



**FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES**  
**COMMISSIONER NICOLE "NIKKI" FRIED**

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September 20, 2019

Chris Stahl, Coordinator  
Florida State Clearinghouse  
Florida Department of Environmental Protection  
3800 Commonwealth Blvd., M.S. 47  
Tallahassee, FL 32399-2400

RE: Project: FL201908068706C

Department of Defense, Department of the Army, Corps of Engineers, Draft Environmental Assessment and Proposed Finding of No Significant Impact 2019 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (LORS 2008) Glades, Hendry, Martin, Okeechobee and Palm Beach Counties, Florida

Dear Mr. Stahl:

Please find below the Florida Department of Agriculture and Consumer Services (FDACS) comments on the draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact 2019 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (LORS 2008).

The proposed deviation is a major change in operations that will fundamentally alter the volume, timing, and location of releases, and will lead to higher or lower lake stages at different times in the annual hydrological cycle compared to LORS 2008. However, the proposed deviation provides a limited amount of evaluation of the detrimental low-water and high-water impacts including on: the Lake Minimum Flow and Level (MFL); endangered species; and water supply for the environment, stormwater treatment areas, Seminole Water Rights Compact, Lake Okeechobee Service Area and the Lower East Coast. The Department cautions against rushing to judgement on a proposal that will have such dramatic impacts without understanding the lasting implications of these impacts.

FDACS supports finding ways to be responsive to the potential for harmful algal blooms (HABs) and the goal of finding ways to improve the ecological health of Lake Okeechobee (Lake) and the St. Lucie and Caloosahatchee estuaries that protects both the human and natural

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environments while balancing the Comprehensive Everglades Restoration Plan (CERP) and authorized purposes of the Central and South Florida Project.

FDACS recommends that deviations be limited in scope to one-time events on an as needed basis. FDACS further recommends that changes contemplated as long-term replacements for LORS 2008 until the adoption of the Lake System Operations Manual be subject to the same analysis under the National Environmental Policy Act (NEPA) that was afforded to the “interim” operations schedule that became LORS 2008.

Contrary to normal deviation criteria, the open-ended conditions and operational uncertainties contained in the Draft LORS 2008 HAB Deviation could allow the Corps to implement the deviation as a long-term interim operational plan with unpredictable outcomes and no clear operational guardrails. FDACS recommends that the Corps adequately define those conditions that necessitate a deviation and articulate clear and predictable conditions to provide guidelines for ending the deviation. This will allow the impacted stakeholders and the public the ability to understand and provide comments on the proposed actions.

FDACS recommends that the Corps provide information regarding the criteria and guidelines for identifying a HAB that would require a deviation response. The documentation provided identifies four conditions when the LORS 2008 HAB Deviation could be applied. The first condition regarding the presence of a HAB needs definitions or criteria to identify when a HAB is present. The third condition where a HAB is “anticipated to occur” needs to be defined. The fourth condition regarding a past HAB is not a response to the actual conditions being encountered, so FDACS suggests it be removed as a deviation condition.

For deviation operations and outcomes to be consistent with the Draft EA “worst case” scenario in Appendix A, deviations would need to be made when the Lake is in the Base Flow Sub-band, begin at the start of the wet season, have a 30-day duration, and remove no more than an additional 123,740 acre-ft from the Lake. Instead of following the evaluation protocols, the proposed deviation allows additional releases year-round even when the Tributary Hydrological Conditions, Multi-Seasonal Climate and Hydrological Outlook are dry. The proposed deviation also allows releases in the Beneficial Use Sub-band, where no releases are called for in LORS 2008 within 0.25 feet of the Water Shortage Management Band.

A water banking scheme is proposed to zero out the effects of the proposed deviation on an annual basis, but the Corps has not provided any quantifiable evaluation or modeling effort to

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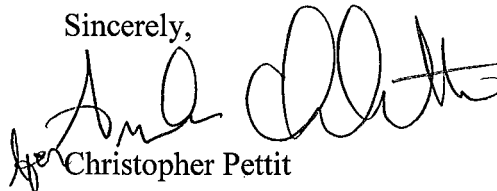
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support the conclusion that banking would be possible or to explain how holding and releasing water in a manner contrary to the operational criteria of LORS 2008 would impact the natural and human environment. FDACS recommends that the Corps more adequately quantify and justify the current potential to “withdraw” virtually unconstrained volumes of water from the Lake in the Low, Base Flow and Beneficial Use operational sub-bands without any control over the arrival of the anticipated “deposit” in the form of adequate precipitation through the Lake basin. FDACS recommends that the Corps provide greater consideration to those scenarios offered in the EA as an evaluation of a worst-case scenario to analyze the potential for unintended consequences contained in the entirety of the operations allowed by the proposed deviation.

