

**Attachment J -
Rationale for Conformed STA NPDES and EFA Permits**

Rationale for Conformed STA NPDES and EFA Permits

I. General Rationale

All portions of STA NPDES and EFA permits not cited below were conformed to eliminate all references to the non-conforming elements of the Long-Term Plan, the EFAA's moderating provisions, and/or any extended compliance schedule past December 31, 2006, as required by the 2010 Order. They were also conformed to incorporate the WQBEL specified in this Amended Determination. The following rationale is provided for changed provisions that do not clearly fall in the above categories for: 1) all or most of the permits; and 2) specific permits. Provisions were also changed to make the permits consistent with the CWA and the implementing NPDES regulations. All added language is denoted by red.

II. Changed Provisions in All or Most Permits

1. The above named permittee is hereby authorized to construct and operate the facilities required by this permit ~~shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:~~

This or similar language is found on the cover page of several permits. Because the application and other documents refer to projects specified in the Long-Term Plan that are now deemed as non-conforming, USEPA deleted reference to them.

2. Replacing “~~stormwater~~” with “non-process wastewater” or “wastewater”

This is most often found in the first pages of each permit where the type of wastewater that is treated by each STA is described. USEPA's view is that the wastewater treated by the STAs is not solely stormwater or return flows from agriculture. It may also include groundwater, stormwater, and other water sources or wastewater types. Due to the varied nature of that wastewater, it is not appropriate to specify it as “stormwater”.

3. WQBEL language - All EFF TP monitoring results for this parameter shall be reported as separate weekly values without rounding to whole numbers. The results shall also be reported as FWM annual averages that are calculated based on the FWM of the weekly values. The results shall also be reported as GM annual averages that are calculated based on all sample point weekly values collected when discharge occurs in the previous 12 months. All FWM and GM annual averages shall be reported to the nearest whole number (i.e., 10.5 ppb shall be reported as 11 ppb; 10.49 ppb shall be reported as 10 ppb). All SWU TP monitoring results shall be reported as separate weekly values without rounding to whole numbers. All results shall also be reported as monthly averages and as FWM annual averages. The monthly averages and FWM annual averages shall be calculated based on the FWM of the weekly values and shall be reported to the nearest whole number (i.e., 10.5 ppb shall be reported as 11 ppb; 10.49 ppb shall be reported as 10 ppb).

This added language or its equivalent is found as footnotes in either Part I.A.1 of each NPDES permit or below the table ‘Discharge Limitations and Associated Monitoring Requirements’ near the end of each EFA permit. Authority for these reporting requirements is provided by CWA Section 308(a) and 40 CFR Parts 122.41(j), 122.48(a), and 122.43(a). It is important that the separate weekly phosphorus data be reported without rounding so that it can be assessed as appropriate in the future. Because

the TP water quality criterion, the various components of the four-part test, and the two WQBEL components are all expressed as whole numbers, compliance with the WQBEL should also be assessed using whole numbers. The rounding requirements specified are consistent with historical USEPA practice and interpretation. The calculation of GM annual averages is consistent with the derivation of the WQBEL.

Beginning at the end of April after the permit effective date and at the end of each April thereafter, the permittee shall report the FWM annual average using data it collected for the prior 12 months. Beginning at the end of April after the permit effective date and at the end of each April thereafter, the permittee shall report the GM annual average using data it collected for each of the prior 3 years.

This language was added to either Part I.A.5 of the STA NPDES permits or as a footnote near the end of each EFA permit below the table 'Discharge Limitations and Associated Monitoring Requirements'.

~~4. No violations for the annual average limit will be deemed to have occurred until data have been compiled for the first 12 months after the issuance date of the permit. The "annual average" effluent limitation is a rolling average equal to the flow weighted arithmetic mean of the effluent samples collected during consecutive reporting periods which comprise one year. For parameters that are measured at least once per month, the annual average shall be computed at the end of each month and is equal to the arithmetic mean of the monthly average of that month and of each of the previous eleven months. No violations for the annual average limit will be deemed to have occurred until data have been compiled for the first 12 months after the issuance date of the permit. For the first 11 months after issuance of this permit, the monitoring results for this parameter shall be recorded on the DMR as MNR. Starting with the 12th month and lasting until the expiration of this permit, the monitoring results for this parameter shall be recorded on the DMR as a 12-month moving flow weighted average.~~

This language was in a footnote in either Part I.A.1 of each NPDES permit or below the EFA permit table 'Discharge Limitations and Associated Monitoring Requirements'. Based on this language, permit TP monitoring results were required to be reported as a moving annual average and where a limit applied, compliance was assessed monthly. As discussed in the Amended Determination WQBEL summary and attached TSD, the underlying TP water quality criterion is a long-term (decades) value. Although TP is known to vary spatially and temporally above 10 ppb, no imbalance of flora or fauna is observed when the long-term 10 ppb value is maintained. Also, the components of the four part test and the two components of the WQBEL are expressed on an annual timeframe, not on a more frequent basis. For these reasons, it is not necessary to assess permit compliance as a rolling annual average on a monthly basis.

5. In the year following any two consecutive years where the TP GM annual average exceeds 10 ppb, the permittee shall report quarterly the GM of all monthly TP values for that year. If that mean exceeds 10 ppb, the permittee shall provide a report to both FDEP and USEPA by the fifteenth of the month following the quarterly report of its evaluation of why that mean is as high as it is and the specific steps it is taking to ensure that the TP GM for that year will not exceed 10 ppb.

For the TP FWM WQBEL, the permittee shall report quarterly the average of all monthly FWMs for that year. If that average exceeds 18 ppb, the permittee shall provide a report to both FDEP and USEPA by the fifteenth of the month following the quarterly report of its evaluation of why that average is as high as it is and the specific steps it is taking to ensure that the TP FWM annual average for that year will not exceed 18 ppb.

This language was added as either Part I.A.6 of each NPDES permit or as a footnote below the EFA permit table 'Discharge Limitations and Associated Monitoring Requirements' under the authority of CWA Section 308(a) and 40 CFR Part 122.41(j). Because the WQBEL components are expressed as annual averages and compliance is typically assessed at the end of each May-April period, USEPA believes that it is important that the permittee provide early warning of possible WQBEL non-compliance and the steps that are being taken to prevent that from occurring.

6. If the facility does not meet the FWM WQBEL in any year, the permittee shall report the annual load of TP discharged by the STA into the Everglades that is in excess of the WQBEL load (based on 18 ppb). If the facility does not meet the GM WQBEL in any year, the permittee shall separately report the annual load of TP discharged by the STA into the Everglades that is in excess of the WQBEL load (based on 10 ppb) for that year and the previous two years.

This language was added as either Part I.A.7 of each NPDES permit or as a footnote below the EFA permit table 'Discharge Limitations and Associated Monitoring Requirements' under the authority of CWA Section 308(a) and 40 CFR Part 122.41(j). In order to better evaluate the cumulative impacts and effects of phosphorus intrusion in the Everglades if either WQBEL component is exceeded, calculating the actual excess TP load that occurred will provide useful information.

7. Samples taken in accordance with Section I.A.1 and submitted monthly as part of the Discharge Monitoring Report (DMR) shall be analyzed to provide an ~~annual~~ assessment in the Annual Report as to whether the facility is operating within or outside the operational envelope. The assessment shall be based on annual inflow volumes and phosphorus loads and shall compare flows and loads to the corresponding average values contained in the operational envelope described in Exhibit A (Goforth et al, 2007). If the annual inflow volumes or phosphorus loads exceed the corresponding average values of the operational envelope during an annual compliance period, the District shall conduct a review of potential causes and include this review in the annual report. Departmental concurrence shall be obtained prior to initiating Lake Okeechobee regulatory or water supply releases that would result in an exceedance of the maximum levels of flow or phosphorus load contained in the operational envelope.

This language was added to the NPDES permits for STA-1E, STA-1W, and STA 3/4 to make it consistent with the other NPDES and EFA permits. Assessment of whether the facility is within or outside the operational envelope is useful in determining if the WQBEL is expected to be met and can lead to advanced actions to prevent non-compliance with the WQBEL.

