5-15.5 feet. This goal is reiterated in the various letters by agencies responsive to the scoping notice, such as the U.S. Fish and Wildlife Service ("FWS") and the Florida Department of Environmental Protection ("DEP"). Adjustments in the schedule are made to either release or hold water with the goal of achieving the optimum elevation for that time of the year. In doing so, Parts 1 and 2 of the Lake Okeechobee Operational Guidance provide direction to water managers on what level of release to make to what part of the system based on tributary hydrologic conditions, the forecasted weather conditions (seasonal, monthly and weekly) and other pertinent information. It is asserted that keeping the Lake at an optimum range a higher percentage of the time will result in benefits to downstream receiving waters such as the estuaries, Everglades and Lake Okeechobee itself. We note that these assertions apparently are based on modeling using a 36-year period of record that excludes the period 2000-2005 (which period should be evaluated by the Corps), and the assumption that significant flows can be sent from the Lake to the L-8 canal (which may not be possible due to downstream water quality concerns).

Flexibility to make adjustments quickly. While certain aspects of the flexible nature of the proposed schedule are problematic, such as the Non-Typical Operations, more fully discussed below, there are other aspects of the flexible nature of the schedule that are positive such as decision-making based on weekly, monthly and seasonal weather data and forecasting. For instance, on page 13, the SEIS states, "it is practical to establish more flexible rules which allow Lake managers to utilize supplemental information and apply their sound judgment in making operational decisions." The County concurs with this premise in certain regards. The schedule also allows more preemptive lower level early discharges to potentially alleviate aggressive high volume discharges at longer durations responsive to weather events. Potential managed spring recessions, when beneficial, can also be achieved by the flexibility in the schedule. Base flows to the Caloosahatchee can be made, but due to the nature of the lower schedule, it is more difficult to achieve these flows consistently. Even with the specific bands, because of their overlap, there is a wide range of flexibility in the schedule that brings with it the ability to adapt to changing conditions quickly, but this flexibility also brings a level of uncertainty about how those decisions will be made.

Benefits of the proposed Alternative. The section above mentions some of the benefits of the proposed schedule such as base flows to the Caloosahatchee and potential beneficial spring recessions. There are additional benefits the schedule provides including:

- A lower average Lake schedule provides a benefit to the ecology of the Lake and downstream ecosystems.
- The proposed alternative results in the optimum Lake stage being achieved 27.3 % of the time.
- The St. Lucie Estuary receives less high volume discharges.
- There is an increase in target flows in the Caloosahatchee Estuary (450-2800 cfs) from the No-Action alternative.
- There is a decrease in flows from 2,800-4,500 cfs from the No-Action alternative in the Caloosahatchee Estuary (the negative high volume flow impacts are discussed below).
- The alternative generally performs better for the Everglades regions over the No-Action alternative.
- Flow decisions to the estuaries contemplate data regarding the most important time of the year to avoid high discharges, which is spring, when most breeding and nesting takes place for species.

Negative attributes of the proposed Alternative. While many of the above-listed aspects of the proposed alternative may yield positive benefits, there are still significant problems with the proposed alternative. The benefits are far outweighed by the fact that the alternative increases the highest level of discharges to the Caloosahatchee Estuary.

First, the Alternative does not meet the goal and objectives of the LORSS because it increases the amount of the highest volume discharges to the Caloosahatchee Estuary. Page E-56 reports 73 exceedances above 2,800 cfs and 37 exceedances above 4,500 cfs.

These figures compare to 44 exceedances and 34 exceedances, respectively, over the No-Action alternative. Table 5-6 on page 110 reports the occurrences of flows within certain volume ranges in the most critical spring months March-June. The table shows a reduction in flows in those months over 2,800 cfs, but the table does not even reflect the amount of flows over 4,500 cfs in this critical time period.

The duration of these flows is also problematic. On E-23, the SEIS states that the base case, or No-Action alternative, included 24 periods of 2-3 months duration of high flows above 4,500 cfs. The proposed alternative included 4 periods of flows 4-5 months in duration. These durations are reported as a "worst case" because the model can only incorporate an assumption that the highest level discharge is released. The Corps has stated publicly, and in its document, that this doesn't always reflect reality because the maximum practicable release is not always made and the level of discharge is based on system and predicted conditions. At the same time that high discharge flows increase from the proposed alternative, flows less than 300 cfs, necessary to meet minimum flow targets, are decreased. These two actions together provide the potential for significant harm in the Caloosahatchee Estuary, at the most critical times when either the Estuary needs or doesn't need the water.

