



Tulane Environmental Law Clinic

January 10, 2017

Via Certified Mail # 7015 1730 0001 8727 1523

Return Receipt Requested

Sally Jewell, Secretary  
U.S. Department of the Interior  
1849 C Street, N.W.  
Washington, DC 20240

Via Certified Mail # 7015 1730 0001 8727 1547

Return Receipt Requested

Penny Pritzler, Secretary  
U.S. Department of Commerce  
1401 Constitution Avenue, NW  
Washington, DC 20230

Via Certified Mail # 7015 1730 0001 8727 1554

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Gina McCarthy, Administrator  
U.S. Environmental Protection Agency  
William Jefferson Clinton Building  
1200 Pennsylvania Avenue, NW  
Mail Code 1101A  
Washington, DC 20460

Via Certified Mail # 7015 1730 0001 8727 1479

Return Receipt Requested

Mr. Ron Curry, Regional Administrator  
U.S. EPA, Region 6  
Fountain Place 12th Floor, Suite 1200  
1445 Ross Avenue  
Dallas, TX 75202-2733

**Re: Sixty-Day Notice of Intent to Sue: Violations of the Endangered Species Act Related to the U.S. Environmental Protection Agency's Failure to Consult**

Dear Secretaries Jewell and Pritzler, Ms. McCarthy, and Mr. Curry:

We are writing to provide notice under Endangered Species Act (ESA), Section 11(g)(2)(A)(i), 16 U.S.C. § 1540(g)(2)(A)(i), that the Gulf Restoration Network, Little Tchefuncte River Association, Sierra Club Delta Chapter, Louisiana Audubon Council, and the Louisiana Environmental Action Network intend to file a citizen suit pursuant to ESA section

Tulane Environmental Law Clinic

6329 Freret St., Ste. 130, New Orleans, LA 70118-6231 tel 504.865.5789 fax 862.8721 www.tulane.edu/~telc

11(g)(1)(A), 16 U.S.C. § 1540(g)(1)(A), against the U.S. Environmental Protection Agency (EPA) for violations of Section 7 of the ESA. When the EPA approved Louisiana's drastic lowering of the dissolved oxygen criteria applicable to thirty-one Louisiana subsegments of rivers and streams pursuant to Section 303(c) of the Clean Water Act, it failed to insure, through consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS), that its action was not likely to jeopardize the continued existence of ESA-listed species, including the Atlantic sturgeon (Gulf subspecies) (hereinafter "Atlantic sturgeon") and the Alabama (inflated) heelsplitter mussel (hereinafter "Alabama heelsplitter mussel").<sup>1</sup> Likewise, with respect to the Atlantic sturgeon, EPA's failed to ensure, through consultation with the FWS, that its action was not likely to result in the destruction or adverse modification of this species' critical habitat.<sup>2</sup> Both of these failures constitute violations of ESA section 7.<sup>3</sup>

### **Factual Background**

On June 3, 2016, pursuant to Section 303(c) of the Clean Water Act, EPA approved Louisiana's Dissolved Oxygen Criteria Revisions for the Eastern Lower Mississippi Alluvial Plain Ecoregion. Exhibit A. The approval resulted in the drastic lowering of dissolved oxygen criteria – to hypoxic or nearly hypoxic levels – for the thirty-one subsegments of rivers and streams in this Ecoregion to 2.3 mg/L for nine months of the year – March through November. EPA did not consult with either the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) before approving these widespread changes, despite the fact that its action may affect at least two species listed as threatened under the Endangered Species Act: the Atlantic sturgeon (Gulf subspecies) and the Alabama (inflated) heelsplitter mussel.