8. The permittee shall submit an Annual Report demonstrating compliance with the conditions of this permit and according to the schedule in Section VI. The Annual Report shall provide details regarding the status of implementation of the requirements of this permit. Specifically, the report will include details regarding: i.) For each downstream transect station, a compilation of the water quality, sediment, and vegetation monitoring data collected, as appropriate, and an

assessment of whether the cumulative impact remained unchanged, improved, or worsened from the previous year/monitoring.

This language is in Part I.E of the NPDES permits for STA-1E, STA-1W, and STA 2, as well as Specific Condition 26 of the STA-1E/1W EFA permit and Specific Condition 27 of the STA 2 EFA permit. To better evaluate the cumulative impacts and effects of phosphorus intrusion in the Everglades while the Amended Determination remedies are being implemented or if either WQBEL component is exceeded, the above reporting requirement was added to the Annual Report and is based on CWA Section 308(a).

9. The District shall notify the Department within 24 hours of any unanticipated bypasses of flow through the Diversion Structures. The District shall notify the Department as soon as practicable in advance of anticipated bypasses, with the exception of routine maintenance. The submitted notification shall include a description of the circumstances related to the bypass and a projection of the anticipated duration of the bypass. All bypasses occurring through any Structure shall be monitored for the parameters listed in the table below. As soon as practicable after cessation of all bypasses, the District shall submit a summary of the data collected from the table below and identify the duration of the bypasses. Bypasses shall be limited to the shortest time possible and are not allowed solely to achieve the WQBEL. Bypasses are subject to and must meet the requirements of Items VIII.20, 21, and 22 of this permit [or F.A.C. Sections 62-620.610(20), (21), and (22)].

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>	<u>Frequency</u>
<u>Total Phosphorus</u>	<u>mg/l</u>	<u>Grab</u>	<u>Weekly</u>
<u>Flow</u>	<u>CFS</u>	<u>Calculated</u>	<u>Daily Average</u>

Part I.E of the NPDES permits and Specific Condition 22 of the STA -1E/1W EFA permit, Specific Condition 25 of the STA 2 EFA permit, Specific Condition 28 of the STA 3/4 EFA permit, and Specific Condition 26 of the STA 5/6 EFA permit were changed to reflect the above language. To make the permits consistent with state and federal permitting regulations, all references to “diversion” were changed to “bypass”. The NPDES regulations at 40 CFR Part 122.41(m) allow some circumstances where water may be bypassed around STAs. In such events, it is important to measure and quantify the flow and TP loading that is bypassed and its duration. That information will help better evaluate cumulative impacts on and effects of phosphorus intrusion in the Everglades, as well as quantify nutrient loadings to the coasts.

10. The laboratory reported PQL for the specific parameter is less than or equal to the permit limit or the applicable water quality criteria, ~~if any~~, stated in Chapter 62-302, F.A.C. Parameters that are listed as “report only” in the permit shall use methods that provide a PQL, which is equal to or less than the applicable water quality criteria stated in 62-302 FAC;

This language is found in Section I.E.1.b of each STA NPDES permit. Because there is now an applicable numeric TP water quality criterion, the phrase “if any” was deleted.

11. The permittee shall report with the monthly DMR if operation of facilities is impacted by or constrained due to requirements under the Endangered Species Act or Migratory Bird Treaty

Act. The report should include the species involved, an estimate of the number of individuals involved, actions taken to avoid deleterious impacts on the endangered species, the affect those actions had on compliance with any condition of this permit, and an estimate of when facility operation will no longer be impacted or constrained.

This language was added as the last requirement in Section I.E of each NPDES permit and as Specific Condition 26.F in the STA-1E/1W EFA permit, Specific Condition 27.F in the STA 2 EFA permit, Specific Condition 30.F in the STA 3/4 EFA permit, and Specific Condition 28.F in the STA 5/6 EFA permit. The District has already implemented an Avian Protection Program to minimize impacts to black-necked stilts and burrowing owls that nest in the STAs. Historically, the District has delayed STA construction or changed STA operation to protect these species as required by the Endangered Species Act or the Migratory Bird Treaty Act. In recognition that future STA construction or operation may also be affected, the above reporting requirement was added. This provision is added under the authority of 40 CFR Part 122.49.

12. ~~An Operations Plan shall be developed and submitted by the permittee to the Department no later than three months after issuance of the permit.~~ Upon completion of and compliance with the requirements specified herein, the permittee shall submit to the Department an updated Operations Plan. Until the updated Operations Plan is submitted by the permittee and approved by the Department, the previously existing Operations Plan shall remain in effect.

This language is found in Section VI of the NPDES permits and Specific Condition 8 of the STA-1E/1W EFA permit, Specific Condition 11 of the STA 2 EFA permit, and Specific Condition 10 of the STA 3/4 and 5/6 EFA permits. The Operations Plan describes how the permittee controls STA wastewater treatment and the movement of water within and between STAs. Once compliance with the WQBEL and implementation of the remedies prescribed in this Amended Determination are achieved, these Plans will need to be updated.

13. The Annual Report shall be received by the Department no later than March 1 of each year following the conformance date of this permit. Each Annual Report shall present the information for the previous water year, from May 1 to April 30. Upon approval by the Department, the District may modify the Annual Report submission date to coincide with multiple reporting requirements and time periods needed for data acquisition and analysis.

This language is found in Part VI of the NPDES permits and Specific Condition 26 of the STA-1E/1W EFA permit, Specific Condition 27 of the STA 2 EFA permit, Specific Condition 30 of the STA 3/4 permit, and Specific Condition 28 of the STA 5/6 EFA permit. Annual Report requirements have been made consistent between the NPDES and EFA permits.

14. A revised Pollution Prevention Plan (PPP) shall be prepared and implemented in accordance with the following schedule:

	<u>Action Item</u>	<u>Scheduled Completion Date</u>
<u>1</u>	<u>Develop and Implement revised Pollution Prevention Plan</u>	<u>As needed upon completion of and compliance with the requirements of this permit</u>
<u>2.</u>	<u>Submittal of revised Pollution Prevention Plan if additional enhancements are implemented</u>	<u>Changes that warrant modifications to the current PPP + 90 days</u>

This language is found in Section VI of the NPDES permits. Because the STAs are considered industrial wastewater facilities, they are required to have a pollution prevention plan that has been adapted to address the treatment and removal of TP under the authority of CWA Section 304(e). The use of such a Plan is consistent with EPA guidance. Once compliance with the WQBEL and implementation of the remedies prescribed in this Amended Determination are achieved, these Plans will need to be updated.

15. Transect Monitoring: The permittee shall conduct water quality, soil, and vegetation monitoring as specified below at a series of sites located along a transect downstream of the STA-1E discharge site to characterize the effects of the STA-1E discharge on adjacent marsh areas of the Refuge. Table 6 below identifies five sampling sites located along a transect originating at LOXA-135 sampling site in the rim canal adjacent to the STA-1E discharge point and extending to the LOXA-139 sampling site located in an unimpacted portion of the marsh. Upon demonstration that an additional sampling site or removal of an existing sampling site is warranted, the permittee may request a modification to the monitoring program as appropriate. The Department and USEPA shall review and approve such requests on a case by case basis. Any alteration in the monitoring program approved by the Department and USEPA shall occur in the form of a modification to this permit.

The monitoring site closest to the discharge point (LOX-135) is located in the rim canal and will be used to evaluate changes in water quality occurring between the discharge point and the actual marsh. Of the remaining four marsh sites, LOXA-136 and LOXA-137 are located in areas currently identified as impacted (i.e., sediment TP concentration greater than 500 mg/kg) with the final two sites located in areas currently identified as unimpacted. All water quality, soil, and vegetation samples will be collected and reported for the parameters and at the frequency specified in the SFWMD's January 20, 2010 'Project WCA-2A Monitoring Plan for STA-2 and Compartment B Build-Out Downstream Monitoring Plan'. ~~Water quality grab samples will be collected at each of the transect sampling sites identified in Table 6 below on a monthly basis. In addition, sediment samples will be collected at each marsh site every three years. The sediment samples will be subdivided into floe (if present) and the upper 10 cm of sediment with each component being analyzed separately for TP and bulk density. The depth of any floe layer will also be recorded. To assure that the samples collected are representative of ambient conditions, all marsh sampling will be conducted in accordance with the marsh sampling protocols provided in the SFWMD's Field Sampling Quality Manual as refined in the District's Monitoring Plan for Everglades Protection Area Water Conservation Area 1 (WCA1), Project: EVPA.~~

This language was added as Section VII.F in the NPDES permit for STA-1E and its equivalent was added as Section VII.F in the NPDES permits for STA-1W and STA 2. Specific Conditions 23 and 24 in the STA 1E/1W EFA permit and Specific Condition 32 in the STA 2 EFA permit were also modified to include equivalent language. The downstream monitoring information is needed to better evaluate the cumulative impacts and effects of phosphorus intrusion in the Everglades while the Amended Determination remedies are being implemented or if either WQBEL component is exceeded. The above

reporting requirements that periodically assesses water quality, vegetation, and sediment were added under the authority of CWA Section 308(a) and 40 CFR Parts 122.41(j)(1), 122.43(a), and 122.48.