A key problem with the SEIS is how these issues are portrayed. For instance, on page 111, the SEIS states, "However, modeling simulations indicate no improvements in the high flow > 4,500 cfs range to the estuary" and also in that discussion "due to the increase in high flows > 4,500 cfs, the Corps has determined that the proposed action would provide minimal benefits overall to essential fish habitat in the Caloosahatchee Estuary." Another fundamental example is on page ii, where the SEIS states, "Stakeholders representing the Caloosahatchee Estuary have concerns that the alternatives analyzed show minimal benefits, if any, for the estuary." These statements do not recognize the potential harm that could be caused to the estuary from implementation of the proposed regulation schedule. Instead, the SEIS portrays these effects as simply not meeting the target or not providing any benefit. This is an important distinction and, for purposes of accurately reflecting the potential environmental effects of the proposed alternative, these types of statements should be corrected in the document.

With respect to the other parts of the ecosystem, the proposed alternative does seem to provide some level of benefits including reduced high volume discharges to the St. Lucie Estuary (page 107 of the SEIS), Lake Okeechobee (page 124 of the SEIS) and the Everglades (pages 93-98 of the SEIS).

Specifically relevant to the St. Lucie Estuary, in addressing the quantity of release discharges, when comparing the release schedule of WSE to the new release schedule, there is a reduction in the releases from the higher bands from 3,500 cfs to 2,800 cfs. This fact was reiterated publicly in a Lake Okeechobee Water Resources Advisory Commission meeting when the discrepancy was recognized and corrected on a power point presentation made by Corps staff. It is unclear why this reduction in discharge through the S-80 structure occurred. This reduction also appears to place the estuarine impacts in a directly conflicting position.

It is also unclear from the document what the basis is for the trigger in the Water Conservation Areas (“WCAs”) (+.25) in terms of limiting releases from Lake Okeechobee south. While this trigger appears in the WSE schedule on page 20, it does not appear to have any detailed discussion, explanation or basis in the SEIS. There is also very little, to virtually no discussion, about the relationship between the proposed alternative and the current Upper Chain of Lakes, including Kissimmee River, flows, relevant schedules or potential changes to them except that there will be an examination of the Tributary Hydrological Conditions in the decision process. Flows north of, and into, Lake Okeechobee have a direct relationship to water discharged out of the Lake. The SEIS should include a more detailed discussion of this relationship.

II. Assumptions to Develop Alternatives

In the alternative development process which led to the current proposed schedule in this SEIS, 1BS2-m, several assumptions were common to all of the alternatives. These assumptions include:

- To achieve zero or close to zero days above Lake elevation 17.25 feet;
- To provide a base flow to one or both of the estuaries to minimize the occurrence of high, damaging releases to the estuaries;
- To include a maximum limit of the Lake regulatory releases passed through Stormwater Treatment Areas 3/4, based on assumed treatment capacity given the current nutrient levels within Lake Okeechobee; and
- To provide Lake operators with as much flexibility as possible to lower the Lake stages when needed to achieve project objectives.

These assumptions and their rationale warrant more discussion in the SEIS.

The 17.25’ constraint. The primary assumption that warrants additional discussion in the SEIS is that regarding the elevation cap of 17.25’. The SEIS states, “Because the Corps recognizes that the HHD is more stable when water in Lake Okeechobee is maintained below 18.5’, the LORSS only focused on alternatives that would allow the Lake to be managed at a lower average level year-round. The final array of alternatives analyzed were developed to achieve zero or close to zero days above Lake elevation 17.25’, NGVD.” Several somewhat conflicting explanations are given for the 17.25’ constraint, yet none of them are substantively detailed or provide a clear engineering basis for the constraint. For example, on pages 7 and 121, the document states, “The 17.25’ constraint was based on the schedule’s ability to store rainfall and runoff anticipated from a storm event comparable to Hurricane Wilma in 2005 without having HHD integrity issues.” It is unclear why this particular storm event or conditions of the Lake at that time were chosen as a scenario to drive this alternative development process. On page E-21, the document states, “Aviodance [*sic*] of the 17.25’ elevation offers **additional protection** for public safety and the Herbert Hoover Dike.” It is unclear what the “additional protection” needs to be from an engineering perspective. Finally, on page 82, the document states, “The crest elevation of the levee system surrounding the Lake ranges from 32 to 45’, NGVD. The likelihood of overtopping the