The FWS has documented that these two listed species occur in many of the waterbody subsegments affected by EPA's approval and to which the new dissolved oxygen criteria apply. The document attached as Exhibit B includes the FWS's listing of waterbody subsegments in Louisiana in which listed species are known to occur. In particular, the Alabama heelsplitter mussel is known to occur in subsegment 040302, formerly "Amite River From LA 37 to Amite River Diversion Canal." Though current subsegment 040302 is not one of the subsegments to which the new criteria apply (see EPA listing of affected subsegments, Exhibit A at 5), the new criterion applies to newly-created subsegment 040306 ("Amite River-From LMRAP Ecoregion boundary to Amite River Diversion Canal"), which contains part of what was formerly designated as 040302.<sup>4</sup>

FWS lists the Atlantic sturgeon as occurring in many of the subsegments which are subject to the new dissolved oxygen criteria: 040302 (see previous discussion), 040305, 040401, 040402, 040502 (which is now 040506), 040503 (part of which is now 040507), 040505 (part of which is now 040508), 040601, 040604, 040702, 040801 (part of which is now 040807), 040802 (which is now 040808), 040901 and 040902 (part of which are now 040912 and 040913),

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<sup>1</sup>Both species are listed at 50 C.F.R. § 17.11(h). The Atlantic sturgeon was listed in 56 Fed. Reg. 49653 (Sept. 30, 1991) and the Alabama heelsplitter was listed in 55 Fed. Reg. 39868 (Sept. 28, 1990).

<sup>2</sup> Critical habitat designation at 68 Fed. Reg. 13370 (Mar. 19, 2003).

<sup>3</sup> 16 U.S.C. § 1536.

<sup>4</sup> In the same rulemaking as the DO revision, Louisiana also revised the boundaries of 42 subsegments, resulting in the creation of 21 new waterbody subsegments. EPA approved the boundary revisions on September 9, 2016.

040904 (part of which is now 040914), 040905 (part of which is now included in 040915), and 040908 (part of which is now included in 040917).

In its June 3, 2016, approval letter, EPA acknowledged both its duty to consult on this approval action and the fact that it did not consult.

### **Alleged Violations of The Endangered Species Act**

The Endangered Species Act provides that “any person may commence a civil suit on his own behalf [ ]to enjoin any person, including the United States and any other governmental instrumentality or agency . . . who is alleged to be in violation of any provision of this chapter or regulation issued under the authority thereof.”<sup>5</sup>

Section 7(a)(2) mandates that federal agencies “shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.”<sup>6</sup> The statute further requires that “each agency shall use the best scientific and commercial data available” to fulfill this requirement.<sup>7</sup> The EPA violated ESA Section 7(a)(2) by failing to consult with the FWS and the NMFS to insure that lowering the dissolved oxygen water quality criteria to 2.3 mg/L for nine months of the year in these thirty-one subsegments would not jeopardize ESA-listed species like the Atlantic sturgeon and the Alabama heelsplitter mussel or result in the destruction or adverse modification of critical habitat of the Atlantic sturgeon. The revised DO criterion could pose a particular threat to sensitive life stages of the Atlantic sturgeon, like the juvenile or larval stages. Further, to the extent that EPA claims it fulfilled its duties under Section 7(a)(2) using the data and analysis it reviewed and performed to approve the DO changes, it violated Section 7 by failing to use the best scientific data available, as that decision was not based on sound scientific data or rationale.

### **Persons Giving Notice**

The full name, address, and telephone number of the parties providing this notice are as follows:

Gulf Restoration Network  
P.O. Box 2245  
New Orleans, Louisiana 70176  
(504) 525-1528

Little Tchefuncte River Association  
c/o Matthew Allen  
13058 Major Lane  
Folsom, LA 70437  
(985) 867-1499

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<sup>5</sup> 16 U.S.C. § 1540(g)(1)(A).

<sup>6</sup> 16 U.S.C. § 1536(a)(2).

<sup>7</sup> *Id.*

EPA Approval of Louisiana Site-Specific DO Criteria  
Notice of Violation  
January 10, 2017

Louisiana Audubon Council  
c/o Barry Kohl  
1522 Lowerline Street  
New Orleans, LA 70118  
(504) 861-8465

Sierra Club, Delta Chapter  
c/o Haywood Martin  
P.O. Box 52503  
Lafayette, LA 70505  
(337) 298-8380

Louisiana Environmental Action Network  
P.O. Box 66323  
Baton Rouge, LA 70896  
(225) 928-1315