16. Implementation of Source Controls

A. Implementation. The permittee shall continue to implement source control programs in each of the contributing basins in accordance with Chapter 40E-63, F.A.C., and other applicable programs. Basins that do not presently include source control programs shall be monitored to determine if such programs are necessary in the event that phosphorus loads to the facility from these basins limit the facility's ability to achieve the WQBEL.

B. Performance. On an annual basis, the permittee shall evaluate the performance of source controls in the contributing basins and include the findings in the annual report required by the permit. The report shall include phosphorus loads from the basins and shall describe trends and compare current loads to those determined necessary to achieve the WQBEL.

C. Improvements. If the WQBEL is not achieved and if the assumed inflow concentration used to develop the Amended Determination remedy is exceeded, the permittee shall submit a report explaining the cause(s) for the excessive concentration and schedules and strategies for source control improvements necessary to achieve the WQBEL in the annual report.

This language or its equivalent was added as Section VII.G in the NPDES permits for STAs 1E, 1W, 2, and 3/4, as Section VII.F in the NPDES permits for STAs 5 and 6, and was modified in Specific Condition 10 of the STA 1E/1W EFA permit, Specific Condition 13 of the STA 2 and 5/6 EFA permits, and Specific Condition 16 of the STA 3/4 EFA permit. Because the combination of source controls and STA treatment has served as the foundation for Everglades restoration, this provision requires that source control efforts continue, that progress be assessed and documented in the Annual Report, and adds extra reporting requirements if the WQBEL is not achieved. These requirements are based on Section 308(a) of the CWA.

17. Annual Report Language

The permittee shall submit an Annual Report demonstrating compliance with the conditions of this permit and according to the schedule in Section VI. The Annual Report shall provide details regarding the status of implementation of the requirements of this permit. Specifically, the report will include details regarding:

a. Implementation of the WQBEL and activities required by this permit and affecting flows and loads to STA-1W;

b. Source control implementation and optimization;

c. STA design modifications affecting implementation of the WQBEL and activities required by this permit;

d. Improvements, enhancements, and strategies that have been initiated and/or completed within the previous year;

e. Any delays in the implementation of the requirements of this permit, the duration of the delays, the reason(s) for the delays, and the expected timeframe for their resolution;

f. Whether revisions and/or additions to the requirements of this permit are recommended;

g. The implementation status of STA Recovery Plans;

- h. For any noncompliance with permit conditions, an evaluation of the cause(s) and implementation of remedial measures;
- i. Whether the facility was operated within or outside of the operational envelope; and
- j. For each downstream transect station, a compilation of the water quality, sediment, and vegetation monitoring data collected, as appropriate, and an assessment of whether the cumulative impact remained unchanged, improved, or worsened from the previous year/monitoring.

This language was added to, or made consistent between, Part I.E of the NPDES permits for STA-1E, STA 2, STA 3/4, STA 5, and STA 6, Part I.C of the NPDES permit for STA-1W, Specific Condition 26 of the STA-1E/1W EFA permit, Specific Condition 27 of the STA 2 EFA permit, Specific Condition 30 of the STA-3/4 permit, and Specific Condition 28 of the STA-5/6 EFA permit. Item J above was added, where appropriate.

III. Changed Provisions in Specific Permits

A. STA 1E NPDES Permit

1. Project Description

The project is to construct, operate and maintain Stormwater Treatment Area 1E (STA-1E), the STA-1 Inflow and Distribution Works (STA-1 Inflow Basin), which includes the G-311, G-300, G-301, G-302, and S-5AS control structures, Inflow Pumping Station S-319, Inflow Pumping Station S-361, Gated Spillway G-311, STA-1E Works, Outflow Pumping Station S-362, C-51 Basin Divide Structure S-155A, and C-51 Canal Improvements, collectively known as STA-1E. STA-1E is part of the Everglades Construction Project (ECP) construction, operation, and maintenance of which is required by the Everglades Forever Act (EFA) (Section 373.4592, F.S.).

This language was added to make it consistent with that in the EFA permit. Including the Inflow Basin as part of the treatment works allows it to be covered by the bypass provisions of the permit.

2. Section VII.A.1

~~The following documents (design documents), not attached hereto, but retained on file with the Department, are made a part hereof:~~

- ~~a. 1994 Conceptual Design Document for the Everglades Protection Project;~~
- ~~b. The June 13, 2000 Stormwater Treatment Area No 1 East Period of Record Dry Out Analysis;~~
- ~~c. The October, 1999 C-51 & STA-1 East Design Documentation Report;~~
- ~~d. The January, 1999 Design Documentation Report, Canal 51 and Stormwater Treatment Area 1 East;~~

- e. ~~The May, 2000 Addendum To Design Documentation Report Stormwater Treatment Area 1 East;~~
- f. ~~The September 26, 2003 Stormwater Treatment Area, C 51 Improvements Construction and Solicitation Specifications;~~
- g. ~~The February, 1999 C 51 West End Flood Control Project Final Environmental Impact Statement; and,~~
- h. ~~The November 16, 2004 Everglades Protection Area Tributary Basins Long Term Plan for Achieving Water _____ Quality _____ Goals.~~

Because this section refers to projects specified in the Long-Term Plan that are now deemed as non-conforming, USEPA deleted reference to them.

3. Section VII.B.2

Record drawings shall be prepared and made available in accordance with Rule 62-620.410(6), F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting ~~within six months of placing the facilities into flow-through operation.~~

The Amended Determination remedies schedule and milestones are not based on the historically used concept of flow-through operations. USEPA deleted that reference here.

B. STA 1W NPDES Permit

1. Section I.A.5

~~By operation of the EFA, a numeric effluent limit for phosphorous shall be derived in accordance with state policy as contained in the EFA, § 373.4592 (4) (e), Fla. Stat, which provides that if the Department does not adopt by rule a revised phosphorus water quality criterion by no later than December 31, 2003, the numeric criterion for phosphorus shall be 10 parts per billion (ppb) in the Everglades Protection Area. Upon adoption of a revised criterion or the default criterion becoming effective, and upon approval by EPA, an effluent limitation shall be established for this permit, in a manner consistent with the EPA, the federal Consent Decree in USA v. SFWMD, Case No. 88-1886-CIV-HOEVELER, as may be modified, and other applicable state and federal laws and that recognizes the relationship between waters discharged to, and the resulting water quality in the Everglades Protection Area. If an effluent limitation is established for this permit based upon the default criterion, that effluent limitation will be replaced with a new effluent limit based on the approved numeric interpretation of the narrative phosphorous criterion once rulemaking for the phosphorous criterion and an appropriate effluent limitation is promulgated under the requirements of the EFA and the Consent Decree. The new effluent limit will be based on the numeric phosphorous criterion, the associated implementation strategy, and the relationship between waters discharged to, and the resulting water quality in, the Everglades Protection Area in a manner consistent with the EFA, the federal Consent Decree in USA v. SFWMD, Case No. 88-1886-CIV-HOEVELER, as may be modified, and other applicable state and federal laws. Persons whose substantial interests are affected by modification of this permit to include a new effluent limitation for phosphorus will be afforded a point of entry under Chapter 120, Florida Statutes~~

This permit was last issued in 1999. This language was deleted since it pre-dates the adoption and approval of the 10 ppb long-term geometric mean TP water quality criterion.