levees from excess storage is nearly non-existent. Possible flooding due to overtopping of levees within the HHD system is limited to short duration events involving wave runup in addition to hurricane-induced storm surge." This elevation constraint is particularly disturbing in light of the fact that the inter-agency team had arrived at a consensus of 17.5' elevation and this was changed later in the alternative development process by the Corps. When reading all of these statements together from the SEIS, it appears that this particular number is not based on any particular engineering analysis and that it is arbitrary. It is also notable that Lake levels have exceeded 17.25 feet only a small portion of the time since the Herbert Hoover Dike was built, which raise questions about what level of risks the Corps is attempting to avoid. The relationship between the crest elevation, Lake levels, choice of Hurricane Wilma 2005 conditions and engineering basis for the 17.25' constraint needs to be more detailed in the SEIS. Potential modeling considerations relative to this constraint are suggested at the end of this correspondence. The Corps should also explain how long this particular 17.25' is contemplated to be a constraint on any Lake Okeechobee Regulation Schedule. For instance, will enough work on the dike be completed that this will not be a constraint on the next iteration of the Lake Okeechobee Regulation Schedule in 2010?

Base flows to one or both estuaries. Another assumption that warrants further discussion is "to provide a base flow to one or both of the estuaries to minimize the occurrence of high, damaging releases to the estuaries." On page 22, the SEIS describes the concept of base flows in alternatives 1BS2 and 1BS2-m as follows: "During the alternative formulation process, data and recommendations were evaluated and the recommended base flow release was determined to be 450 cfs to the Caloosahatchee Estuary (measured at S-79) and zero base flow to the St. Lucie Estuary." On page 38 when reviewing Part 2 of the Lake Okeechobee Operational Guidance during normal to dry conditions this base flows to the Caloosahatchee is reflected, yet there is no base flow to the St. Lucie Estuary through S-80. In the Non-typical Operations, depending on tributary hydrologic conditions, then base flows to both estuaries can be made. Some base flow to the St. Lucie Estuary, as well as possible increased base flows to the Caloosahatchee should be modeled to determine the ability of these operations to alleviate high volume discharges. While the County understands that the benefits of these additional base flows may be minimal, they should be modeled nonetheless to determine the benefits that can be achieved. It is unclear whether they have been modeled to date, based on the limitations of the South Florida Water Management Model. Coupled with other changes to the proposed alternative, there could be a more significant benefit to these base flows to both estuaries.

Stormwater Treatment Area capacity. The next assumption is "to include a maximum limit of the Lake regulatory releases passed through Stormwater Treatment Areas 3/4, based on assumed treatment capacity given the current nutrient levels within Lake Okeechobee." Implicit in this constraint is that the Corps will not allow a violation of water quality standards in the Water Conservation Areas which receive water from the Stormwater Treatment Areas. While we appreciate and support the Corps' desire to avoid water quality impacts in the Water Conservation Areas, we do not understand why the Corps is not willing to impose a similar water quality constraint for the

Caloosahatchee Estuary. This appears to be a double standard, which makes the choice of alternatives arbitrary.

Lake operational flexibility. Another assumption warranting discussion is “to provide lake operators with as much flexibility as possible to lower the lake stages when needed to achieve project objectives.” The proposed alternative essentially provides an optimum stage to manage the Lake and then provides allowable discharges to the WCAs and estuaries under various system and tributary conditions. This is similar to the WSE Decision Tree which currently dictates operations. The problem with the proposed alternative is that while there is much overlap and flexibility between the various bands and stages to manage to a seasonal optimum, and consider forecast and tributary conditions, there is a high level of uncertainty with the potential use of “Non-typical Temporary Operations” (“NTO”). While the concept is to only use the NTOs when the Lake Management Bands and operational guidance is “not effective at managing lake levels” as defined under certain conditions, the NTOs provide such wide flexibility, they are essentially rendered useless in providing any predictability as to what operation may end up resulting. For instance, if everything that is in place regarding the schedule isn’t working “and it has been determined that it would be advantageous” NTO would be used. The SEIS provides no detail as to who makes these determinations and when.

