(h) Description of the Waters of the United States within a State over which the State Assumes Jurisdiction Under the Approved Program
(Required by 40 C.F.R. § 233.11(h))

Purpose of Section (h)

The purpose of Section (h) is to provide the information required in 40 C.F.R. § 233.11(h), which states: *"The program description as required under §233.10 shall include: (h) A description of the waters of the United States within a State over which the State assumes jurisdiction under the approved program; a description of the waters of the United States within a State over which the Secretary retains jurisdiction subsequent to program approval; and a comparison of the State and Federal definitions of wetlands."*

Description of State-Assumed Waters

Section 404 of the Clean Water Act (CWA) provides that the U.S. Army Corps of Engineers (USACE) is the agency authorized to issue CWA section 404 dredge and fill program permits for activities within waters of the United States. However, the CWA includes provisions that allow a state to assume administration of a 404 program in certain waters (state-assumed waters). The CWA does not define state-assumed waters; rather, it describes waters that a state cannot assume and for which jurisdiction remains with the USACE (retained waters). State-assumed waters then are all waters of the United States that are not retained waters. Retained waters are defined below, and in section 2.0 of the State 404 Program Applicant's Handbook and listed in Appendix A of the Handbook. Activities within retained waters will generally still require a state ERP authorization and a separate federal authorization from the USACE. To provide certainty, streamlining, and efficiency, the State will consider that any wetlands or other surface waters delineated in accordance with Chapter 62-340, F.A.C., that are regulated under Part IV of Chapter 373, F.S. could be considered Waters of the United States, and will treat them as if they are, unless the applicant clearly demonstrates otherwise.

Description of Retained Waters

"Retained Waters" means those waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce shoreward to their ordinary high water mark, including all waters which are subject to the ebb and flow of the tide shoreward to their mean high water mark, including wetlands adjacent thereto. The USACE will retain responsibility for permitting for the discharge of dredged or fill material in those waters identified in the Retained Waters List (Appendix A of the State 404 Program Applicant's Handbook), as well as all waters subject to the ebb and flow of the tide shoreward to their mean high water mark that are not specifically listed in the Retained Waters List, including wetlands adjacent thereto landward to the administrative boundary. The administrative boundary demarcating the adjacent wetlands over which jurisdiction is retained by the USACE is a 300-foot guide line established from the ordinary high water mark or mean high tide line of the retained water. In the case of a project that involves discharges of dredged or fill material both waterward and landward of the 300-foot guide line, the USACE will retain jurisdiction to the landward boundary of the project for the purposes of that project only.

Comparison of Florida's Wetland Delineation Methodology to the Federal Methodology

For regulatory purposes since July 1, 1994, all state and local governments must delineate uplands, wetlands, and other surface waters using Chapter 62-340 F.A.C. pursuant to Florida Statutes 373.019(22) and 373.4211. For regulatory purposes since November1, 2010, the United States Army Core of Engineers (ACOE) and the United States Environmental Protection Agency (EPA) use the 1987 Wetland Delineation Manual (87 Manual) combined with the Atlantic and Gulf Coastal Plain Region Supplement Version 2.0 to delineate wetlands in the state of Florida. While utilizing different methodologies to delineate areas meeting the wetland definition, both the 87 Manual and Chapter 62-340 F.A.C. use the identical operational sentence and nearly identical diagnostic environmental characteristics in their definitions of wetlands, leading to consistent determinations. Florida statute 373.019(22), Florida Chapter 62-340.200(19) F.A.C., EPA 1980 Federal Registry, and the 87 Manual, define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." In addition to this core operational sentence are three diagnostic environmental characteristics describing vegetation, soils, and hydrology generally found in wetlands. Both the State and Federal definitions of wetlands share these three diagnostic environmental characteristics. Below are the Federal and State definitions of wetlands, hydric soils, and wetland hydrologic indicators for regulatory purposes in the state of Florida.

Wetland definition per 1987 ACOE Wetland Delineation Manual:

a. Definition. The CE (*Federal Register* 1982) and the EPA (*Federal Register* 1980) jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

b. Diagnostic environmental characteristics. Wetlands have the following general diagnostic environmental characteristics:

(1) *Vegetation.* The prevalent vegetation consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described in *a* above. Hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions.

