Title 33
ENVIRONMENTAL QUALITY

Part IX. Water Quality

Subpart 1. Water Pollution Control

Chapter 11. Surface Water Quality Standards

§1105. Definitions

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Bottomland Hardwood Swamps—those areas inundated or saturated by surface water or groundwater of negligible to very low salinity at a frequency and duration sufficient to support, and that under normal conditions do support, bottomland hardwood vegetation. These ecosystems are commonly found wherever streams or rivers occasionally cause flooding beyond their channel confines. They are deciduous forested wetlands, made up of different species of gum (*Nyssa* spp.), oak (*Quercus* spp.), dwarf palmetto (*Sabal minor*), and bald cypress (*Taxodium distichum*), and other species. These swamps cannot tolerate continuous flooding; typically areas are flooded two to six months per year.

Brackish Marshes—those areas inundated or saturated by surface water or groundwater of moderate salinity at a frequency and duration sufficient to support, and that under normal circumstances do support, brackish emergent vegetation ~~characterized by a prevalence of species typically adapted for life in such soil and contiguous surface water conditions~~. Typical vegetation ~~would~~ includes bulltongue (*Sagittaria* spp.), wild millet (*Echinochloa walteri*), bullwhip (*Scirpus califomicus*), sawgrass (*Cladium jamaicense*), wiregrass *(Spartina patens)*, three-cornered grass *(Scirpus olneyi)*, ~~coco *(Scirpus robustus),*~~ and widgeongrass *(Ruppia maritima)*. *Brackish marshes* are also characterized by interstitial water salinity that~~which~~ normally ranges between 3~~7~~ and 15 parts per thousand (ppt) or practical salinity units (psu).

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Cypress-Tupelo Swamps—those areas inundated or saturated by surface water or groundwater of negligible to very low salinity at a frequency and duration sufficient to support, and that under normal circumstances do support, cypress-tupelo vegetation. Typical vegetation includes water tupelo (*Nyssa Sylvatica* var. *aquatica*), bald cypress (*Taxodium distichum*), red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*), and common wax myrtle (*Myrica cerifera*). *Cypress-tupelo swamps* can tolerate continuously flooded conditions and are divided into two subtypes: continuously flooded and seasonally flooded. Continuously flooded swamps are those areas that have standing water present all year round. They range from forests with a closed canopy to open canopy conditions with understory freshwater emergent wetland vegetation. Seasonally flooded swamps are those areas that are typically flooded for more than six months per year. They typically have a closed canopy that limits understory vegetation.

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Forested Wetlands—a category of wetlands that includes *bottomland hardwood swamps, cypress-tupelo swamps*, and *oligotrophic seasonally flooded pine forests* as defined in this Section.

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Freshwater Emergent Wetlands (including *freshwater marshes*)—those areas inundated or saturated by surface water or groundwater of negligible to very low salinity at a frequency and duration sufficient to support, and that under normal circumstances do support, freshwater emergent vegetation. Typical vegetation includes cattail (*Typha angustifolia*), bulltongue (*Sagittaria* spp.), maiden cane (*Panicum hemitomon*), water hyacinth (*Eichomia crassipes*), pickerelweed (*Ponterderia cordata*), alligatorweed (*Altemanthera philoxeroides*), and *Hydrocotyl* spp. *Freshwater emergent wetlands* also are characterized by interstitial water salinity that is normally less than 2 ppt or psu. There are two subtypes of *freshwater emergent wetlands*: floating and attached. Floating wetlands are those areas where the wetland surface substrate is detached and is floating above the underlying deltaic plain (also called "buoyant" and "flotant"). Attached wetlands are those areas where the vegetation is attached to the wetland surface and is contiguous with the underlying wetland substrate and can be submerged or emergent.