Thus, the NTO which is another complex system of bands, stages and conditions that dictates a completely different set of operations. The “operational band” or the parameters which frame the optimum Lake stage vary widely between 9.5 and 17.25’. Regulatory and base flow releases can be made under various conditions, but there are such extreme differences between these conditions that there is no way of knowing when an NTO operation will be used. Also, as mentioned above, this is the only place where potentially higher base flows can be made to the Caloosahatchee and any base flows can be made to the St. Lucie Estuary at all. If NTOs are not contemplated to be used that often, then this potential operation, which could provide some relief to the estuaries on both coasts, is lost. In summary, it appears that the negative aspect of minimal flexibility and the temporary deviation process in WSE has moved far to the other side of the spectrum in that the NTOs provide too much flexibility and zero predictability. Public discussions have raised the possibility of eliminating the NTOs from the proposed alternative. The County would support that decision only if Part 2 of the Operational Guidance regarding releases to the estuaries is revised to allow more flexibility in the quantity of base flows and specifically allows for base flows to the St. Lucie estuary as well as the Caloosahatchee.

III. Factors That Need to be Addressed More Adequately in the SEIS

While the assumptions are central to each of the alternatives analyzed in the SEIS, there are other factors that are either specifically not addressed for reasons unknown or are not adequately addressed. These include:

- Scope of the analysis
- Scope of Economic analysis
- Lack of discussion of water supply implications until the appendix

- Cumulative Impacts
- Compliance with other Statutes
- Mitigation Measures

Scope of Analysis. Most of the SEIS focus on environmental effects, water quality and vegetation centers around the resources within Lake Okeechobee itself. This downplays the importance of the resources downstream of the Lake and further treats the Lake and estuaries as separate entities. The entities must be considered as a whole. The overall discussion on water quality in the Caloosahatchee and St. Lucie Estuary pales in comparison to the detailed discussion on Lake Okeechobee water quality. There is no discussion on nutrient concentrations or loading to either Estuary and there is no discussion of the relevant water quality standards for the Caloosahatchee or St. Lucie water bodies including total maximum daily load implications. The SEIS also fails to explain how Lake releases contribute to water quality problems, in the Estuary, i.e., the influence of nutrients, turbidity, freshwater, or color. The SEIS should model the water quality effects in the Caloosahatchee Estuary for each alternative, as well as the effects each alternative will have on algae growth (including blue-green algae), red tide, sea grasses, fish populations, endangered species, and other ecological impacts. The SEIS also should discuss impacts on State and Federal wildlife refuges and estuarine reserves.

The SEIS on page 1 states, "The areas considered to be most affected and which shall receive the greatest scrutiny in terms of impact assessment is the Lake itself, particularly within the littoral and marsh areas of the Lake, and major downstream estuaries including the St. Lucie and Caloosahatchee Estuaries." But, on page 84 relative to water quality in the Caloosahatchee basin, the SEIS states, "Nutrient and chlorophyll levels are high and small algal blooms occur regularly." This statement should be corrected because several of these algal blooms that occur are, in fact, very large, have devastating effects on the environment and economy of Southwest Florida and potential public health implications as the result of potential impact to the public water supply. In the same discussion the SEIS states that salinity is only a concern when discharge events exceed 2800 cfs at the S-79 structure for longer than 14 consecutive days, but the reality is that these discharges do occur and stand to occur more often due the implementation of the proposed alternative. Finally, that same discussion states, "These discharges of Lake water are just a piece of the puzzle of water quality conditions in the Caloosahatchee River and estuary." While the County recognizes the role of basin run-off in the

Estuary's condition, this statement downplays the role of Lake discharges in the degraded water quality of the Caloosahatchee River and Estuary and should be deleted. Analyzing the breakdown of releases shared between the S-77 and S-79 structure could help clarify these effects of basin run-off and Lake discharges.