**Identification of Counsel**

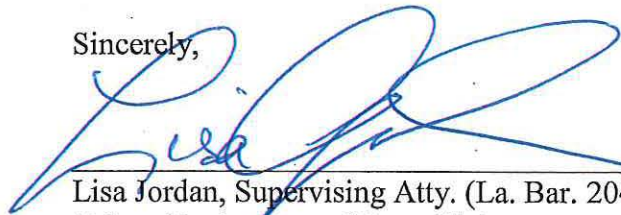
Lisa Jordan, La. Bar No. 20451  
Tulane Environmental Law Clinic  
6329 Freret Street  
New Orleans, LA 70118  
Phone: (504) 865-5789  
Direct: (504) 314-2481  
Fax: (504) 862-8721  
Email: lwjordan@cox.net

**Relief Sought**

If a lawsuit is necessary to resolve this matter, the Gulf Restoration Network, Little Tchefuncte River Association, Sierra Club, Louisiana Audubon Council, and the Louisiana Environmental Action Network may seek declaratory and injunctive relief, as well as costs of litigation.

If you believe any of the contents of this letter to be in error, or otherwise wish to discuss the violations alleged in this letter, please contact counsel for the citizen groups. Thank you.

Sincerely,



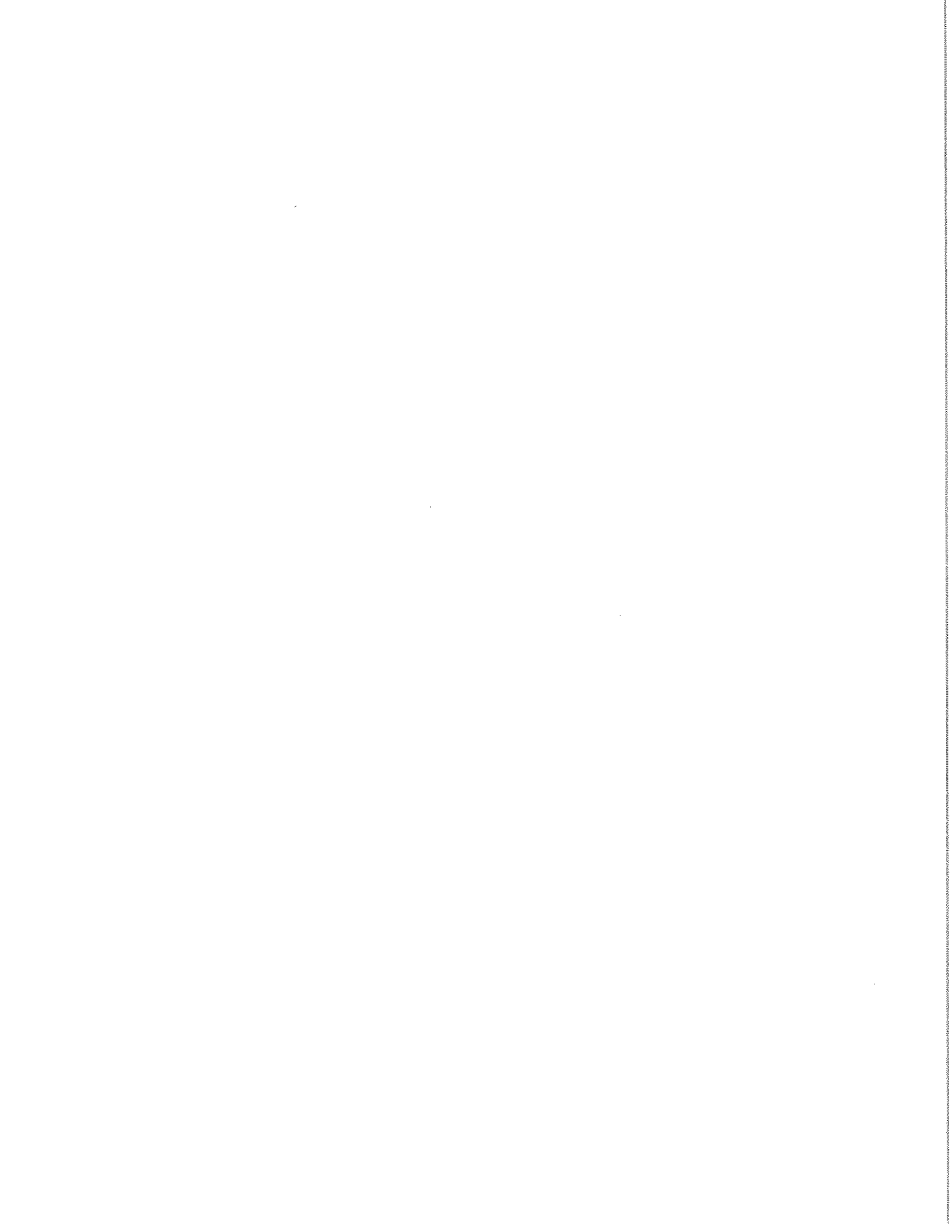
Lisa Jordan, Supervising Atty. (La. Bar. 20451)  
Tulane Environmental Law Clinic  
6329 Freret Street  
New Orleans, LA 70118  
Tel. No. (504) 865-5789