Given the potential for the deviation to substantially alter Lake releases on a long-term basis, while creating system-wide impacts not anticipated by LORS 2008, FDACS believes the Draft LORS 2008 HAB deviation legally constitutes an interim operational plan under the provisions of NEPA, like LORS 2008, and recommends that the Corps adopt the deviation through the development of an Environmental Impact Statement to allow for adequate public input and the examination of possible consequences to the natural and human environment. FDACS suggests that more information is necessary to support the conclusions and to evaluate potential impacts to the environment and other goals and objectives of LORS 2008, as well as any deviations that are legally required to be considered as part of the NEPA process. Additional supporting technical and scientific documentation, a full hydrological analysis, greater surety on conditions and decision criteria for HAB operations will result in a more effective and defensible operational foundation.

FDACS appreciates the opportunity to comment and looks forward to continued progress on Lake operations through cooperative efforts. Additional technical comments are attached. Please contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Pettit', written over a horizontal line.

Christopher Pettit

Director

Office of Agricultural Water Policy

Department of Agriculture and Consumer Services

Staff Technical Comments on the USACE Draft Environmental Assessment (EA) and Proposed Finding of No Significant Impact (FONSI) 2019 Planned Deviation to the Water Control Plan for Lake Okeechobee and Everglades Agricultural Area (LORS 2008) aka the LORS08 Harmful Algae Bloom (HAB) Deviation

The following comments are submitted for consideration regarding the Draft LORS08 HAB Deviation. General technical comments that apply to the proposed deviation and its concepts throughout the draft document and a set of specific technical comments on sections of the text, actions and operations proposed have been provided.

GENERAL COMMENTS:

Significant operational change

The deviation is being proposed as a Finding of No Significant Impact (FONSI) and evaluated with an Environmental Assessment (EA). However, the draft does not support a FONSI given that the currently proposed August 2019 deviation is contrary to normal deviation criteria. The open-ended conditions and operational uncertainties contained in the Draft LORS08 HAB Deviation allows the USACE to implement the deviation as a long term interim operational plan with unpredictable outcomes and no clear operational guardrails, creating a major change in operations with the potential to be in place for the next three years. It will fundamentally change the volume of releases, timing of releases, location of releases, and will lead to higher or lower Lake stages at different times in the annual hydrological cycle than those that would be experienced under LORS08.

Evaluation of full range of potential operations and impacts lacking

The alternatives and scenarios evaluated do not address the full range of operational possibilities and outcomes. They appear to be derived from a best professional judgement approach developed by a small group of Corps staff members in a relatively brief amount of time. In order for deviation operations and outcomes to be consistent with the Draft EA "worst case" scenario in Appendix A page 9, they would be made when the Lake is in the Base Flow Sub-band, begin at the start of the wet season, have a 30-day duration and remove no more than an additional 123,740 acre-ft from Lake Okeechobee. Instead of following the scenario evaluation protocols, the proposed deviation allows additional releases year-round in the Low and Base Flow Sub-bands contrary to the LOR08 guidance of no releases when Tributary Hydrological Conditions (THC), Multi-Seasonal Climate and Hydrological Outlook are dry. The proposed deviation also allows releases in the Beneficial Use Sub-band where LORS08 calls for no releases in order preserve a minimal portion of the water supply purpose of the C & SF Project while the Herbert Hoover Dike is being rehabilitated.