(2) *Soil.* Soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions.

(3) *Hydrology.* The area is inundated either permanently or periodically at mean water depths: 6.6 ft., or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation.

Wetland definition per Florida Statute 373.019(22) and Chapter 62-340.200(19) F.A.C.:

"Wetlands", means those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Hydric Soils per 1987 ACOE Wetland Delineation Manual Federal:

"Hydric Soils" means soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile.

Hydric soils per Florida Statute 373.4211 and Chapter 62-340.200(8) F.A.C.:

"Hydric Soils" means soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile.

Hydrologic indicators per 1987 ACOE Wetland Delineation Manual and Regional Supplement:

Indicator A1: Surface water / Category: Primary / General Description: This indicator consists of the direct, visual observation of surface water (flooding or ponding) during a site visit.

Indicator A2: High water table / Category: Primary / General Description: This indicator consists of the direct, visual observation of the water table 12 in. (30 cm) or less below the surface in a soil pit, auger hole, or shallow monitoring well. This indicator includes water tables derived from perched water, throughflow, and discharging groundwater (e.g., in seeps) that may be moving laterally near the soil surface.

Indicator A3: Saturation / Category: Primary / General Description: Visual observation of saturated soil conditions 12 in. (30 cm) or less from the soil surface as indicated by water glistening on the surfaces and broken interior faces of soil samples removed from the pit or auger hole. This indicator must be associated with an existing water table located immediately below the saturated zone; however, this requirement is waived under episaturated conditions if there is a restrictive soil layer or bedrock within 12 in. (30 cm) of the surface.

Indicator B1: Water marks / Category: Primary / General Description: Water marks are discolorations or stains on the bark of woody vegetation, rocks, bridge supports, buildings, fences, or other fixed objects as a result of inundation.

Indicator B2: Sediment deposits / Category: Primary / General Description: Sediment deposits are thin layers or coatings of fine-grained mineral material (e.g., silt or clay) or organic matter (e.g., pollen), sometimes mixed with other detritus, remaining on tree bark, plant stems or leaves, rocks, and other objects after surface water recedes.

Indicator B3: Drift deposits / Category: Primary / General Description: Drift deposits consist of rafted debris that has been deposited on the ground surface or entangled in vegetation or other fixed objects. Debris consists of remnants of vegetation (e.g., branches, stems, and leaves), man-made litter, or other waterborne materials. Drift material may be deposited at or near the high water line in ponded or flooded areas, piled against the upstream side of trees, rocks, and other fixed objects, or widely distributed within the dewatered area.

Indicator B4: Algal mat or crust / Category: Primary / General Description: This indicator consists of a mat or dried crust of algae, perhaps mixed with other detritus, left on or near the soil surface after dewatering.

Indicator B5: Iron deposits / Category: Primary / General Description: This indicator consists of a thin orange or yellow crust or gel of oxidized iron on the soil surface or on objects near the surface.

Indicator B6: Surface soil cracks / Category: Secondary / General Description: Surface soil cracks consist of shallow cracks that form when fine-grained mineral or organic sediments dry and shrink, often creating a network of cracks or small polygons.

Indicator B7: Inundation visible on aerial imagery / Category: Primary / General Description: One or more recent aerial photographs or satellite images show the site to be inundated.

Indicator B8: Sparsely vegetated concave surface / Category: Secondary / General Description: On concave land surfaces (e.g., depressions and swales), the ground surface is either unvegetated or sparsely vegetated (less than 5 percent ground cover) due to long-duration ponding or flooding during the growing season.

Indicator B9: Water-stained leaves / Category: Primary / General Description: Water-stained leaves are fallen or recumbent dead leaves that have turned grayish or blackish in color due to inundation for long periods.

Indicator B10: Drainage patterns / Category: Secondary / General Description: This indicator consists of flow patterns visible on the soil surface or eroded into the soil, low vegetation bent over in the direction of flow, absence of leaf litter or small woody debris due to flowing water, and similar evidence that water flowed across the ground surface.