EPA Approval of Louisiana Site-Specific DO Criteria  
Notice of Violation  
January 10, 2017

Direct: (504) 314-2481  
Fax No. (504) 862-8721

cc: Via Certified Mail # 7015 1730 0001 8727 1561  
Return Receipt Requested  
Attorney General Loretta E. Lynch  
U.S. Department of Justice  
950 Pennsylvania Avenue, NW  
Washington, DC 20530-0001

Via Certified Mail # 7015 1730 0001 8727 1578  
Return Receipt Requested  
United States Fish and Wildlife Service  
Office of Endangered Species  
4401 N. Fairfax Drive, Rm. 420  
Arlington, VA 22303





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 REGION 6  
 1445 ROSS AVENUE, SUITE 1200  
 DALLAS TX 75202-2733

JUN 03 2016

Mr. Scott Guilliams  
 Administrator, Water Permits Division  
 Louisiana Department of Environmental Quality  
 Post Office Box 4313  
 Baton Rouge, Louisiana 70821-4301

Re: Dissolved Oxygen Criteria Revisions for the Eastern Lower Mississippi River Alluvial Plain (eLMRAP) Ecoregion, LAC 33:IX.1123 (WQ091)

Dear Mr. Guilliams:

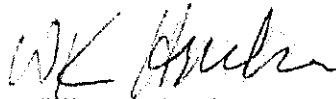
The Environmental Protection Agency (EPA) has completed its review of the above-referenced revisions to the Louisiana Administrative Code (LAC), Title 33, Part 9, Chapter 11. The state-adopted standards extends the work previously done in the western section of the Lower Mississippi River Alluvial Plain ecoregion in the Barataria and Terrebonne basins which refined dissolved oxygen criteria and adjusted criteria to appropriate values. The Louisiana Department of Environmental Quality (LDEQ) adopted the revised water quality standard (WQS) rule as state law on December 20, 2015. LDEQ submitted the revisions to the EPA for review and action via certification letter dated January 7, 2016, signed by the general counsel.

In today's action EPA is approving the revisions to the dissolved oxygen criteria for the eLMRAP ecoregion at LAC 33:IX.1123, pursuant to section 303(c) of the Clean Water Act and the implementing regulations at 40 CFR part 131. This letter constitutes our formal notification of the results of this review. A more detailed explanation of what EPA is approving and discussion of the basis for our approval is provided in the enclosed support document (TSD.)

It is important to note that EPA's approval of the State's revisions to LAC 33:IX.1123, as detailed above, is considered a federal action which may be subject to the Section 7(a)(2) consultation requirements of the Endangered Species Act (ESA). Where EPA concludes that its approval action will have "no effect" on listed endangered or threatened species, or is otherwise not subject to ESA consultation, EPA can issue an unconditional approval. Section 7(a)(2) of the ESA states that "each federal agency ... shall ... insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical..." EPA's approval of the revisions, therefore, may be subject to the results of consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) pursuant to Section 7(a)(2) of the ESA. Nevertheless, EPA also has a Clean Water Act obligation, as a separate matter, to complete its water quality standards action. Therefore, in approving Louisiana's revisions today, EPA is completing its CWA Section 303(c) responsibilities. However, should the consultation process identify information that supports a conclusion that one or more of these revisions is likely to jeopardize the continued existence of any endangered or threatened species, EPA will revisit and amend its approval decision for those revised standards.