Given its potential to substantially alter Lake releases and create system-wide impacts not anticipated by the LORS08 Supplemental EIS in an open-ended, long-term basis, the Draft LORS08 HAB Deviation should be subject to the requirements of a Supplemental Environmental Impact Statement (SEIS). Minimal review time, insufficient technical evaluations, and a lack of impacted stakeholder and public at large input needs to be corrected. More information is necessary to support the conclusions and evaluate potential impacts to the environment and other goals and objectives of LORS08. Additional supporting technical documentation and greater surety on conditions and decision criteria for HAB operations are needed. Scientific evaluation and hydrological analysis are needed to further qualify and

quantify the full extent of the impacts associated with the proposed deviation. It would be beneficial to employ a long-term Period of Record (POR) and model the full range of operations and potential impacts rather than rely on the extremely limited scenarios currently included in the proposed deviation.

The draft deviation has the potential to generate additional operational risks for the human and natural environments during both low water and high water events. Based on the review of the August 2019 Draft, it appears the deviation could create a variety of low water detrimental impacts including increased risk for Lake Okeechobee Minimum Flow and Level violations, detrimental impacts to endangered species and detrimental impacts to water supply for the environment system-wide, Stormwater Treatment Areas (STAs), Lake Okeechobee Service Area (LOSA), Seminole Water Rights Compact and the Lower East Coast (LEC). Given the limited amount of evaluation provided in the draft document, the extent of low water and high water impacts is not clear.

#### Vague and undefined terms, criteria, and decision-making protocols

The lack of criteria and guidelines for identifying an HAB that would require a deviation response is problematic for decisions regarding the implementation of the deviation. The proposed definition of HAB is so vague as to make the presence of any blue-green algae a potential HAB. There are four conditions when the Draft LORS08 HAB Deviation could be applied. The first condition would need some definitions or criteria to identify when an HAB is present, the second condition regarding emergency declarations for an existing HAB is a clear condition, the third condition where an HAB is "anticipated to occur" would need to be further defined and the fourth condition regarding past HABs is not a response to the actual conditions being encountered and recommend it be removed as a deviation condition.

The vague deviation conditions along with the utilization of phraseology and undefined terms such as: "caused harm", "impacted public safety" and "Manage water in anticipation of HAB conditions by making long term low volume releases before and after an HAB event and not during," has no reference to associated law or regulation and lacks specific scientific and technical justification.

The decision-making process also contains vague and undefined protocols with ambiguous descriptions of the individuals and agencies responsible for decisions. Clearer descriptions are needed regarding the process that will take place when decisions are made about implementing the HAB Operations Deviation. Additionally, there is a lack of well-defined criteria to be applied in implementing the process. Recommend a fully described project team with opportunity for public input and a transparent process for the decision making to address the uncertainties in the August 2019 Draft.

The combination of the vague, undefined terms for conditions, operations, and the decision-making process results in almost unbridled discretion in the ability of the Corps to undertake discharges with a lack of any defined boundary conditions or legal justification. This will result in a lack of predictability and accountability for stakeholders regarding proper management of Lake Okeechobee.

#### Proposed operations contrary to LORS08 Intent

Releases in the Beneficial Use (BU) Sub-Band are contrary to the stated intent of LORS08 as adopted to preserve a minimal portion of the water supply purpose of the C & SF Project while the Herbert Hoover Dike is being rehabilitated. Recommend no HAB releases in the Beneficial Use Sub-Band in the

deviation operations in order to stay consistent with LORS08. If deviation releases are going to be made in the BU Sub-band, a buffer of 0.25 foot above the water shortage line throughout the year is not adequate to provide the protections necessary for the human and natural environments, particularly when terms like releases “reduced” and “cut-back” all the way down to the Water Shortage Management Band apply. I have provided some recommendations in the specific comments to modify the proposed operations in the BU Sub-Band if such releases cannot be avoided in this process.

A water banking scheme is proposed to zero out the effects of the proposed deviation on an annual basis but no credible quantifiable evaluation or modeling effort has been offered to support that this would be possible or how holding and releasing water in a manner contrary to the intentions and operational criteria of LORS08 would impact the natural and human environment. Of great concern is the potential to “withdraw” virtually unconstrained volumes of water resources from the Lake in the Low, Base Flow and Beneficial Use operational sub-bands without any control over the arrival of the anticipated “deposit”. This is contrary to the LORS08 volumes, timing and distribution of water system-wide into and out of the Lake. The proposed deviation operations have the potential to upend the water budget modeled in LORS08 and in CERP project planning.