Indicator B13: Aquatic fauna / Category: Primary / General Description: Presence of live individuals, diapausing insect eggs or crustacean cysts, or dead remains of aquatic fauna, such as, but not limited to, sponges, bivalves, aquatic snails, aquatic insects, ostracods, shrimp, other

crustaceans, tadpoles, or fish, either on the soil surface or clinging to plants or other emergent objects.

Indicator B15: Marl deposits / Category: Primary / General Description: This indicator consists of the presence of marl on the soil surface.

Indicator B16: Moss trim lines / Category: Secondary / General Description: Presence of moss trim lines on trees or other upright objects in seasonally inundated areas.

Indicator C1: Hydrogen sulfide odor / Category: Primary / General Description: A hydrogen sulfide (rotten egg) odor within 12 in. (30 cm) of the soil surface.

Indicator C2: Dry-season water table / Category: Secondary / General Description: Visual observation of the water table between 12 and 24 in. (30 and 60 cm) below the surface during the normal dry season or during a drier-than-normal year.

Indicator C3: Oxidized rhizospheres along living roots / Category: Primary / General Description: Presence of a layer containing 2 percent or more iron-oxide coatings or plaques on the surfaces of living roots and/or iron-oxide coatings or linings on soil pores immediately surrounding living roots within 12 in. (30 cm) of the soil surface.

Indicator C4: Presence of reduced iron / Category: Primary / General Description: Presence of a layer containing reduced (ferrous) iron in the upper 12 in. (30 cm) of the soil profile, as indicated by a ferrous iron test or by the presence of a soil that changes color upon exposure to the air.

Indicator C6: Recent iron reduction in tilled soils / Category: Primary / General Description: Presence of a layer containing 2 percent or more redox concentrations as pore linings or soft masses in the tilled surface layer of soils cultivated within the last two years. The layer containing redox concentrations must be within the tilled zone or within 12 in. (30 cm) of the soil surface, whichever is shallower.

Indicator C7: Thin muck surface / Category: Primary / General Description: This indicator consists of a layer of muck 1 in. (2.5 cm) or less thick on the soil surface.

Indicator C8: Crayfish burrows / Category: Secondary / General Description: Presence of crayfish burrows, as indicated by openings in soft ground up to 2 in. (5 cm) in diameter, often surrounded by chimney-like mounds of excavated mud.

Indicator C9: Saturation visible on aerial imagery / Category: Secondary / General Description: One or more recent aerial photographs or satellite images indicate soil saturation. Saturated soil signatures must correspond to field-verified hydric soils, depressions or drainage patterns, differential crop management, or other evidence of a seasonal high water table.

Indicator D2: Geomorphic position / Category: Secondary / General Description: This indicator is present if the area in question is located in a depression, drainageway, concave position within a floodplain, at the toe of a slope, on an extensive flat, on the low-elevation fringe of a pond or other water body, or in an area where groundwater discharges.

Indicator D3: Shallow aquitard / Category: Secondary / General Description: This indicator occurs in and around the margins of depressions and in flat landscapes, and consists of the presence of an aquitard within the soil profile that is potentially capable of perching water within 12 in. (30 cm) of the surface.

Indicator D5: FAC-neutral test / Category: Secondary / General Description: The plant community passes the FAC-neutral test.

Indicator D8: Sphagnum moss / Category: Secondary / General Description: Presence of peat mosses (Sphagnum spp.).

Hydrologic indicators per Florida Statute 373.4211 and Chapter 62-340.500 F.A.C.:

(1) Algal mats. The presence or remains of nonvascular plant material which develops during periods of inundation and persists after the surface water has receded.

(2) Aquatic mosses or liverworts on trees or substrates. The presence of those species of mosses or liverworts tolerant of or dependent on surface water inundation.

(3) Aquatic plants. Defined in subsection 62-340.200(1), F.A.C.

(4) Aufwuchs. The presence or remains of the assemblage of sessile, attached or free-living, nonvascular plants and invertebrate animals (including protozoans) which develop a community on inundated surfaces.

(5) Drift lines and rafted debris. Vegetation, litter, and other natural or manmade material deposited in discrete lines or locations on the ground or against fixed objects, or entangled above the ground within or on fixed objects in a form and manner which indicates that the material was waterborne. This indicator should be used with caution to ensure that the drift lines or rafted debris represent usual and recurring events typical of inundation or saturation at a frequency and duration sufficient to meet the wetland definition of subsection 62-340.200(19), F.A.C.

