

Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

ATTACHMENT A

The EPA concluded that the following bold text from the March 2013 Implementation Document constitutes new or revised WQS:

“The Hierarchical Approach” Section

RPS Decision Key

- 1. Were environmental conditions associated with the RPS samples representative of the typical conditions of the system? (e.g., flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc).**
 - 1a. Yes, proceed to couplet 2.**
 - 1b. No. Collect additional RPS samples at representative locations and during representative conditions, and return to couplet 1.**

- 2. Results of two temporally independent RPS samplings show that RPS rank 4-6 is 25% or less?**
 - 2a. Yes. Evidence that the waterbody *achieves the algal mat component of floral measures* (other components must still be evaluated). If RPS rank 4-6 results are between 20% to 25%, then algal species composition will also be evaluated (see algal species composition decision key).**
 - 2b. No, evidence that the *nutrient standard at 62-302.531(2)(c) is not achieved.***

Algal Species Composition Decision Key

- 1. Were environmental conditions associated with the RPS samples and algal taxonomic collections representative of the typical conditions of the system? (e.g., flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc.).**
 - 1a. No. Collect additional RPS samples and algal taxonomic composition samples at representative locations and during representative conditions, and return to couplet 1.**
 - 1b. If Yes, see couplet 2.**

- 2. Results of two temporally independent RPS samplings show that RPS rank 4-6 is 20% or less?**
 - 2a. Yes. Evidence that the waterbody *achieves the algal species composition component of floral measures* (other components must still be evaluated).**
 - 2b. If No, see couplet 3.**

3. Do dominant taxa¹ of algal community include taxa known to be nutrient enrichment indicators? (see list above and references in Appendix).
 - 3 a. Yes. Evidence that the *nutrient standard at Rule 62-302.531(2)(c) is not achieved.*
 - 3b. No. This is evidence that the waterbody *achieves the algal species composition component of floral measures* (other components must still be evaluated).

The Department will evaluate those dominant species that individually constitute approximately 10% or more of the community.

Where the RPS 4-6 coverage is greater than 20%, an evaluation of the algal species composition (identifying the five most dominant taxa) is also conducted to provide additional information whether there is no imbalance of flora.

Changes in algal species composition (through an analysis of autecological information) are also evaluated using the latest scientific references for algal species. The Department maintains a list of the scientific references used in this evaluation.

For example, nutrient enriched Florida springs are typically characterized by an abundance of one or more of the following taxa: *Lyngbya wollei*, *Oscillatoria* sp., *Aphanothece* sp., *Phormidium* sp., *Vaucheria* sp., *Spirogyra* sp., *Cladophora* sp., *Rhizoclonium* sp., *Dichotomosiphon* sp., *Hydrodictyon* sp., *Enteromorpha* sp., and *Chaetomorpha* sp. Other algal indicators of nutrient enrichment from the literature include: *Anabaena* sp., *Euglena* sp., *Chlamydomonas* sp., *Scenedesmus* sp., *Chlorella* sp., *Rhopalodia* spp., *Gomphonema* spp., *Cosmarium* sp., *Nitzschia* spp., *Navicula* spp., and *Stigeoclonium* sp. Dominance of such taxa at a stream where the RPS rank 4-6 >20% would be evidence that the NNC is not achieved.

As another example of this approach, the Everglades TP criterion was largely based on observed shifts in the dominant algal taxa from those characteristic of reference conditions (e.g., *Scytonema* sp., *Schizothrix* sp.) to taxa indicative of nutrient enriched conditions (e.g., *Gomphonema parvulum*, *Navicula minima*, *Nitzschia amphibia*, *Nitzschia palea*, *Oscillatoria* sp., *Rhopalodia gibba*, *Scenedesmus* sp., *Anabaena* sp., *Cosmarium* sp., and *Lyngbya wollei*).

LVS Decision Key

1. Were environmental conditions associated with the LVS samples representative of the typical conditions of the system (e.g., flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc.).
 - 1a. No. Collect additional LVS samples at representative locations and during representative conditions, and return to couplet 1.
 - 1b. Yes, proceed to couplet 2.
 2. Given that invasive exotic species can occur even in the absence of nutrient impacts
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and that aquatic plant management practices can also affect LVS results, is there evidence the LVS results can be linked to anthropogenic nutrient inputs?

2a. Yes, proceed to couplet 3.

2b. No. The LVS results are inconclusive and other lines of floral evidence should be used.

3. Results of two temporally independent LVS samplings show that C of C score is ≥ 2.5 and the frequency of occurrence of FLEPPC exotic taxa is $\leq 25\%$?

3a. Yes. Evidence that the waterbody *achieves the nuisance macrophyte growth component of floral measures* (other components must still be evaluated).

3b. No. Evidence that the *nutrient standard at 62-302.531(2)(c) is not achieved*.