The scenario offered in the EA as a worst-case scenario evaluation does not begin to encompass the potential for unintended consequences contained in the entirety of the operations allowed by the proposed deviation. Recommend that Lake Okeechobee be managed based on the stage and climatic conditions at a specific time, in accordance with LORS08. This will be a more beneficial approach than an arbitrary release based on a previous impact 6 months prior or anticipated to occur 12 months in the future.

#### SPECIFIC COMMENTS:

##### **1 Project Purpose and Need**

Page 1-8 /Last paragraph

When making ecological science statements such as “The coverage and intensity of the bloom has been variable, likely due to local meteorological conditions rather than significant changes in the bloom itself” recommend a footnote identifying the scientific source for the information.

Recommend updating the information to current conditions and findings that the NOAA imagery does produce false-positives under some conditions and does not always coincide with HAB occurrence.

Source SFWMD and FDEP sampling and reports.

Page 1-11 / First paragraph

Make-up releases were not meant to be “preemptive” in nature. They are to occur as soon as possible when the Lake is in the Intermediate Sub-band after releases that should have been made at higher Lake levels were withheld.

Source LORS2008 page 7-28 & 7-29 Section 7-15.

Page 1-12 / Use of Additional Operational Flexibility (AOF)

AOF is not relevant to the proposed deviation. The deviation is a major change in Lake operations that is long term and pervasive. AOF is to be used when the 2008 LORS Parts A through D are not effective at managing lake levels consistent with the intent of 2008 LORS.

AOF is anticipated to be used infrequently, have a desired outcome and should be discontinued when the outcome is achieved.

Source LORS08 page 7-29 Section 7-16.

Page 1-12 / Decisions to be Made

It seems a full range of reasonable alternatives was not evaluated. The proposed deviation appears to have been formulated by a small group of Corps staff in a relatively brief time period. Recommend the alternatives be revisited and subject to an SEIS process with full stakeholder participation and additional scientific evaluations and hydrological analysis.

Page 1-12 / Permits, Licenses and Entitlements

The reason the LORS08 SEIS was found consistent in the Florida State Clearinghouse process was due to its interim status and the understanding that it was to be in place for approximately three years. Given the LORS08 history, it is important not to make a mistaken assumption on the duration of the deviation.

## 2 Proposed Action and Alternatives

**Note: Section 2 Comments apply to Appendix A where the content is repeated.**

Page 2-1 /Part D HAB Operations

Recommend the following modifications to the proposed operations:

It is recommended that no HAB deviation releases occur in the Beneficial Use (BU) Sub-Band. LORS08 anticipated that the Base Flow Sub-Band is where low volume releases associated with flood control would occur. The Beneficial Use Sub-Band is for preserving water supply and relies on the SFWMD Adaptive Protocols for release guidance per LORS08.

The following recommendation is for a clear and present danger of an HAB event – not anticipation and not past - and a “storage” operation in the BU Sub-Band is the only option available, the following modifications are recommended:

The use of “cut-back” or “reduced” replaced with “stopped” or “ceased” when Lake levels get too close to the Water Shortage Line to continue HAB operations.

- 1) No releases within 0.50 feet of Water Shortage Line February 1 – April 15
- 2) No releases at or below 12 ft NGVD April 16 – July 10
- 2) No releases within 0.25 feet of Water Shortage Line July 10 – January 31

While not recommending that releases be made below 12 ft NGVD – if you are using an average rate of rise criteria, the time period for calculating the average needs to be identified. This is where additional hydrological analysis would be useful.

#### Page 2-1 / Part C HAB Operations

As currently proposed, removing any constraint on Maximum Practicable Releases to the WCAs in the Low and Base Flow Sub-Bands and allowing them in the BU Sub-Band is unacceptably dangerous to balancing project purposes and should be revisited. Recommend this section be revised and developed further with guidelines protective of system-wide impacts, balances the project purposes and includes a robust hydrological analysis. Recommend some cap and seasonality on what is sent to the WCAs beyond conveyance and STA capacity. These proposed deviation operations have the potential to upend the water budget modeled in LORS08 and in CERP project planning unless they focus on excess water that would have been sent to tide. During dry years and the dry season, sending this water into the WCAs where it is no longer available system-wide for a variety of natural area and developed area uses will result in much greater risk of detrimental, even severe, low water impacts to Lake Okeechobee, the Caloosahatchee Estuary, STAs and all water uses reliant on Lake Okeechobee for water supply during dry times