Freshwater Swamps and Marshes—Repealed.~~those areas inundated or saturated by surface water or groundwater of negligible to very low salinity at a frequency and duration sufficient to support, and that under normal circumstances do support, emergent vegetation characterized by a prevalence of species typically adapted for life in such soil and contiguous surface water conditions. Typical freshwater swamp vegetation includes bald cypress marshes and open areas within freshwater swamps would include bulltongue *(Sagittaria spp.)*, maiden cane *(Panicum hemitomon)*, water hyacinth *(Eichornia crassipes)*, pickerelweed *(Pontederia cordata)*, alligatorweed *(Alternanthera philoxeroides)*, and Hydrocotyl sp. Freshwater swamps and marshes are also characterized by interstitial water salinity which is normally less than 2 parts per thousand.~~

Intermediate Marshes—Repealed.~~those areas inundated or saturated by surface water or groundwater of low salinity at a frequency and duration sufficient to support, and that under normal circumstances do support, emergent vegetation characterized by a prevalence of species typically adapted for life in these soil and contiguous surface water conditions. Typical vegetation includes wiregrass *(Spartina patens)*, deer pea *(Vigna luteola)*, bulltongue *(Sagittaria spp.)* wild millet *(Echinochloa walteri)*, bullwhip *(Scirpus californicus)*, and sawgrass *(Cladium jamaicense)*. Intermediate marshes are also characterized by interstitial water salinity which normally ranges between 3 and 6 parts per thousand.~~

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Non-Forested Wetlands—a category of wetlands that includes *freshwater emergent wetlands*, *brackish marshes*, and *salt* (*saline*) *marshes* as defined in this Section.

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Oligotrophic Seasonally Flooded Pine Forests—palustrine, seasonally saturated pine communities on hydric soils that may become quite dry for part of the year and generally occur in flat or nearly flat areas not associated with a river or stream system. They are usually dominated by loblolly pine (*Pinus taeda*). These pine forests are seasonally flooded and receive very low nutrient inputs. Because of their oligotrophic nature, these forests are characterized by unique understory vegetation communities that may include insectivorous plants.

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Saline Marshes—Repealed.~~those areas that are inundated or saturated by surface water or groundwater of salinity characteristic of nearshore Gulf of Mexico ambient water at a frequency and duration sufficient to support, and that under normal circumstances do support, emergent vegetation characterized by a prevalence of species typically adapted for life in such soil and contiguous surface water conditions. Typical vegetation includes oystergrass *(Spartina alterniflora)*, glasswort *(Salicornia spp.)*, black rush *(Juncus roemerianus)*, saltwort *(Batis maritima)*, black mangrove *(Avicennia germinans)*, and salt grass *(Distichlis spicata)*. Saline marshes are also characterized by interstitial water salinity that normally exceeds 16 ‰ (parts per thousand).~~

Salt (*Saline*) *Marshes*—those areas that are inundated or saturated by surface water or groundwater of salinity characteristic of nearshore Gulf of Mexico ambient water at a frequency and duration sufficient to support, and that under normal circumstances do support, saline emergent vegetation. Typical vegetation includes oystergrass (*Spartina alterniflora*), glasswort (*Salicomia* spp.), black rush (*Juncus roemerianus*), saltwort (*Batis maritima*), black mangrove (*Avicennia germinans*), and salt grass (*Distichlis spicata*). *Salt marshes* are also characterized by interstitial water salinity that normally exceeds 16 ppt or psu.

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Wetlands—~~those areas inundated or saturated by surface water or groundwater 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, bottomland hardwood forests, and similar areas.~~those areas that have one or more of the following attributes: support hydrophytic (water tolerant) vegetation during most of the year; contain predominately undrained hydric (water saturated) soils; and/or are periodically inundated or saturated by surface water or groundwater.

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§1109. Policy

Water quality standards policies concerned with the protection and enhancement of water quality in the state are discussed in this Section. Policy statements on antidegradation, water use, water body exception categories, compliance schedules and variances, short-term activity authorization, errors, severability, revisions to standards, and sample collection and analytical procedures are described.