2. Section VII.E

~~This permit currently contains the narrative water quality standard for nutrients. In accordance with Section 373.4592(4)(e) or the Everglades Forever Act (EFA), by December 31, 2001, the Florida Department of Environmental Protection shall file a notice of rule making in the Florida Administrative Weekly to establish a phosphorus criterion in the Everglades Protection Area. By operation of the EFA, if the Department does not adopt by rule a revised phosphorus water quality criterion by December 31, 2003, the numeric criterion for phosphorus shall be the default of 10 ppb in the Everglades Protection Area. In either case, the numeric phosphorus criterion and implementation methodology must be submitted to EPA for approval. The USEPA shall review the water quality data that the state develops pursuant to the EFA, Section 373.4592(4)(e)1., Fla. Stat., and the interpreted numeric phosphorus criterion approved by the Florida Environmental Regulation Commission in accordance with the EFA, Section 373.4592(4)(e)2., Fla. Stat., and shall approve the criterion provided it adequately protects the designated uses of the Everglades Protection Area, and complies with the Clean Water Act and implementing regulations. The same standard of review will apply to this criterion that applies to all other proposed State water quality standards.~~

~~In the event that the state of Florida revises the dissolved oxygen criterion, or establishes a site specific alternative criterion (SSAC) or other moderating provision for dissolved oxygen in the Everglades Protection Area., the numeric effluent limitation for dissolved oxygen contained in this permit shall be revised.~~

This permit was last issued in 1999. This language was deleted since it pre-dates the adoption and approval of the 10 ppb long-term geometric mean TP water quality criterion. The last paragraph was deleted since it pre-dates the adoption and approval of the DO SSAC.

The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

- a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;
- b. Controls any pollutant not addressed in the permit.

The permit as revised or reissued under this paragraph shall contain any other requirements then applicable.

The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL consistent with the requirements of Section 403.067, F.S.

Since this NPDES permit was issued in 1999, these conditions were added to be consistent with FDEP's current permit reopener language.

3. Section VII.F – Transect Monitoring

A second transect, the Z transect, was added based on recommendations from Department of Interior scientists and USEPA's consultant William Walker and the authority of CWA Section 308(a). STA 1W discharges can go to the L-7 Canal, which

forms a topographic low point further downstream. Under certain hydrologic conditions, that low point could discharge to the Refuge.

The Z transect impacted/unimpacted demarcation is based on:

Grover P, Bennet T, Weaver K, Nearhoof F, 2001. Everglades Phosphorus Criterion Technical Support Document - Chapter 4.0-4.1: Results - Introduction and Evidence of Phosphorus Enrichment. Florida Department of Environmental Protection, Everglades Technical Support Section, Tallahassee, FL. Available at: <http://www.dep.state.fl.us/water/wqssp/everglades/pctsd.htm>; Figure 4.1.5.

4. Section VIII.V.1

~~The term “bypass” does not include waters diverted around the entire STA-1W Project. Because of the hydrologic relationship between STA-1W and the Loxahatchee national Wildlife Refuge, “bypass” is not expected to occur at this facility.~~

This language was stricken because it is not consistent with 40 CFR Part 122.41(m).

C. STA 2 NPDES Permit

1. Permit Cover Page

~~This permit is accompanied by an Administrative Order (Order), AO-010-EV, pursuant to Subsections 403.088 (2)(e) and (f), F.S. Compliance with AO-010-EV is a specific requirement of this permit.~~

Based on the 2008 and 2010 Orders, the AO compliance schedule is no longer valid because it has the same effect as the invalidated portions of the Phosphorus Rule and the EFAA. Because the conformed permit requires immediate compliance with the WQBEL, all cites or links to a concurrent AO are being deleted.

2. Section I.E.7

~~Use of improvements, enhancements, and strategies identified~~

This was deleted from several parts of this section because it appears to refer to non-conforming parts of the Long-Term Plan and/or the TBEL, which are no longer valid.

D. STA 3/4 NPDES Permit

1. Section I.A.5

~~By operation of the EFA, a numeric effluent limit for phosphorus shall be derived in accordance with state policy as contained in the EFA, § 373.4592(4)(c), Fla. Stat., which provides that if the Department does not adopt by rule a~~

revised phosphorus water quality criterion by no later than December 31, 2003, the numeric criterion for phosphorus shall be 10 parts per billion (ppb) in the Everglades Protection Area. Upon adoption of a revised criterion or the default criterion becoming effective, and upon approval by EPA, an effluent limitation shall be established for this permit, in a manner consistent with the EFA, the federal Consent Decree in USA v. SFWMD, Case No. 88-1886-CIV-HOEVELER, as may be modified, and other applicable state and federal laws and that recognizes the relationship between waters discharged to, and the resulting water quality in the Everglades Protection Area. If an effluent limitation is established for this permit based upon the default criterion, that effluent limitation will be replaced with a new effluent limit based on the approved phosphorus numeric interpretation of the narrative phosphorus criterion once rulemaking for the phosphorus criterion and an appropriate effluent limitation is promulgated under the requirements of the EFA and the Consent Decree. The new effluent limit will be based on the numeric phosphorus criterion, the associated implementation strategy, and the relationship between waters discharged to, and the resulting water quality in, the Everglades Protection Area in a manner consistent with the EFA, the federal Consent Decree in USA v. SFWMD, Case No. 88-1886-CIV-HOEVELER, as may be modified, and other applicable state and federal laws. Persons whose substantial interests are affected by modification of this permit to include a new effluent limitation for phosphorus will be afforded a point of entry under Chapter 120, Florida Statutes.

This permit was last issued in 2004. This language was deleted since it pre-dates the adoption and approval of the 10 ppb long-term geometric mean TP water quality criterion.

2. Section VII.E

~~This permit currently contains the narrative water quality standard for nutrients. In accordance with Subsection 373.4592(4)(e) of the Everglades Forever Act (EFA), the Florida Department of Environmental Protection filed a notice of rulemaking in the Florida Administrative Weekly to establish a phosphorus criterion in the Everglades Protection Area. By operation of the EFA, if the Department does not adopt by rule a revised phosphorus water quality criterion by December 31, 2003, the numeric criterion for phosphorus shall be the default of 10 ppb in the Everglades Protection Area. In either case, the numeric phosphorus criterion and implementation methodology must be submitted to EPA for approval. The USEPA shall review the water quality data that the state develops pursuant to the EFA, Subsection 373.4592(4)(e)1., Fla.Stat., and the interpreted numeric phosphorus criterion approved by the Florida Environmental Regulation Commission in accordance with the EFA, Subsection 373.4592(4)(e)2., Fla.Stat., and shall approve the criterion provided it adequately protects the designated uses of the Everglades Protection Area, and complies with the Clean Water Act and implementing regulations. The same standard of review will apply to this criterion that applies to all other proposed state water quality standards.~~

~~In the event that the state of Florida revises the dissolved oxygen criterion, or establishes a site specific alternative criterion (SSAC) or other moderating provision for dissolved oxygen in the Everglades Protection Area, the numeric effluent limitation for dissolved oxygen contained in this permit shall be revised.~~

This permit was last issued in 2004. This language was deleted since it pre-dates the adoption and approval of the 10 ppb long-term geometric mean TP water quality criterion. The last paragraph was deleted since it pre-dates the adoption and approval of the DO SSAC.

The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

- a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;
- b. Controls any pollutant not addressed in the permit.

The permit as revised or reissued under this paragraph shall contain any other requirements then applicable.

The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL consistent with the requirements of Section 403.067, F.S.

Since this NPDES permit was issued in 2004, these conditions were added to be consistent with FDEP's current permit reopener language.