Additionally, in Section 5.0 of the SEIS on Environmental Effects of the proposed alternative, while there is some analysis of performance measures for other parts of the natural system including the Water Conservation Areas and estuaries, discussions on threatened and endangered species such as the Snail Kite, Wood Stork, West Indian Manatee and Bald Eagle are all focused upon effects on those species in Lake Okeechobee. Many of these species occur in the estuaries as well, and there is virtually

no discussion on impacts to these species occurring in those areas. Specific examples in Section 5.0 on Environmental Effects include:

- The SEIS fails to discuss the potential impacts to designated critical manatee habitat in the Caloosahatchee Estuary. The Caloosahatchee Estuary is critical habitat for the manatee. The analysis must consider growth rates and recovery to determine what the impacts to submerged aquatic vegetation (“SAV”) in the Caloosahatchee Estuary may be. High flow events may be severe enough and frequent enough to prevent the SAV from recovering, and additional impacts may be pushing the estuary past an adverse ecological threshold thereby adversely impacting the critical habitat.
- The SEIS does not mention the historic and ongoing nesting of wood storks in Caloosahatchee Estuary, and does not analyze effects on storks there.
- The SEIS does not list the Kemp’s ridley turtle (*Lepidochelys kempii*) as a species known to occur in the study area although there is significant data of use as far upstream as US41. This species has a preferred diet of horseshoe crabs and salinity changes could certainly have an indirect effect on this highly endangered turtle.
- The SEIS does mention bald eagle nesting around Lake Okeechobee but fails to consider similar uses for Caloosahatchee Estuary (19 active nests in Lee County in 2001 that met the same criteria used for Lake Okeechobee).
- The SEIS fails to discuss impacts on the Smalltooth Sawfish, which lives in the Caloosahatchee Estuary in the areas hit hardest by Lake releases.
- The SEIS fails to discuss impacts of Lake releases on other fish populations, oyster beds, crab populations, and other estuarine organisms.
- The SEIS does not discuss how Lake releases may affect or exacerbate red tide and blue-green algae which affects marine organisms.

Scope of Economic analysis. Section 5.8, on Socio-Economics, is completely lacking and specifically excludes any discussion on tourism income due to degraded conditions in the estuaries. There is significant discussion on the economic effects on the recreational industry on Lake Okeechobee and agriculture. The Recreation discussion in Appendix D, which provides a presumably more detailed economic analysis, is completely geared to recreation on Lake Okeechobee. Specifically Section 7.2 on page D-67 states, “There are other potential (non-fishing) economic effects from freshwater releases which are also associated with changes in estuarine water quality. These effects could include changes in: (1) waterfront property values if water quality degradation is severe or sustained and (2) the quantity or quality of recreation (and tourism) if the releases discolor the water at beaches or if the releases contribute to algae blooms that limit beach access. These non-fishing effects are beyond the scope of this investigation, but they are current sources of concern to local residents and businesses who enjoy the estuaries and depend on tourists who come to use them.”

Lee County’s Visitor and Convention Bureau has been very active in water resource issues over the last year specifically due to the significant and documented impact on tourism and the economy felt in Southwest Florida from the degradation of our water

resources. Lee County tourism is approximately a \$2 Billion a year industry and this industry employs 41, 125 people. Lee County has completed data research estimating an approximate \$3.5 Million adverse economic impact on the tourism industry during just the Sept-Nov 2005 timeframe due to the excessive Lake Okeechobee releases. Cumulatively, this adverse economic impact must be factored into the decision-making process for the proposed alternative. It is unclear why the document states that these significant, and cumulative, adverse impacts are beyond the scope of the SEIS process when the document describes these types of impacts for other areas such as Lake Okeechobee itself and , when they've gone to great efforts to compile it for other areas.

Lack of discussion of water supply implications. Section 5.13 states that the preferred alternative “allows for water supply requirements to be satisfied nearly as effectively as the current operational schedule WSE.” There is some economic discussion of the water supply implications of the preferred alternative in Appendix D starting on page 30. That discussion concludes that there is no meaningful difference between the alternatives in terms of unmet demand the cost associated with that loss.

The most significant discussion on the water supply implications of the preferred alternative occurs in Appendix E, Simulation of Operational Alternatives for the Lake Okeechobee Regulation Schedule. Notably, the period of record is 1965-2000 and does not include the most recent drought and Hurricanes which would equate to the most significant extremes in recent history.