(6) Elevated lichen lines. A distinct line, typically on trees, formed by the water-induced limitation on the growth of lichens.

(7) Evidence of aquatic fauna. The presence or indications of the presence of animals which spend all or portions of their life cycle in water. Only those life stages which depend on being in or on water for daily survival are included in this indicator.

(8) Hydrologic data. Reports, measurements, or direct observation of inundation or saturation which support the presence of water to an extent consistent with the provisions of the definition of wetlands and the criteria within this rule, including evidence of a seasonal high water table at or above the surface according to methodologies set forth in Soil and Water Relationships of Florida's Ecological Communities (Florida Soil Conservation Staff 1992).

(9) Morphological plant adaptations. Specialized structures or tissues produced by certain plants in response to inundation or saturation which normally are not observed when the plant has not been subject to conditions of inundation or saturation.

(10) Secondary flow channels. Discrete and obvious natural pathways of water flow landward of the primary bank of a stream watercourse and typically parallel to the main channel.

(11) Sediment deposition. Mineral or organic matter deposited in or shifted to positions indicating water transport.

(12) Vegetated tussocks or hummocks. Areas where vegetation is elevated above the natural grade on a mound built up of plant debris, roots, and soils so that the growing vegetation is not subject to the prolonged effects of soil anoxia.

(13) Water marks. A distinct line created on fixed objects, including vegetation, by a sustained water elevation.

Both methodologies utilize the same three field categories of wetland indicators to delineate wetlands: plant species percentages, hydric soils as defined by the Natural Resource and Conservation Service (NRCS), and hydrologic indicators of wetland saturation or inundation. While differences in plant percentage requirements or plant indicator classification exist between the two methodologies, the similarity between hydrologic indicators and hydric soil indicators leads to the same wetland boundary. This is due to a shared definition of wetlands and how the two methodologies evaluate the three categories of field indicators being absent or present under normal circumstances.

Five delineation methods are authorized to delineate wetlands using Chapter 62-340 F.A.C. under normal circumstances: direct application of the “wetland definition”, "A" test, "B" test, "C" test, and "D" test. None of the Chapter 62-340 F.A.C. methods require all three categories of wetland field indicators to be present at the same location before delineating an area as a wetland but rather two out of three. Unlike Chapter 62-340 F.A.C., the 87 Manual methodology requires all three indicators be present at the same location before delineation as a wetland is possible under normal circumstances. Thus, for any area delineated as a wetland by the 87 Manual, it will automatically qualify as having a hydric soil for Chapter 62-340 F.A.C., and therefore, will require only one additional indicator in plants or hydrology to qualify as a wetland. If the hydrologic indicator the 87 Manual identified within a wetland area also has a Chapter 62-340 F.A.C. hydrologic indicator present, then the wetland boundary is the same regardless of any plant differences. This 2/3 requirement vs. 3/3 requirement is a critical alignment consideration between the two methodologies. Areas identified as wetlands by the 87 Manual which may fail plant criteria per Chapter 62-340 F.A.C. will still qualify as wetlands with the presence of a Chapter 62-340 F.A.C. hydrologic indicator and soil. For example, any hydric pine flatwood identified as a wetland by the 87 Manual, and failing plant percentage ratios for Chapter 62-340 F.A.C., would still be identified as a wetland per the “D” test (i.e. two of three field indicators are meet, hydric soils and hydrologic indicators).

Since the 2010 adoption by the ACOE of the NRCS Hydric Soil Definition and NRCS Hydric Soils Field Indicators, pre-2010 delineation differences between Chapter 62-340 F.A.C. and 87 Manual methodologies no longer exists within the state of Florida. Pragmatically, given normal expression of indicators, the two methodologies now yield the same wetland extent throughout Florida's landscapes despite different plant indicator statuses such as Slash Pine (*Pinus elliottii*)

and Gallberry (*Ilex glabra*) between the two methodologies. Conversely, any sites in "atypical" or "altered" conditions should also be equivalent since both methodologies strive to delineate wetlands in these conditions as they would occur under normal or typical circumstances.