A. – B.3.f. ...

C. Water Body Exception Categories. ~~Poor water quality will be viewed as a problem to be solved, not as an impediment to categorizing water bodies or assigning designated uses. However, s~~Some water bodies, because of natural water quality or physical limitations, may qualify for an excepted use classification. This classification will be made on a case-by-case basis. Whenever data indicate that an excepted classification is warranted, the department will recommend the exception to the ~~state~~ administrative authority for approval. In all cases where exceptions are proposed, the concurrence of the regional administrator of the EPA must be obtained and the opportunity for public participation must be provided during the exceptions review process. In most cases, the proposed exception will be considered during the public participation process along with a permit application or management plan update. Exceptions are allowed for the following three ~~four~~ categories of water bodies: certain intermittent streams, man-made water bodies, and naturally dystrophic waters~~, and wetlands~~. ~~Applications~~ Requests for excepted water use classifications may be considered for certain water bodies that~~which~~ satisfy one of the following descriptions.

C.1. – I.4. …

J. ~~4.~~ Wetlands

1. ~~a.~~ *Wetlands*, as defined in LAC 33:IX.1105, are a valuable resource to the state of Louisiana. Because of the state's natural low elevations, extensive riverine and riparian environments, and the presence of the Mississippi River delta, Louisiana has a large and diverse amount of wetland habitat. Specific values of Louisiana wetlands include commercial, recreational, and cultural uses. In addition, Louisiana wetlands provide important biological and physiochemical functions that include, but are not limited to, buffering against hurricanes and storms, holding excess floodwaters during high rainfall or high tides, recharging groundwater aquifers used for drinking water and irrigation, and improving water quality by filtering pollutants and taking up nutrients.

2. ~~b.~~ There are two basic types of Louisiana wetlands: forested wetlands and non-forested, or marsh, wetlands. Forested wetlands include bottomland hardwood swamps, continuously flooded cypress-tupelo swamps, seasonally flooded cypress-tupelo swamps, and oligotrophic seasonally flooded pine forests. Non-forested or marsh wetlands include floating freshwater emergent wetlands, attached freshwater emergent wetlands, brackish marshes, and salt (saline) marshes. Each of these wetland types are defined in LAC 33:IX.1105.

~~c. A wastewater discharge may be proposed for a wetland of any defined type only if the discharge will not cause impairment of the wetland or applicable general and site-specific criteria.~~

3. ~~d.~~ Wetlands approved by the administrative authority for wastewater assimilation projects pursuant to the Water Quality Management Plan, Volume 3, Section 10, Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, are assigned the following designated uses: secondary contact recreation and fish and wildlife

propagation.

4. Applicable Criteria. Wetlands provide several values and functions that necessitate water quality criteria protective primarily of vegetative productivity. Additionally, ~~W~~wetlands can periodically become anoxic or anaerobic, or lack water altogether~~, supporting wildlife to a greater extent and fish to a lesser extent~~. Therefore, the following criteria are applicable to wetlands approved by the administrative authority for wastewater assimilation projects pursuant to the Water Quality Management Plan, Volume 3, Section 10, Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards.

a. A ~~a~~numerical dissolved oxygen criterion is not necessary to protect the beneficial use of fish and wildlife propagation~~ in wetlands~~.

b. The general criteria found in LAC 33:IX.1113.B, except for LAC 33:IX.1113.B.3 and 9, ~~are applicable to wetlands~~ apply.

c. Numerical criteria found in LAC 33:IX.1113.C.4, 5.b, and 6 ~~are applicable to wetlands~~apply.

~~5. e~~d. The ~~applicable~~ biological criteria found in LAC 33:IX.1113.B.12.b apply~~ are applicable for to water bodies classified as wetlands receiving treated wastewater discharges under this exception are found in LAC 33:IX.1113.B.13~~.

~~6. e~~. Additional or site-specific criteria ~~for wetlands~~ may be necessary to protect other existing or beneficial uses identified by the administrative authority.

~~7~~5. A wastewater discharge may be proposed for a wetland of any defined type only if the discharge will not cause impairment of the wetland or exceedance of applicable general or site-specific criteria.