#### Page 2-1 & 2-2 / Deviation Conditions

The lack of criteria and guidelines for identifying an HAB that would require a deviation response is problematic for decisions regarding the implementation of the deviation. The proposed definition of HAB is so vague as to make the presence of any blue-green algae a potential HAB. There are four conditions when the Draft LORS08 HAB Deviation could be applied. The first condition would need some definitions or criteria to identify when an HAB is present, the second condition regarding emergency declarations for an existing HAB is a clear condition, the third condition where an HAB is “anticipated to occur” would need to be further defined and the fourth condition regarding past HABs is not a response to the actual conditions being encountered and recommend it be removed as a deviation condition.

The proposed description of HAB conditions that would trigger the use of the proposed deviation is provided below for reference:

“These operations would only be utilized if conditions were met for HAB operations. Any one of the conditions below could warrant the use of HAB operations:

- If a HAB is currently in Lake Okeechobee, C-43, or C-44 canals, the Caloosahatchee Estuary, or the St. Lucie Estuary.
- If the state of Florida declares a state of emergency due to HABs on Lake Okeechobee, C-43 or, C44 canals, the Caloosahatchee Estuary, or the St. Lucie Estuary.
- If a HAB is anticipated to occur on Lake Okeechobee, C-43 or C-44 canals, the Caloosahatchee Estuary, or the St. Lucie Estuary.
- If a HAB has occurred and caused harm, or have impacted public safety during the last 12 months within Lake Okeechobee, C-43 or C-44 canals, the Caloosahatchee Estuary, or the St. Lucie Estuary”



Page 2-2 / Determining When Releases Will be Made

The decision-making process contains vague and undefined protocols with ambiguous descriptions of the individuals and agencies responsible for decisions. It does not appear to include an opportunity for public input on a proposed HAB operation even if the LO Periodic Scientist Call (PSC) is used to gather information before an HAB operation is developed. Clearer descriptions are needed regarding the process that will take place when decisions about implementing the HAB Operations deviation are needed. Additionally, there is a lack of well-defined and technically justified criteria to be applied in implementing the process. Recommend a fully described project team with the opportunity for public input and a process for the decision making to address the uncertainties in the August 2019 Draft be developed.

In the "Operations under these circumstances could include" section, the first two circumstances are responding to bloom conditions (though still undefined) but the third circumstance does not require a bloom condition and instead has "manage water in anticipation of HAB conditions by making long term low volume releases before and after a HAB event and not during (subject to considerations identified in the operational strategy)". Since this does not involve an existing bloom condition, it appears to be outside of deviation criteria that would have a beginning and an end. It is a substantial operational change that that will be pervasive and long term instead of responsive to a well-defined condition with a recognizable outcome. How the "anticipated blooms" condition would be managed and the consequences of such actions is unpredictable given the many uncertainties contained in the proposed deviation.

Pages 2-2 & 2-3 / Water Bank for HAB Operations

A water banking scheme is proposed to zero out the effects of the proposed deviation on an annual basis but no credible quantifiable evaluation or modeling effort has been offered to support that this would be possible and not negatively impact the natural and human environment. Of great concern is the potential to "withdraw" virtually unconstrained volumes of water resources from the Lake in the Low, Base Flow and Beneficial Use operational sub-bands during dry conditions without any control over the arrival of the anticipated "deposit". This is contrary to the LORS08 volumes, timing and distribution of water system-wide into and out of the Lake in the extreme. The proposed deviation operations have the potential to upend the water budget modeled in LORS08 and in CERP project planning. Make-up releases were not meant to be "preemptive" in nature. They are to occur as soon as possible after releases that should have been made at high Lake levels were withheld when the Lake is below the Intermediate Sub-band.

The scenario offered in the EA as a worst-case scenario evaluation does not begin to encompass the potential for unintended consequences contained in the entirety of the operations allowed by the proposed deviation. As stated in the proposed deviation, any conditions may impact the "zero sum" plan such as large rainfalls, tropical events, and drought. How the releases will be developed and tracked at what structures is unclear. There is even some indication a "pull" from another area rather than the Lake conditions themselves may determine releases such as "needs may include, but are not limited to, environmental releases to maintain salinities within the estuaries or to hydrate the WCAs during important nesting periods."