A baseline assumption of the simulation is that the SFWMD temporary forward pumps will be operated, which are neither permitted nor constructed at this time. On page 13, the SEIS states, “All alternatives evaluated, including the No-Action Alternative, assume operation of the SFWMD temporary forward pumps for water supply at S-354 (400 cfs), S-351 (600 cfs), and S-352 (400 cfs).” The SEIS does not appear to analyze a true “no action” alternative. These pumps are not being used now, hence they should not be included in the “no action” alternative. We also believe that the Corps should evaluate the forward pumps as part of this SEIS (but in a separate and additional alternative to the “no action” alternative), because the installation and operation of such pumps is a connected action to a new Lake regulation schedule.

From a water supply perspective, a tremendous amount of reliance is placed on those pumps for the operations of the preferred alternative. The pumps are contemplated to be operated when the Lake stage is between 10.2' and 11.2'. Water supply assumptions also include a lowering the Supply Side Management line by 1.0', which is subject of a separate SFWMD rulemaking effort and is currently being revised. The conclusions of the water supply analysis for the Lake Okeechobee Service Area, Lower East Coast Services area and Everglades Agricultural Area all show more phased cutbacks and more demands not met due to implementation of the alternative. For the County's water supply needs, while a relatively small amount of water is used by the County via Lake Okeechobee deliveries, increases in water supply cutbacks system wide and increases in exceedances of the Lake Minimum Flow and Level (“MFL”) (over double the amount of exceedances for the period of record) are problematic. These impacts will concern all consumptive uses of water. Basing the entire risk to water supply on the operation of

the temporary forward pumps may be a problematic assumption. Since even the No-Action Alternative assumes the addition of the temporary forward pumps (page 14 of the SEIS), there is no way to determine what any effects may be if the forward pumps do not come on line. As the U. S. Fish and Wildlife Service suggested early on in their correspondence for the LORSS, the alternatives must be modeled, and results included in the SEIS, regarding the performance of the alternatives in a “with-forward pumps” and “without-forward pumps scenario.”

The SEIS also does not analyze potential impacts on drinking water supplies. Lee County draws some of its public drinking water supply from the Caloosahatchee River. Blue-green algae, which can produce harmful toxins, has appeared in the river associated with Lake releases. Such algae can be drawn into the drinking water intakes, and requires additional treatment in water treatment plants. We do not understand why the Corps has not studied this issue, because it is as much an issue of public health and safety as the Herbert Hoover Dike.

Cumulative Impacts. The SEIS has almost no discussion of cumulative impacts. Given the injury caused to the Caloosahatchee Estuary by repeated high Lake releases in recent years, the SEIS should analyze how the proposed alternatives would have cumulative impacts on important resources. The Corps should not defer such analysis to a later time, since the public should be aware of cumulative impacts of the new Lake schedules before the Corps acts.

Compliance with other Statutes. The discussion in the SEIS regarding compliance with other statutes needs to be strengthened. As discussed above, the analysis of impacts to Federally-listed threatened and endangered species is weak hence making it difficult to determine whether the Corps is complying with the Endangered Species Act. The analysis of water quality issues also leaves much to be desired, and does not inform the reader whether the violations of water quality standards. The SEIS should explain why the Corps need not comply with Clean Water Act sections 401 and 402 regarding the Lake releases into the Caloosahatchee River. The SEIS also should explain whether Florida permitting requirements found in Chapter 373 and 403, Florida Statutes, apply to operation of or discharges from Corps water control structures on the Lake, and whether the Lake regulation schedules will cause violations of minimum flows and levels in the Caloosahatchee Estuary.

Mitigation Measures. The SEIS should discuss potential measures to mitigation adverse environmental impacts on the Caloosahatchee Estuary. In particular, the SEIS should discuss opportunities for additional water quality impacts of Lake releases. There is no such discussion in the SEIS, even though many mitigation opportunities exist.

IV. Potential changes/modeling/information to include in the SEIS

It is clear from reading the SEIS that no one particular alternative rises to the top in terms of stellar performance for the natural system overall. In fact, all of the alternatives, including the No-Action Alternative, benefit different parts of the system in

different ways. The County suggests revising the proposed alternative because 1BS2-m is not supportable in its current form. The following summary represents recommendations for either more detailed discussions or modeling, either through sensitivity runs or added assumptions, to be included in the SEIS.