3. Section VII.F

This permit does not authorize the hydropattern restoration of WCA-3A. Once the performance of STA-3/4 ~~has been optimized and long-term water quality solutions for S-7/S-2 and S-8/S-3 basins have been implemented~~ attains the WQBEL, it is anticipated that discharges from STA-3/4 ~~will be diverted directly into WCA-3A~~ could be directed southward directly across the L-5 canal and levee into WCA-3A to assist in hydropattern restoration in accordance with Subsection (4)(b) of the EFA. Future WCA-3A hydropattern restoration plans will be coordinated with CERP implementation. Implementation of hydropattern restoration in WCA-3A associated with STA-3/4 will require review and approval by the Department and USEPA in the form of a modification to this permit. If hydropattern restoration proceeds, monitoring will be required along a transect in WCA3A downstream of the STA 3/4 discharge. The purpose of this monitoring will be to document the effect of the discharge on the downstream EPA marsh and changes in downstream water quality and cumulative phosphorus impacts. Transect monitoring will begin one year prior to the commencement of hydropattern restoration discharges in order to document baseline conditions. ~~The modification will require downstream monitoring which must be implemented sufficiently in advance to establish a scientifically defensible baseline and may include transect monitoring, if appropriate. The monitoring plan should be submitted to the Department for review and approval prior to the commencement of monitoring.~~

This provision was conformed to reflect the 2010 Order requirements regarding implementation of the WQBEL and to assess possible future changes in downstream water quality and cumulative phosphorus impacts in the Everglades.

4. Section VIII.22

~~The term "bypass" does not include waters diverted around the entire STA-3/4 project via the G-371 and G-373 structures, to prevent damage to the facility (usually caused by flooding) or for water resource needs such as the prevention of adverse impacts to public and/or environmental health as described in Condition b. below.~~

This language was stricken because it is not consistent with 40 CFR Part 122.41(m).

E. STA 5 NPDES Permit

1. Permit Cover Page

~~This permit is accompanied by an Administrative Order (Order), AO-011-EV, pursuant to Subsections 403.088 (2)(e) and (f), F.S. Compliance with AO-011-EV is a specific requirement of this permit.~~

Based on the 2008 and 2010 Orders, the AO compliance schedule is no longer valid because it has the same effect as the invalidated portions of the Phosphorus Rule and the EFAA. Because the conformed permit requires immediate compliance with the WQBEL, all cites or links to a concurrent AO are being deleted.

2. Section I.E.7

~~Use of improvements, enhancements, and strategies identified~~

This was deleted from several parts of this section because it appears to refer to non-conforming parts of the Long-Term Plan and/or TBELs, which are no longer valid.

F. STA 6 NPDES Permit

1. Permit Cover Page

~~This permit is accompanied by an Administrative Order (Order), AO-012-EV, pursuant to Subsections 403.088 (2)(e) and (f), F.S. Compliance with AO-012-EV is a specific requirement of this permit.~~

Based on the 2008 and 2010 Orders, the AO compliance schedule is no longer valid because it has the same effect as the invalidated portions of the Phosphorus Rule and the EFAA. Because the conformed permit requires immediate compliance with the WQBEL, all cites or links to a concurrent AO are being deleted.

2. Section I.E.7

~~“Use of improvements, enhancements, and strategies identified”~~

This was deleted from several parts of this section because it appears to refer to non-conforming parts of the Long-Term Plan and/or TBELs, which are no longer valid.

G. STA 1E/1W EFA Permit

1. General Condition 2

Scope of permit. This permit is valid only for the specific ~~processes and operations applied for and indicated in the approved drawings or exhibits~~ requirements of this permit. Any unauthorized deviation from the ~~approved drawings, exhibits, specifications, or conditions~~ requirements of this permit may constitute grounds for revocation and enforcement action by the Department.

This section is conformed to ensure that all references to non-conforming elements of the Long Term Plan are stricken, consistent with the requirements of the 2010 Order and the Amended Determination.

2. General Condition 5

Liability. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, ~~unless specifically authorized by an order from the Department~~. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.

The 2010 Order has currently enjoined FDEP from modifying NPDES permits through EFA permits (or AOs).

3. Specific Conditions 14 and 15

~~14. Stabilization Phase (Flow through Operations) — During the Stabilization Phase the treatment vegetation will be maturing and the STA performance will generally be improving toward achieving the TBEL. However, the overall performance of the STA is extremely difficult to evaluate and predict. It is anticipated that the treatment vegetation may require one to three years after flow through operations begin for the affected cells to achieve optimal performance. During the stabilization phase the TBEL shall apply. Once the facility achieves the TBEL it shall enter the Routine Operations Phase. During the Stabilization Phase, exceedance of the TBEL may occur; however, the STA shall be deemed in compliance with the permit as long as the actions described Specific Condition 17 of this permit are being taken in conjunction with all other applicable permit conditions.~~

~~An STA or Flow way may enter the Stabilization Phase after one of four antecedent conditions: (1) once flow through operations begin following the initial start up of a new treatment cell; (2) when a treatment cell is taken off line for implementation of Long Term Plan enhancements that may have adverse impacts on STA performance, (3) when a treatment cell is taken off line for recovery activities associated with a major event that compromises the structural integrity or performance of the STA, or (4) planned/unplanned maintenance activities which would cause adverse impacts to the STA's treatment capabilities. If the flow way is determined by the District to be incapable of operating or performing effectively as a result of the impacts caused by one or more of these circumstances, the District shall submit strategies and timelines identified as being the most effective in restoring the impacted flow way(s) to the optimal performance level within 60 days from such a determination or occurrence. The timely submittal and implementation of these strategies and timelines in conjunction with the Department's review and~~

~~approval of such submittals and compliance with all other applicable conditions of this permit shall constitute compliance.~~

~~As part of the first annual report following any adverse impact to the facility, and each subsequent year until the facility achieves the TBEL, the 12 month rolling flow weighted mean TP concentration of the STA outflow shall be assessed as to whether there is a trend in improvement of performance relative to prior years. If the trend analysis that is applied to this data indicates that there is not a trend in improvement of performance, the permittee shall report as to the causes behind the lack of performance improvement. If during a subsequent annual report the trend analysis applied to these data indicate that there is not a trend in improvement of performance after the affected flow way has been in flow through operation for 24 months, the annual report shall include any remedial measures necessary to achieve improved facility performance by the end of next year, and shall provide an estimate of when the TBEL shall be achieved.~~

~~154. Routine Operations Phase - During the Routine Operations Phase, discharges from the STAs shall achieve compliance with the **WQBEL as of December 31, 2006**. TBEL, as described in Specific Condition 16 of this permit. STA 1W and STA 1E shall achieve the WQBEL, established pursuant to Specific Condition 18, by no later than Dec 31, 2016.~~

USEPA recognizes that time is needed from when flooding occurs and emergent/submerged/floating vegetation begins to function until the WQBEL is achieved. However, reliance on the historically used concepts of ‘stabilization’ and ‘flow-through operations’ is no longer needed. Because use of stabilization had been linked to TBEL compliance and since the 2010 Order deems the use of TBELs to be invalid, continued regulatory application of stabilization is not appropriate.

4. Specific Condition 16

~~Application of Technology Based Effluent Limits. The TBEL described above will be applied as follows:~~

~~A. Compliance shall be tested in each water year (May – April) using data from the monitored representative inflow structures (G-302, G-311, and S-319) and outflow structures (G-251, G-310, and S-362), except as noted below. The result of this compliance testing shall be reported by the District as part of the annual reporting requirements in Specific Condition 30. The compliance calculations will exclude flows made for low flow water supply deliveries. Low flow water supply deliveries are deliveries that pass through the Everglades Protection Area to Dade, Broward or Palm Beach County, and the Big Cypress Seminole Indian Reservation for water supply (wellfield recharge and salt water intrusion prevention) purposes. In addition, low flow water supply deliveries are made at times when water levels in the Water Conservation Areas (WCAs) are below the minimum elevations presented below:~~

- ~~• WCA 1 – 14.5 ft. NGVD measured at the 1-8C gauge~~
- ~~• WCA 2 – 10.5 ft. NGVD measured at the headwater (HW) of the S-11B structure~~
- ~~• WCA 3A – 7.5 ft. NGVD measured at HW of S-333 or 11.0 ft at HW of G-409~~

~~These stage thresholds will be reviewed as part of any future analyses associated with revisions to the current regulation schedules (WCA 1: May 1995; WCA 2: June 1989; WCA 3A: November 2000). This method will also exclude water supply deliveries to the Loxahatchee National Wildlife Refuge (Refuge) or Everglades National Park (ENP), which have been requested by Refuge, ENP or U.S. Army Corps of Engineers staff and which cannot be treated by an STA prior to delivery.~~

~~B. The TBEL shall not apply in water years when rainfall in the source basins tributary to the STA exceeds the maximum annual basin rainfall that occurred during the period of record used for deriving the TBEL (See Goforth *et. al.*, 2007). In addition, the TBEL shall not apply in water years when rainfall in the basin tributary to that STA is less than the minimum annual rainfall that occurred during the period of record used for deriving the TBEL for that STA if supplemental flows are not available to maintain wet conditions~~

~~in that STA. If a year is excluded based upon these criteria, results from adjacent years shall be treated as consecutive in testing compliance.~~

- ~~C. The STAs will be deemed in compliance with the TBEL unless the annual flow weighted mean phosphorus concentration at the monitored representative outflows is greater than the annual limit. The annual limit can be calculated using the methods contained on pages 9-12 of the *Technical Support Document for the STA-1W TBEL* (Goforth et al. 2007, Exhibit B) and the *Technical Support Document for the STA-1E TBEL* (Goforth et al., 2007, Exhibit C). The method may be revised in the future as appropriate to reflect lower STA limits. Tables 2 and 3 below contain example calculations of the TBEL based on corresponding phosphorus loading rates (PLR).~~

Based on the 2010 Order, the use of TBELs is no longer valid because they derive from non-conforming parts of the Long-Term Plan and are also considered moderating provisions.