Recommend that Lake Okeechobee be managed based on the stage and climatic conditions at a specific time, in accordance with LORS08. This will be a more beneficial approach than an arbitrary release based on a previous impact 6 months prior or anticipated to occur 12 months in the future.

#### Page 2-7 / Alternative B Evaluation

The second paragraph of page 2-7 states "HAB operations would not result in more frequent or prolonged departures of lake stage outside of the prescribed envelope nor increase the occurrence of extreme high and low lake stage events as compared to LORS" without citing any hydrological analysis demonstrating this is true.

The alternative evaluations also states that releases would only be made "if the lake was rising rapidly (greater than 0.15 ft per week on average) and that releases would not be made if stages were declining (7 day average declining consistently for multiple weeks) and below 12 feet ...". The criteria is incomplete. It does not include how many weeks would be used for the rising scenario or, in the declining scenario, the rate of decline and how many weeks would be used. Fully developed criteria and quantifiable evaluation methodology are lacking to support the conclusions of the EA and FONSI.

Economic impacts to the Lake communities and businesses due to prolonged Lake stages under 12.5 ft NGVD were not provided.

## 4 Environmental Effects

#### Page 4-16 / Cumulative Effects

The second paragraph states that "Only under extreme drought events, would lake stage water bank debits not be made up through holding back releases that otherwise would have been required under LORS08. In this scenario, the limit of such effect would be a lower lake stage of about 0.28 feet, NGVD because preemptive releases would have been limited due to meteorological predictions of drought." This conclusion appears to be based on Scenario 1 for deviation operations when releases would be made when the Lake is in the Base Flow Sub-band, begin at the start of the wet season, have a 30 day duration and remove no more than an additional 123,740 acre-ft from Lake Okeechobee. The referenced scenario does not capture the full extent of deviation operations year-round or the full extent of releases in the Low, Base Flow and Beneficial Use Sub-bands during dry conditions. A comprehensive evaluation of the potential impacts of the full range of the proposed deviation has not been performed to support the conclusions of the EA and FONSI. If Scenario 1 is the basis for the conclusions, then LORS08 HAB Deviation releases should be limited to the Base Flow Sub-band at the start of the wet season and no more than 123,740 acre-feet. If additional analyses have been performed, they should be provided as part of the EA.

## Appendix A – Harmful Algae Bloom Operational Strategy

**Note: Section 2 Comments apply to Appendix A where the content is repeated.**

#### Page A-1 through A-3 / Decision-making process comparison to LORS08

The last two paragraphs on page A-1 claim that "The decision-making process for releases out of Lake Okeechobee will remain unchanged from LORS 2008 and is included below for consistency." It continues to say how the considerations include all the Congressionally authorized project purposes. While it may

be true in form, the considerations will not be the same in practice as LORS08. The intention of the LORS08 HAB deviations is to replace the carefully considered and evaluated LORS08 SEIS balance of the authorized project purposes with the deviation's focus on creating wet season storage in Lake Okeechobee at the expense of water supply performance and higher risk to the Lake's ecological health. The deviation is fundamentally not like LORS08 operations and its balanced decisions.

The decision making also creates a layer of ad hoc engagement by the Corp to develop a unique plan for the LORS08 HAB Deviation operations whenever they determine some operation is needed, resulting in further unpredictability for Lake operations.

Page A-4 / Releases Within 0.25 ft of the Water Shortage Management Line.  
Please see Section 2 Comments, Page 2-1

Page A-5 / Use of "up-to" limit maximums is an over estimation of release volumes held back  
The last paragraph states " Releases could be postponed due to HABs (postponed meaning doing less than the up-to limits within Part D of LORS until after an HAB event) and would be banked to be tracked for a duration of 12 months." Up-to limits are maximums and releases can be less than the maximum amount. This is the source of much of the flexibility within LORS08. To assume maximum releases would always be made is an over estimation of release volume. Recommend a methodology that more correctly reflects the volume of releases that might have been made.

Page A-6 & A-7 / Beneficial Use Sub-band operations and Water bank for HAB operations  
Please see comments for A-4 for operations in the Beneficial Use Sub-band  
Please see comments for Pages 2-2 & 2-3 for "Water bank for HAB Operations"