No Increase in Harm to the Caloosahatchee in High Discharge Events. More work needs to be completed on the proposed alternatives to achieve at least a “no harm” standard from what occurred with WSE for the Caloosahatchee Estuary. Fundamentally, the County cannot support any alternative that creates any harm in the Caloosahatchee Estuary. Additional alternatives that provide real relief in the Caloosahatchee Estuary should be analyzed. The County also suggests modeling that shows what “mid-range” releases may be rather than “up to the maximum release” as the modeling assumption has incorporated thus far. The Corps should also account for the effect and reduction of the 700 cfs at the S-80 structure between WSE and the proposed schedule for the St. Lucie Estuary.

Justification for 17.25’ Constraint. The basis for the 17.25’ constraint appears to conflict in the document in terms of engineering rationale. While the County is mindful regarding the debate surrounding the integrity of the Herbert Hoover dike and the Governor’s correspondence regarding this issue, significant volumes of water will be discharged to the Caloosahatchee Estuary to achieve that precise 17.25’ target. We also note that Lake levels have exceeded 17.25 feet 10 times over the past 40 years, without causing the worst-case scenarios identified by some. While publicly the Corps has stated that the Regulation Schedule will drive Lake management, not the 17.25’ constraint, this constraint eliminated viable alternatives from consideration that may have provided a different balance of benefits and substantially less impacts to the Caloosahatchee Estuary. The effect of this constraint cannot be overstated. In Project Delivery Team (“PDT”) discussions regarding alternative development, the discussion has been clear that other target elevations were discussed and driving the alternative development process, such as 17.5’. The Corps imposed this 17.25’ constraint on the alternative development process unilaterally. Modeling should occur that shows the volume versus discharge relationship for an elevation constraint between 17.25’ and 17.5’. The Corps should also include a discussion of when this constraint will not longer be a driving factor in Lake Okeechobee management.

Base flows to both estuaries. While the County is supportive of a constant base flow to the Caloosahatchee and the St. Lucie Estuaries, the appropriate level of base flow must be clearly achievable through Part 2 of the Regulation Schedule, not just through NTO. Appropriate base flows to both estuaries should be modeled to determine what benefit and reduction of impact to the Estuaries this may have on the regulation schedule.

Include more specific information on water quality in the Estuaries. Water quality requirements and conditions in the estuaries should be a limiting factor in the discharges that can be made. The SEIS provides no detailed discussion of the relevant regulatory context or water quality conditions in the estuaries but does regarding Lake Okeechobee. The SEIS also does not analyze the water quality impacts of the range of

alternatives. The SEIS must address this issue due to ecological impacts, indirect economic impacts, and the implications of poor water quality to public health (e.g., blue/green algal blooms in the Caloosahatchee River) potentially affecting the Lee County public water supply.

Discussion of when conditions might improve to be able to move water south. The discharge of water to the STAs south to the WCAs is limited due to the quality of discharges from the Lake and the limited treatment capacity of the STAs. The document should include a discussion of when these conditions might improve in terms of projects to optimize the STAs or when Lake water quality may improve to allow more water to move south.

Modeling of the forward pumps. These pumps are neither permitted nor constructed as of yet. Their permitted operation range is not known either. Endangered or threatened species issues could change the assumptions relative to the forward pumps which could have a marked effect on the impacts and operations of the proposed schedule. The Corps must provide some analysis of what the effects of the proposed regulation schedule may be if the forward pumps are not brought on line, or their operation is limited due to effects on listed species. The analysis of these pumps should be made part of the SEIS process, and not conducted separately.

Consider removing NTO. The proposed regulation schedule has a high level of flexibility incorporated into it already. There is significant operational flexibility which is found in each band and the overlap of each band. The NTO described in the document introduces too much uncertainty into the proposed schedule. Whatever flexibility is needed beyond the regulation schedule should be clearly identified through changes to the proposed alternative rather than masked in a "catch all" Non-typical Operation.

We appreciate the opportunity to provide these comments on the LORSS. We also look forward to working closely with you on making changes to the proposed alternative that eliminate the predicted harm to the Caloosahatchee Estuary. We anticipate reviewing and commenting on the next versions of the SEIS. For any further questions you may have on these comments, please contact Kurt Harclerode, Lee County Division of Natural Resources, 239-479-8146.

Thank you for your attention to our comments.

Sincerely,

Tammara Hall
Chairwoman
Lee County Board of County Commissioners

cc: District # 1, Janes
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District # 3, Judah
District # 5, Albion
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