If there is <2 m² of vascular plant coverage present in a 100 m stream reach, there are no floral imbalances attributable to aquatic plants.

Chlorophyll/Algal Bloom Decision Key

1. Were environmental conditions associated with the chlorophyll samples representative of typical conditions for the system? (*e.g.*, flow between 10th and 90th percentile of long term discharge, light penetration characteristic of system, sampling location representative of waterbody segment, etc.).

1a. No. Collect additional chlorophyll samples at representative locations and during representative conditions, and return to couplet 1.

1b. If Yes, see couplet 2.

2. Annual geometric mean chlorophyll ≤ 3.2 ug/L?

2a. Yes. Evidence that the waterbody *achieves the chlorophyll a/algal bloom component of floral measures* (other components must still be evaluated).

2b. If No, see couplet 3.

3. Annual geometric mean chlorophyll ≥ 20 ug/L more than once in a three year period?

3a. Yes. The *narrative nutrient standard at 62-302.531(2)(c) is not achieved*.

3b. No, annual geometric mean chlorophyll is between 3.2 and 20 ug/L, see couplet 4.

4. After considering site specific factors that affect chlorophyll concentrations, such as system morphology, water residence time, or consistency with other functionally similar reference sites, can it be documented that the chlorophyll *a* values represent a healthy well balanced phytoplankton community?

4a. Yes. Evidence that the waterbody *achieves the chlorophyll a/algal bloom component of floral measures*.

4b. No. Evidence that the *nutrient standard at 62-302.531(2)(c) is not achieved*.

4c. Inconclusive because of insufficient contemporaneous data from other functionally similar reference sites. Waterbody will be placed on the Study List if either of the TN or TP thresholds were exceeded.

If all floral measures are achieved, a stream meets the floral component of a healthy, well balanced aquatic system, because it is within the minimally disturbed Benchmark stream condition. However, if any one [of] these floral measures indicates an imbalance, then the stream does not attain the NNC.

“Basic Information Needs for Distinguishing Flowing Waters under 62-302.200(36)” Section

In implementing water quality standards and evaluating whether a particular waterbody meets the provisions of 62-302.200(36)(a) or (b) F.A.C., the Department will provide public notice and request information relevant to the application of water quality standards, including the purpose of the waterbody such as flood protection, stormwater management, irrigation, water supply, navigation, boat access to an adjacent waterbody, or frequent recreational use relevant to 62-302.200(36)(b)1. F.A.C. The Department will consider all relevant information in implementing water quality standards and maintain the administrative records of such decisions, which are available to the public.

“General Information” Section

Until a Class I or III stream segment is identified as meeting the provisions in Rule 62-302.200(36)(a) or (b), F.A.C., the criteria in Rule 62-302.531(2)(c), F.A.C., will apply. Interested parties wishing to distinguish the characteristics of a waterbody with respect to provisions in Rule 62-302.200(36), F.A.C., may provide the Department with the applicable information set forth in the stream definition.

A clear delineation of the geographic boundaries of the segment in question is necessary so that the Department knows exactly where applicable criteria apply.

For waters that meet the definition of 62-302.200(36)(a) or (b) F.A.C., the Department shall follow the Impaired Waters Rule at 62-303 F.A.C.

“Non-Perennial Water Segments” Section

To identify whether a segment is a non-perennial water segment, the biological information identified below will be evaluated by the Department. Other methods that provide this demonstration with similar accuracy will be accepted by the Department if they are a means to predicting the resulting biological conditions discussed below.

[T]he presence of certain facultative or facultative-wetland herbaceous species within the stream bed can be a valid indication that the stream is non-perennial, as these taxa may require moist or saturated conditions to germinate and grow, but would not tolerate the inundation of a perennially flowing stream. Examples of these taxa include, grasses such as *Chasmanthium latifolium* and *Tripsacum dactyloides*, sedges such as *Cyperus esculentus* and *Cyperus retrorsus*, forbs such as *Cuphea cartagenensis*, *Bidens pilosa*, and *Sphagneticola trilobata*, and ferns such as

***Woodwardia virginica* and *Thelypteris* spp.** (see complete lists of obligate wetland, facultative wetland and facultative taxa in Chapter 62-340, F.A.C.). *[The lists of obligate wetland, facultative wetland and facultative taxa in Chapter 62-340 are considered new or revised WQS in their entirety although they are not repeated here].* During a habitat assessment or Linear Vegetation Survey conducted during a site visit, the presence of facultative and facultative wetland herbaceous vascular plant taxa in the channel bed would be an indicator that the system is non-perennial.