5. Specific Condition ~~23~~19

~~Factors Outside the Permittee's Control.~~ In the event that non-compliance or failure to achieve the WQBEL performance objectives results for any of the reasons other than those below, the permittee shall take appropriate remedial measures.

- ~~A. Anomalous Rainfall. Compliance with the TBEL shall not be tested in water years when the rainfall in the source basins exceed the range of values that occurred during the period of model simulation used in the development of the TBELs, or when sufficient supplemental flows are not available to maintain an average depth of 0.5 ft in each treatment cell of STA-1W and/or STA-1E. In these instances, results from adjacent years will be treated as consecutive for purposes of testing compliance. The Department may make similar adjustments where emergency discharges occur.~~
- ~~B. Random Variation. The permittee shall report any statistical uncertainty in the methodology using acceptable scientific methods.~~

Factor A above was stricken because it relates to TBELs, which derive from non-conforming parts of the Long-Term Plan and are also considered moderating provisions. Factor B was stricken because it is an inappropriate basis to avoid the consequences of WQBEL non-compliance.

6. Specific Condition ~~26~~1

- ~~A. **STA-1W Diversion Limit.** To limit discharge concentrations resulting from diversion events, discharges of waters from the EAA to the L-7 Canal from the G-301 diversion structure and the discharge pump stations from STA-1W shall not exceed a 50 ppb maximum annual discharge limit. The 50 ppb maximum annual discharge limit shall be calculated as an annual flow weighted mean total phosphorus concentration for combined discharges from the EAA during the May-April Water Year from the G-301 diversion structures and from the G-251 and G-310 pump stations.~~
- ~~B. **STA-1E Diversion Limit.** To limit discharge concentrations resulting from diversion events, discharges of waters from the EAA to the L-40 Canal from the G-300 diversion structure and the discharge pump station from STA-1E shall not exceed a 50 ppb maximum annual discharge limit. The 50 ppb maximum annual discharge limit shall be calculated as an annual flow weighted mean total phosphorus concentration for combined discharges from the EAA during the May-April Water Year from the G-300 structure and the G-362 pump station.~~

~~The 50 ppb maximum annual discharge limit for waters from the EAA shall be enforceable after all of the additional components of the control program set forth in Specific Condition 17 of this permit are operational. By including a 50 ppb maximum annual discharge limit in this permit, the Department is not determining, admitting, or waiving any adjudicating permittee's or the Department's rights, claims, or defenses of the permittee, the Department, or any other party to any matters relating to compliance with requirements of the Everglades Consent Decree, as modified, entered in the case styled *United States v. So. Fla. Water Management Dist., et al.*, case No. 88-1886 CIV Moreno (S.D. Fla.).~~

Because the WQBEL is effective immediately, this language has been deleted.

7. Specific Condition ~~30~~26.C.1

Records of the operations status of the STAs during the water year, stating whether each STA (or particular cells or flow-ways therein) is in start-up, ~~stabilization~~ or routine operations;

As explained above, since the concept of 'stabilization' has been linked to TBELs and is no longer appropriate, this was stricken. Information regarding start-up is needed since remedy milestone dates are in part, based on that.

8. Specific Condition ~~30~~26.E.6

The operational status of the STA, stating whether the STA is in routine operations or ~~start-up stabilization~~. If the facility is in non-routine operations during the reporting period, the report shall also include the date at which the facility entered the start up ~~or stabilization~~ phase and the length of time it remained or is expected to remain in that phase;

As explained above, since the concept of 'stabilization' has been linked to TBELs and is no longer appropriate, this provision was stricken. Information regarding start-up is needed since remedy milestone dates are in part, based on that.

9. Tables 2 and 3 - Interim TBELs for STA-1W and STA-1E As A Function of PLR

Based on the 2010 Order, these tables are stricken because the use of TBELs is no longer valid since they derive from non-conforming parts of the Long-Term Plan and are also considered moderating provisions.

H. STA 2 EFA Permit

1. Permit Cover Page

~~This permit is accompanied by Administrative Order AO-010-EV, which is incorporated herein by reference.~~

Based on the 2008 and 2010 Orders, the AO compliance schedule is no longer valid because it has the same effect as the invalidated portions of the Phosphorus Rule and the EFAA. Because the conformed permit requires immediate compliance with the WQBEL, all cites or links to a concurrent AO are being deleted.

2. General Condition 2

Scope of permit. This permit is valid only for the specific ~~processes and operations applied for and indicated in the approved drawings or exhibits~~ requirements of this permit. Any unauthorized deviation from the ~~approved drawings, exhibits, specifications, or conditions~~ requirements of this permit may constitute grounds for revocation and enforcement action by the Department.

This section is conformed to ensure that all references to non-conforming elements of the Long Term Plan are stricken, consistent with the requirements of the 2010 Order and the Amended Determination.

3. General Condition 5

Liability. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, ~~unless specifically authorized by an order from the Department.~~ The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.

The 2010 Order has currently enjoined FDEP from modifying NPDES permits through EFA permits (or AOs).

4. Specific Conditions 18 and 19

~~Stabilization Phase. (Flow through Operations) An STA enters the Stabilization Phase after each of three antecedent conditions: (1) once flow through operations begin following the initial start up of a new treatment cell; (2) when a treatment cell is undergoing implementation of the Long Term Plan enhancements that may have adverse impacts on STA performance, or (3) when a treatment cell undergoing recovery activities associated with a major event that compromises the structural integrity or performance of the STA. During the Stabilization Phase the treatment vegetation will be maturing and the STA performance will generally be improving toward achieving the permit effluent limitation. However, the overall performance of the STA is extremely difficult to evaluate and predict. It is anticipated that the treatment vegetation will require one to three years after flow through operations begin for the affected cells to continue to improve toward achieving the permit effluent limit. During the stabilization phase, the effluent limitation shall apply. Once the facility achieves the effluent limitation, it shall enter the Routine Operations Phase. During the Stabilization Phase, exceedance of the effluent limitation is anticipated; however, the STA shall be deemed in compliance as long as the actions described in this condition and all other applicable permit conditions are met.~~

~~If a flow way is determined to be incapable of operating or performing effectively as a result of the impacts caused by one or more of the above mentioned circumstances, within 60 days the District shall submit strategies and timelines identified as being the most effective in restoring the impacted flow way(s) and achieving the permit effluent limit. The District's strategies and timelines shall include, at a minimum, the following:~~

- ~~1. Identify the cause of the incident which resulted in the facility not achieving the effluent limitation;~~
- ~~2. A statement that the facility was being properly operated at the time of the incident;~~
- ~~3. The period of the anticipated stabilization phase; and,~~

~~4. Any remedial steps employed to ensure that the stabilization period will be as minimal as possible.~~

~~The timely submittal and implementation of these strategies and timelines in conjunction with the Department's review and approval of such submittals and compliance with all other applicable conditions set forth in this permit shall constitute compliance.~~

~~In addition to the reporting associated with this condition and as part of the annual reporting requirements of the permit, the District shall provide an assessment of the facility and the steps taken to meet the permit effluent limit. As part of the first annual report following any adverse impact to the facility, and each subsequent year until the facility achieves the permit effluent limit, the 12 month rolling flow weighted mean TP concentration of the STA outflow shall be assessed as to whether there is a trend in improvement of performance relative to prior years. If the trend analysis that is applied to this data indicates that there is not a trend in improvement of performance, the permittee shall report as to the causes behind the lack of performance improvement. If during a subsequent annual report the trend analysis applied to these data indicate that there is not a trend in improvement of performance after the affected flow way has been in flow through operation for 24 months, the annual report shall include any remedial measures necessary to achieve improved facility performance by the end of next year, and shall provide an estimate of when the permit effluent limit shall be achieved.~~

1918. Routine Operations Phase. During the Routine Operations Phase, discharges from the STA shall meet the WQBEL permit effluent limitations set forth in Table 1 below.