Chapter 62-340 F.A.C. has provided a rapid and specifically tailored delineation methodology for Florida's landscape which accurately delineates Florida's surface water resources with clarity, statewide consistency, and legally defensible certainty for the past 24 years. The USACOE uses a Wetland Data Form within its methodology and Florida Department of Environmental Protection has developed a similar Chapter 62-340 Data Form which is analogous in form and function. Adoption of the 62-340 Data Form into statewide ERP phase III rule revisions will further align the standardization of field procedures and documentation.

Comparison of State vs. Federal Hydrologic Indicators

Wetland hydrologic indicator comparison for the Atlantic and Gulf Coastal Plain Region and Florida Chapter 62-340.500 F.A.C. Federal hydrologic indicators must meet "typical year hydrology" standards before satisfying wetland hydrology criteria. Federal rules require one "primary" indicatory or two "secondary" indicators to satisfy wetland hydrology criteria. State rules do not have typical year restrictions or primary vs. secondary requirements on wetland hydrologic indicators.

Table Legend

Same: Identical indicator, application, or equivalent result with similar State indicator.

Partial: Similar State indicator but may have more limited applications or results.

No: Same or similar indicator does not exist in State rule as an indicator of wetland hydrology.

+: Positive symbols indicate a greater application or result may be authorized in State rule usually due to typical year restrictions placed upon Federal inundation indicators or the lack of primary indicator requirements in State rules.

-: Negative symbols indicate a lesser application or result may be required in State rule.

Comparison Table

Federal Hydrologic Indicator	Category		Chapter 62-340.500 F.A.C.
	Primary	Secondary	Florida Hydrologic Indicator
Group A – Observation of Surface Water or Saturated Soils			State indicator comparison: Same/Partial/No/+/-
A1 – Surface water	X		Same + (8) Hydrologic data
A2 – High water table	X		Partial (8) Hydrologic data
A3 – Saturation	X		Partial (8) Hydrologic data
Group B – Evidence of Recent Inundation			
B1 – Water marks	X		Same + (13) Water marks
B2 – Sediment deposits	X		Same + (11) Sediment deposition

B3 – Drift deposits	X		Same + (5) Drift lines or rafted debris
B4 – Algal mat or crust	X		Same + (1) Algal mats
B5 – Iron deposits	X		Same + (8) Hydrologic data
B7 – Inundation visible on aerial imagery	X		Same + (8) Hydrologic data
B9 – Water-stained leaves	X		No
B13 – Aquatic fauna	X		Same (7) Evidence of aquatic fauna
B15 – Marl deposits	X		Same (8) Hydrologic data
B6 – Surface soil cracks		X	Same + (8) Hydrologic data
B8 – Sparsely vegetated concave surface		X	No
B10 – Drainage patterns		X	Same + (10) Secondary flow channels
B16 – Moss trim lines		X	Same + (2) Aquatic mosses or liverworts
Group C – Evidence of Current or Recent Soil Saturation			
C1 – Hydrogen sulfide odor	X		Same (8) Hydrologic data
C3 – Oxidized rhizospheres along living	X		Partial - (8) Hydrologic data
C4 – Presence of reduced iron	X		Partial - (8) Hydrologic data
C6 – Recent iron reduction in tilled soils	X		Partial - (8) Hydrologic data
C7 – Thin muck surface	X		Same (8) Hydrologic data
C2 – Dry-season water table		X	No
C8 – Crayfish burrows		X	Same + (7) Evidence of aquatic fauna
C9 – Saturation visible on aerial imagery		X	No
Group D – Evidence from Other Site Conditions or Data			
D2 – Geomorphic position		X	No
D3 – Shallow aquitard		X	No
D5 – FAC-neutral test		X	No
D8 – Sphagnum moss		X	Same + (2) Aquatic mosses or liverworts
Group E - Florida Chapter 62-340.500 hydrologic indicators not included in Federal hydrologic indicators categories			Chapter 62-340.500 F.A.C. Hydrologic Indicators
			(3) – Aquatic plants
			(4) - Aufwuchs
			(6) - Elevated lichen lines
			(7) - Evidence of aquatic fauna
			(8) - Hydrologic data
			(9) - Morphologic plant adaptations
			(12) - Vegetated tussocks or hummocks