The Department has compiled lists of taxa to assist with distinguishing perennial from non-perennial streams/wetland systems (Tables 8 and 9). *[Tables 8 and 9 are considered new or revised WQS in their entirety although they are not repeated here].*

The presence of long-lived aquatic species (benthic macroinvertebrates that require water for their entire life cycle) is another reliable method to determine if a stream is more characterized by perennial flow or wetland/terrestrial conditions. A list of long-lived taxa is included in DEP SOP SCI 2100. *[The list of long-lived taxa included in DEP SOP SCI 2100 are considered new or revised WQS in their entirety although they are not repeated here].* For purposes of establishing segments that are excluded from the stream definition, the Department shall evaluate the taxa that occur in the segment, as well as the vascular plant information described above.

“Tidally Influenced Segments” Section

Tidally influenced segments are those that fluctuate (daily, weekly, or seasonally) between predominantly marine and predominantly fresh waters during typical climactic and hydrologic conditions.

Typical hydrologic conditions exclude periods of high rainfall or drought that would create flow conditions well outside of average annual flow conditions.

“Water Management Conveyances” Section (only the bolded text below is considered to be new or revised)

The following information will be used in identifying segments meeting the requirements in Rule 62-302.200(36)(b):

Delineation

Only those sections that meet the requirements in Rule 62-302.200(36)(b), F.A.C., are eligible to retain the narrative nutrient criteria. **A map of the applicable areas for review must clearly delineate the upstream and downstream extent of the artificial conveyance.**

Primary Water Management Purpose

Information must show that the current purpose of the man-made or physically altered conveyance is primarily water management such as flood protection, stormwater management, irrigation, or water supply. Relevant documentation can

include photographic evidence, funding authorizations, operational protocols, local agreements, permits, memoranda of understanding, contracts, or other records that indicate how the conveyance is operated and maintained, and must verify that the design or maintenance of the conveyance allows the conveyance to currently function in a manner consistent with the primary water management purpose. The phrase “primarily used for water management purposes” in Rule 62-302.200(36)(b)1., F.A.C., does not include use for navigation or boat access to an adjacent waterbody, or frequent recreational activities. The purpose of the design of the conveyance in conjunction with the purpose of any subsequent alterations or maintenance is evaluated to help differentiate whether its primary function is navigation, boat access to adjacent waterbodies, or frequent recreational activities; versus flood protection, stormwater management, irrigation, or water supply. If available information provided by the public, in response to public notice and request for information, or otherwise known by the Department, demonstrates that the segment is commonly used for navigation, boat access, or other frequent recreational activities such as swimming or boating, then the primary purpose is not water management and the department will apply the nutrient standards in Rule 62-302.531(2) F.A.C. Freshwater finger canals dug during the construction of neighborhoods designed to create homes with boat access to waterbodies are an example of a navigation or access as a primary purpose.

Physical Alteration that Limits Habitat

The definition at Rule 62-302.200(36)(b)2., F.A.C., outlines that the conveyance must have marginal or poor stream habitat or habitat components that limit biological function because the conveyance has cross sections that are predominantly trapezoidal, has armored banks, or is maintained primarily for water conveyance. Photographic evidence of these limitations can demonstrate the habitat condition of the conveyance. Also, **Standard Operating Procedures for conducting stream Habitat Assessments have been adopted by the Department in DEP SOP FT 3000. In order to qualify under Rule 62-302.200(36)(b)2., F.A.C., the overall Habitat Assessment score must score either marginal or poor.**

The Habitat Assessment procedures include long-established criteria that can be used to demonstrate physical alterations in a system, and can provide information verifying that ongoing maintenance activities are associated with perpetuating those physical alterations. The lack of substrate and degree of artificial channelization are part of the definition and components of the Habitat Assessment scoring system, and a Habitat Assessment score must be completed by an individual with demonstrated proficiency (as per DEP SOP 3000) to indicate that the definition related to the segment’s modification is met. **If there are different segments within the conveyance that exhibit different features, a Habitat Assessment is needed for each segment.** The Department will conduct a Habitat Assessment if one was not previously conducted.

To ensure adequate water volume delivery, routine maintenance activities associated with conveyances used for water management purposes often involve removal of aquatic substrate (e.g., woody debris, aquatic and wetland vegetation), dredging of sediments, and/or removal of

riparian trees. **If the Substrate Diversity and Availability and Artificial Channelization metrics in the Habitat Assessment score in the Poor category, then one can conclude that the conveyance is predominantly altered and is being maintained in a manner to serve the primary purpose for water management.** The overall habitat assessment may not rank as Poor due to other factors, but a primary factor being considered in the definition is the alteration and the maintenance of the conveyance. **If the Substrate Diversity and Availability or Artificial Channelization scores are currently in the marginal range due to lack of maintenance of the conveyance at the time the assessment was completed, the Department will evaluate whether there is a maintenance program with a schedule to demonstrate that the conveyance is still being maintained for its primary water management purpose. If the overall Habitat Assessment score is other than poor or marginal, the conveyances would not meet the definition.**