I would like to commend the commitment and efforts put forth by LDEQ and its staff on the development of these revisions. We look forward to working with LDEQ to further refine the State of Louisiana's water quality standards. If you have any questions or concerns, please call me at (214) 665-7101 or contact Klaire Freeman, of my staff at (214) 665-7239 or at [freeman.klaire@epa.gov](mailto:freeman.klaire@epa.gov).

Sincerely,



William K. Honker, P.E.  
Director  
Water Division

Enclosure



**U.S. ENVIRONMENTAL PROTECTION AGENCY – REGION 6**

**Technical Support Document for EPA R6 Review of:**

**Louisiana Criteria Revisions: Dissolved Oxygen Criteria Revisions for Eastern Lower Mississippi River Alluvial Plains Ecoregion (LAC 33:IX:1123) (Rule WO091)**

Revisions adopted by Louisiana Department of Environmental Quality on  
December 20, 2015

**U.S. EPA REGION 6  
WATER QUALITY PROTECTION DIVISION  
June 2016**

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## **I. Introduction**

### ***Background***

As described in §303(o) of the Clean Water Act (CWA) and in the water quality standards (WQS) regulation at 40 CFR §131.20, states and authorized tribes have primary responsibility to develop and adopt WQS to protect their waters. State and tribal WQS consist of three primary components: designated uses, criteria to support those uses, and antidegradation requirements. In addition, CWA §303(c)(1) and 40 CFR §131.20 require states to hold public hearings at least once every three years to review and, as appropriate, modify and adopt standards. As specified in 40 CFR §131.21, the Environmental Protection Agency (EPA) reviews new and revised surface WQS that have been adopted by states and authorized tribes. Authority to approve or disapprove new and/or revised water quality standards submitted to EPA for review has been delegated to the Water Division Director in Region 6. State or tribal WQS are not considered effective under the CWA unless and until approved by EPA.

The purpose of this Technical Support Document (TSD) is to document the review and provide the basis for EPA's actions concerning revisions to Dissolved Oxygen Criteria for Eastern Lower Mississippi River Alluvial Plains (eLMRAP) Ecoregion (LAC 33:IX:1123) (Rule WQ091), adopted by the Louisiana Department of Environmental Quality (LDEQ) on December 20, 2015.

### ***Chronology of Events***

On December 20, 2015, the Louisiana Department of Environmental Quality (LDEQ) adopted revisions to Louisiana's surface water quality standards (WQS) at LAC 33:IX.1123, Table 3. These consisted of dissolved oxygen (DO) criteria revisions for freshwater and tidally influenced inland streams in subsegments located within the eLMRAP ecoregion, as well as boundary refinements for 42 subsegments. LDEQ refers to the rule as WQ091.

June 7, 2013 LDEQ finalized a UAA for the eLMRAP which suggested that the DO criteria established for streams in the western portion of the LMRAP in the Barataria-Terrebonne UAA are appropriate for the eastern portion as well.

November 25, 2013 EPA sent letter to LDEQ noting no significant points of concern with the UAA.

November 18, 2014 LDEQ sent EPA a draft version of the eLMRAP rule which included the eLMRAP DO criteria and subsegment boundary refinements.

December 18, 2014 EPA provided LDEQ with comments on the draft eLMRAP rule.

March 18, 2015 LDEQ provided responses to EPA's comments on the draft eLMRAP rule.

June 20, 2015 LDEQ published a proposed rule for eLMRAP DO criteria and subsegment boundary refinements (WQ091).

August 25, 2015 EPA sent a letter to LDEQ noting no further comments or concerns on the proposed rule.

September 4, 2015 Tulane University provided extensive comments on the proposed rule to LDEQ.

November 4, 2015 LDEQ sent EPA a copy of "Comment Summary Response & Concise Statement," their response to selected comments from the public comment period.

December 20, 2015 LDEQ adopted WQ091 (eLMRAP DO) revisions.