USEPA recognizes that time is needed from when flooding occurs and emergent/submerged/floating vegetation begins to function until the WQBEL is achieved. However, reliance on the historically used concepts of 'stabilization' and 'flow-through operations' is no longer needed. Because use of stabilization had been linked to TBEL compliance and since the 2010 Order deems the use of TBELs to be invalid, continued regulatory application of stabilization is not appropriate.

5. Specific Condition ~~21~~20

~~Factors Outside the Permittee's Control. In the event that non-compliance or failure to achieve performance objectives results for any of the reasons other than those below, the permittee shall take appropriate remedial measures.~~

~~A. Anomalous Rainfall. Compliance with the effluent limitation shall not be tested in water years when the rainfall in the source basins fall outside the range of values that occurred during the period of model simulation if sufficient supplemental flows are not available to maintain wet conditions in STA 2. A joint field inspection between the Department and the District will be undertaken to verify if the facility has resulted in dryout conditions that would impact compliance. In these instances, results from adjacent years will be treated as consecutive for purposes of testing compliance. The Department may make similar adjustments where emergency discharges occur.~~

~~B. Random Variation. The permittee shall report any statistical uncertainty in the methodology using acceptable scientific methods.~~

Factor A above was stricken because reporting on whether the facility operated within or outside the operational envelope will provide equivalent information. Factor B was stricken because it is an inappropriate basis to avoid the consequences of WQBEL non-compliance.

6. Specific Condition ~~27~~8.C

Performance Evaluation. The Annual Report shall provide a performance evaluation for STA-2 containing the following information: The operations status of the STA, stating whether the STA is in start-up, ~~stabilization~~ or routine operations.

As explained above, since the concept of ‘stabilization’ is no longer valid, this provision has been stricken. Information regarding start-up is needed since remedy milestone dates are in part, based on that.

7. Specific Condition 30.D.6

The operational status of the STA, stating whether the STA is in Start-up, ~~Stabilization~~ or Routine Operations. ~~–If the facility is in Stabilization operations during the reporting period, the report shall also include the date at which the facility entered the Stabilization Phase and the length of time it remained or is expected to remain in that phase~~

As explained above, since the concept of ‘stabilization’ is no longer valid, this provision has been stricken. Information regarding start-up is needed since remedy milestone dates are in part, based on that.

I. STA 3/4 EFA permit

1. Project Description

~~A stabilization phase will follow, continuing until the 12 month flow-weighted average total phosphorus concentration at the outflow is less than or equal to 50 parts per billion. Thereafter, the project will be in the normal or post stabilization operations phase.~~ Once the WQBEL is achieved, the project will be in routine operations.

USEPA recognizes that time is needed from when flooding occurs and emergent/submerged/floating vegetation begins to function until the WQBEL is achieved. However, reliance on the historically used concept of ‘stabilization’ is no longer needed. Because use of stabilization had been linked to TBEL compliance and since the 2010 Order deems the use of TBELs to be invalid, continued regulatory application of ‘stabilization’ is not appropriate. The concept of ‘routine operations’ was added to be consistent with the other EFA permits.

2. General Condition 2

Scope of permit. This permit is valid only for the specific ~~processes and operations applied for and indicated in the approved drawings or exhibits~~ requirements of this permit. Any unauthorized deviation from the ~~approved drawings, exhibits, specifications, or conditions~~ requirements of this permit may constitute grounds for revocation and enforcement action by the Department.

This section is conformed to ensure that all references to non-conforming elements of the Long Term Plan are stricken, consistent with the requirements of the 2010 Order and the Amended Determination.

3. Specific Condition 10.G

Operational Envelope. The permittee shall ensure to the maximum extent practicable that authorized operation of the existing components of the facility do not exceed the operational envelope for STA-3/4, as set forth in the existing STA-3/4 Operations Plan.

This language was added to make it consistent with the other NPDES and EFA permits.

4. Specific Condition 16

~~Stabilization. Following completion of the Start-Up Phase, the project shall begin a period of stabilization, in accordance with Subsection (9)(h) of the EFA. The stabilization period for STAs is generally anticipated to last 2 to 3 years after the start up phase ends. During that period, compliance with the criteria in Subsection (9)(h) of the EFA shall be evaluated as follows:~~

~~After start up operations have ended and flow project flow through operations and discharges have begun from each flow way, the District shall operate and monitor STA 3/4, allowing for a stabilization period. The stabilization period for STA 3/4 shall end when the 12 month flow weighted average total phosphorus concentration at the outflow stations is less than or equal to 50 ppb. Starting 12 months after commencing discharge from each flow way, the District shall provide rolling 12 month flow weighted average total phosphorus concentration in monitoring reports. If, after the first two years of full project flow through operation, the STA has not met this stabilization test, the District shall submit a report which shall compare the flow weighted mean of the total phosphorus discharge data from the most recent 12-month period (e.g., months 13 – 24) with the flow weighted mean of the total phosphorus discharge data from the previous 12-month period (e.g., months 1 – 12) to ensure that performance of the STA is not declining, based upon a Student's t test at the 95% confidence interval. This report is to be submitted 90 days after the end of each reporting period. If at any time, the STA performance indicates that this test will not be met by December 31, 2006, the permittee shall submit a report on the progress made towards meeting the stabilization requirements and an analysis of the system operation and shall submit and initiate implementation of an optimization plan designed to reach the phosphorus stabilization goal by December 31, 2006.~~

USEPA recognizes that time is needed from when flooding occurs and emergent/submerged/floating vegetation begins to function until the WQBEL is achieved. However, reliance on the historically used concepts of 'stabilization' and 'flow-through operations' is no longer needed. Because use of stabilization had been linked to TBEL compliance and since the 2010 Order deems the use of TBELs to be invalid, continued regulatory application of stabilization is not appropriate.

5. Specific Condition 17

~~**Post Stabilization / Normal Flow Through Operations.** From the end of the stabilization period, until the beginning of the long term compliance period discharges from STA 3/4, via the G-376B, G-376E, G-379B, G-379D, G-381B, and G-381E structures, shall meet an annual flow weighted average total phosphorus concentration at the outflow stations of less than or equal to 76 ppb for each water year, (May 1 – April 30). In addition, the discharges shall not exceed an annual flow weighted average total phosphorus concentration of 50 ppb for three or more consecutive water years. Both tests are simultaneously applied to ensure that the design objectives of the STA 3/4 project are met.~~

Based on the 2010 Order, the use of TBELs is no longer valid because they derive from non-conforming parts of the Long-Term Plan and are also considered moderating provisions. USEPA deems this provision to set TBELs and has stricken it accordingly.

6. Specific Condition ~~22~~1

~~Factors Outside the Permittee's Control.~~—In the event that non-compliance or failure to achieve the WQBEL performance objectives results for any reason other than those listed below, the permittee shall take appropriate remedial measures.