~~8~~6. ~~f.~~ Discharges to wetlands approved by the administrative authority for wastewater assimilation projects will only be permitted following ~~P~~procedures ~~for a proposed discharge to water bodies classified as wetlands~~ pursuant to ~~can be found in~~ the ~~current~~ Water Quality Management Plan, Volume 3, Section 10, Permitting Guidance Document for Implement~~ation~~ing ~~of~~Louisiana~~'s~~ Surface Water Quality Standards.

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§1113. Criteria

A. – B.11. ...

12. Biological and Aquatic Community Integrity~~:~~

a. The biological and community structure and function in state waters shall be maintained, protected, and restored except where not attainable and feasible as defined in LAC 33:IX.1109~~.B.3~~. This is the ideal condition of the aquatic community inhabiting the unimpaired water bodies of a specified habitat and region as measured by community structure and function. The biological integrity will be guided by the fish and wildlife propagation use designated for that particular water body. Fish and wildlife propagation uses are defined in LAC 33:IX.1111.C. The condition of these aquatic communities shall be determined

from the measures of physical, chemical, and biological characteristics of each surface water body type, according to its designated use (LAC 33:IX.1123). Reference site conditions will represent naturally attainable conditions. These sites should be the least impacted and most representative of water body types. Such reference sites or segments of water bodies shall be those observed to support the greatest variety and abundance of aquatic life in the region as is expected to be or has been recorded during past surveys in natural settings essentially undisturbed by human impacts, development, or discharges. This condition shall be determined by consistent sampling and reliable measures of selected, indicative communities of animals (i.e., fish, invertebrates, etc.) and/or ~~invertebrates~~plants as established by the department and may be used in conjunction with acceptable chemical, physical, and microbial water quality measurements and records as deemed appropriate for this purpose.

~~13.~~ b.~~Wetlands Criteria.~~ Assessment of Biological Integrity for Wetlands ~~Receiving Treated Wastewater Discharges~~ Approved for Wastewater Assimilation Projects Pursuant to the Water Quality Management Plan, Volume 3, Section 10, Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards. Wetland biological integrity will be guided by above-ground wetland vegetative productivity with consideration given to floral diversity. Due to effluent addition, the discharge area of a wetland shall have no more than a 20 percent reduction in the rate of total above-ground wetland productivity over a five-year period as compared to a reference area. The *discharge area* is the area of a wetland directly ~~impacted~~affected by effluent addition~~, typically within a 100-meter radius of the discharge pipe(s)~~. For each location, the discharge area will be defined by the volume of discharge. The *reference area* is the wetland area that is nearby and similar to the discharge area but that is not ~~impacted~~affected by effluent addition. Above-ground productivity is a key measurement of overall ecosystem health in the wetlands of south Louisiana. Primary productivity is dependent on a number of factors, and the methods for measurement of above-ground productivity and floral diversity are found in the current Water Quality Management Plan, Volume 3, Section 10, Permitting Guidance Document for Implement~~ation~~ing ~~of~~Louisiana~~'s~~ Surface Water Quality Standards.

1~~4~~3. Other Substances and Characteristics. General criteria on other substances and characteristics not specified in this Subsection~~LAC 33:IX.1113.B~~ will be developed as needed.

C. Numerical Criteria. Numerical criteria identified in LAC 33:IX.1123, Table 3, apply to the specified water bodies, and to their tributaries, distributaries, and interconnected streams and water bodies contained in the water management subsegment if they are not specifically named therein, unless unique chemical, physical, and/or biological conditions preclude the attainment of the criteria. In those cases, natural background levels of these conditions may be used to establish site-specific water quality criteria. Those water bodies officially approved and designated by the state and EPA as intermittent streams, man-made water bodies, or naturally dystrophic waters~~, or wetlands~~ may be excluded from some or all numerical criteria as stated in LAC 33:IX.1109. Although naturally occurring variations in water quality may exceed criteria, water quality conditions attributed to human activities must not exceed criteria when flows are greater than or at critical conditions (as defined in LAC 33:IX.1115.C).

C.1. – Table 1A.Footnote d. ...

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