~~A. Anomalous Rainfall. Compliance with Specific Conditions 16-19 shall not be tested in water years when the EAA annually adjusted rainfall, as defined in Rule 40E-63, F.A.C., exceeds 63.8 inches, or is less than 35.1 inches (based on the minimum and maximum annual rainfall values for the EAA during water years 1979 thru 1988), and sufficient supplemental flows are not available to maintain wet conditions in STA 3/4. In this instance, results from adjacent years will be treated as consecutive for purposes of testing compliance. The Department may make similar adjustments where emergency discharges occur.~~

~~B. Natural Background. Deviations from water quality standards may occur as a result of natural background conditions, in accordance with Section 403.021(11), F.S. The Department shall evaluate such deviations as a part of the Department's evaluation of water quality standards in accordance with Subsection (4)(e)4 of the EFA.~~

~~C. Random Variation. The District shall report any statistical uncertainty in the methodology using acceptable scientific methods.~~

~~D. Vegetation Conditions. The District shall report whether vegetation conditions in STA 3/4 have contributed to the non-compliance. The permittee shall prepare an analysis of the vegetation coverage of STA 3/4 as compared with the baseline vegetation coverage maps developed in accordance with the monitoring conditions found in Specific Condition 29.~~

Factor A above was stricken because reporting on whether the facility operated within or outside the operational envelope will provide equivalent information. Factor B was stricken because it is not appropriate to apply a natural background condition to TP levels in wastewater coming into the STAs for treatment. Factors C and D were stricken because they are inappropriate bases to avoid the consequences of WQBEL non-compliance.

7. Specific Condition 30.D

Performance Evaluation.

1. The operations status of the STA, stating whether the STA is in start-up, ~~stabilization~~, or ~~normal flow through~~ routine operations;
2. A comparison of inflow water quality data with outflow water quality data using the student's t-test with a 95% confidence intervals; and,
3. ~~Beginning with the second Annual Report, a~~ A comparison of performance of current reporting year with performance in previous years.

As explained above, since the concept of 'stabilization' is no longer valid, this provision has been stricken.

8. Specific Condition 30.F

Item 6. The operational status of the STA, stating whether the STA is in routine operations or ~~start-up stabilization~~. If the facility is in start-up ~~non-routine operations~~ during the reporting period, the report shall also include the date at which the facility entered start up ~~or stabilization phase~~ and the length of time it remained or is expected to remain in that phase; ~~Achievement of effluent limitations set forth in the TBEL and/or~~

As explained above, since the concept of ‘stabilization’ is no longer valid, this provision has been stricken. Information regarding start-up is needed since remedy milestone dates are in part, based on that.

J. STA 5/6 EFA permit

1. Cover Page

~~This permit is accompanied by Administrative Order AO-011-EV, which is incorporated herein by reference.~~

Based on the 2008 and 2010 Orders, the AO compliance schedule is no longer valid because it has the same effect as the invalidated portions of the Phosphorus Rule and the EFAA. Because the conformed permit requires immediate compliance with the WQBEL, all cites or links to a concurrent AO are being deleted.

2. **Scope of permit.** This permit is valid only for the specific requirements of this permit ~~processes and operations applied for and indicated in the approved drawings or exhibits.~~ Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions requirements of this permit may constitute grounds for revocation and enforcement action by the Department.

This section is conformed to ensure that all references to non-conforming elements of the Long Term Plan are stricken, consistent with the requirements of the 2010 Order and the Amended Determination.

3. Specific Condition 18

~~Stabilization Phase (Flow through Operations) – An STA enters the Stabilization Phase after each of three antecedent conditions: (1) once flow through operations begin following the initial start up of a new treatment cell; (2) when a treatment cell is undergoing implementation of Long Term Plan enhancements that may have adverse impacts on STA performance, or (3) when a treatment cell undergoing for recovery activities associated with a major event that compromises the structural integrity or performance of the STA. During the Stabilization Phase the treatment vegetation will be maturing and the STA performance will generally be improving toward achieving the permit effluent limitation. However, the overall performance of the STA is extremely difficult to evaluate and predict. It is anticipated that the treatment vegetation will require one to three years after flow through operations begin for the affected cells to continue to improve toward achieving the permit effluent limit. During the stabilization phase the effluent limitation shall apply. Once the facility achieves the effluent limitation it shall enter the Routine Operations Phase. During the Stabilization Phase, exceedance of the effluent limitation is anticipated; however, the STA shall be deemed in compliance as long as the actions described in this condition and all other applicable permit conditions are met.~~

~~If a flow way is determined to be incapable of operating or performing effectively as a result of the impacts caused by one or more of the above mentioned circumstances, within 60 days the District shall submit strategies and~~

~~timelines identified as being the most effective in restoring the impacted flow way(s) and achieving the permit effluent limit. The District's strategies and timelines shall include, at a minimum, the following:~~

- ~~1. Identify the cause of the incident which resulted in the facility not achieving the effluent limitation;~~
- ~~2. A statement that the facility was being properly operated at the time of the incident;~~
- ~~3. The period of the anticipated stabilization phase; and,~~
- ~~4. Any remedial steps employed to ensure that the stabilization period will be as minimal as possible.~~

~~The timely submittal and implementation of these strategies and timelines in conjunction with the Department's review and approval of such submittals and compliance with all other applicable conditions set forth in this permit shall constitute compliance~~

USEPA recognizes that time is needed from when flooding occurs and emergent/submerged/floating vegetation begins to function until the WQBEL is achieved. However, reliance on the historically used concepts of 'stabilization' and 'flow-through operations' is no longer needed. Because use of stabilization had been linked to TBEL compliance and since the 2010 Order deems the use of TBELs to be invalid, continued regulatory application of stabilization is not appropriate.

~~As part of the first annual report following any adverse impact to the facility, and each subsequent year until the facility achieves the permit effluent limit, the 12 month rolling flow weighted mean TP concentration of the STA outflow shall be assessed as to whether there is a trend in improvement of performance relative to prior years. If the trend analysis that is applied to this data indicates that there is not a trend in improvement of performance, the permittee shall report as to the causes behind the lack of performance improvement. If during a subsequent annual report the trend analysis applied to these data indicate that there is not a trend in improvement of performance after the affected flow way has been in flow through operation for 24 months, the annual report shall include any remedial measures necessary to achieve improved facility performance by the end of next year, and shall provide an estimate of when the permit effluent limit shall be achieved.~~

The Annual Report requirements in Specific Condition 28.D has been conformed to require that the specific cause(s) for delay in WQBEL implementation and timeframes for resolution be provided. In light of those requirements, this provision is not relevant or appropriate.

4. Specific Condition 21

~~Factors Outside the Permittee's Control.~~ In the event that non-compliance or failure to achieve the WQBEL performance objectives results for any of the reasons other than those below, the permittee shall take appropriate remedial measures.

- ~~A. Anomalous Rainfall. Compliance with the effluent limitation shall not be tested in water years when the rainfall in the source basins fall outside the range of values that occurred during the period of model simulation if sufficient supplemental flows are not available to maintain wet conditions in STA 5/6. A joint field inspection between the Department and the District will be undertaken to verify if the facility has resulted in dryout conditions that would impact compliance. In these instances, results from adjacent years will be treated as consecutive for purposes of testing compliance. The Department may make similar adjustments where emergency discharges occur.~~
- ~~B. Random Variation. The permittee shall report any statistical uncertainty in the methodology using acceptable scientific methods.~~

Factor A above was stricken because reporting on whether the facility operated within or outside the operational envelope will provide equivalent information. Factor B was stricken because it is an inappropriate basis to avoid the consequences of WQBEL non-compliance.

5. Specific Condition 28.C

Performance Evaluation. The Annual Report shall provide a performance evaluation for STA-5/6 containing the following information:

1. The operations status of the STA, stating whether the STA is in start-up, ~~stabilization~~ or routine operations
2. A comparison of inflow water quality data with outflow water quality data an appropriate statistical test with a 95% confidence interval and based on statistical distributional assumptions (e.g., Student's t-test or Mann-Whitney test);
3. A comparison of outflow phosphorus concentrations with the permit effluent limit for STA-5/6 and between the current reporting year and previous years
4. An assessment of the inflow volumes and phosphorus loads during the year relative to the anticipated operational envelope contained in the STA-5 and STA-6 Operations Plans.

As explained above, since the concept of 'stabilization' is no longer valid, this was stricken.

6. Specific Condition 28.E

Item 6. The operational status of the STA, stating whether the STA is in Start-up, ~~Stabilization~~ or Routine Operations. If the facility is in ~~Start-up~~ ~~Stabilization~~ operations during the reporting period, the report shall also include the date at which the facility entered ~~the Stabilization~~ ~~that~~ Phase and the length of time it remained or is expected to remain in that phase;

Since the concept of 'stabilization' is no longer valid, this provision was stricken. Information regarding start-up is needed since remedy milestone dates are in part, based on that.