January 12 2016 EPA received LDEQ's WQS submittal for the eLMRAP rule revisions.

February 24 2016 EPA facilitates call between LDEQ and Gulf Restoration Network/Tulane Environmental Law Clinic to discuss concerns and comments provided September 4 2015.

March 8 2016 EPA receives letter and data from Tulane Environmental Law Clinic/Gulf Restoration Network: "Request for Disapproval of Louisiana DO Changes - WQ091"

April 26, 2016 EPA receives email response from LDEQ to inquiry seeking clarification on WQ091 data

May 10, 2016 LDEQ/EPA collaborative call to clarify details of WQ091 and establish estimated timeline for action

### ***Summary of Revisions to WQ091***

The Dissolved Oxygen Criteria Revisions for eLMRAP Ecoregion (LAC 33IX.1123)(WQ091) revised the DO criteria for 31 inland streams to 2.3 mg/L for the months of March through November; for the months of December through February the DO criteria for inland streams will remain as 5.0 mg/L (inland areas) or 4.0 mg/L (for estuarine areas). This revision was based on findings from a use attainability analysis of inland rivers and streams in the eLMRAP ecoregion. In addition, boundaries for 42 subsegments within the eastern eLMRAP, the southern plains terrace, and flatwoods, the terrace uplands, and the coastal deltaic marshes ecoregions are being refined based on watersheds; these boundary refinements resulted in the delineation of 21 new subsegments.

The DO criteria revisions were derived using an ecoregion approach and are the result of findings presented in a June 7, 2013, report entitled *Use Attainability Analysis (UAA) of Inland Rivers and Streams in the Eastern Lower Mississippi River Alluvial Plains Ecoregion for Review of Dissolved Oxygen Water Quality Criteria*. The UAA demonstrated that the DO criteria established for streams in the western portion of the LMRAP as a result of the earlier Barataria-Terrebonne UAA are also appropriate for the eastern portion of the LMRAP. EPA had no significant points of concern for the UAA, as stated in the November 25, 2013 letter to LDEQ.

### **II. New or Revised Provisions EPA is Approving**

EPA is approving DO criteria revisions for all 31 watershed subsegments, listed here: 040201, 040303, 040305, 040306, 040401, 040402, 040403, 040404, 040503, 040506, 040508, 040601, 040604, 040605, 040606, 040702, 040705, 040809, 040907, 040915, 040916, 040917, 041101, 041201, 041202, 040807, 040808, 040903, 040912, 040913, and 040914. Discussion of approval rationale is found below.

### *Discussion of Additional Commentary Received*

Following LDEQ's WQS submittal for the eLMRAP rule revisions, EPA received additional information from Tulane Environmental Law Clinic, working with the Gulf Restoration Network (GRN). This information provided additional commentary and data, raising valid concerns for the revisions, via a letter with several enclosures dated March 8, 2016, "Request for Disapproval of LDEQ's Amendments to the Water Quality Regulations regarding Dissolved Oxygen Criteria for Water Quality Subsegments in the Eastern Lower Mississippi River Alluvial Plains Ecoregion (LAC 33:IX.1123.Table 3) (WQ091)"

The letter stated six main concerns, which EPA R6 staff investigated. The concerns and EPA's findings included the following:

1. None of the UAA reference sites are on the Northshore of Lake Pontchartrain, and thus data cannot be representative of the watershed segments in that area.
  - o LDEQ is using an ecoregion-based approach, which EPA has previously agreed to in the 2008 MOA. Reference sites were chosen from least impacted water bodies that met the following criteria: without unique morphological/hydrological characteristics, with no significant point or nonpoint sources of pollution, without hydromodification, and must be accessible to the sampling crew. Reference sites are representative of the entire ecoregion.
2. Many of the Northshore subsegments, plus subsegment 040506, contain portions outside of the ecoregion.
  - o Ecoregion boundaries in Louisiana change as the ecoregions are shaped by major ecological events, such as hurricanes. The most recent revisions to the ecoregion boundaries and subsegment boundaries were established via ground-truthing, to establish the direction of water flow for that watershed, and confirming that all drainage ends up in the eLMRAP ecoregion. By excluding drainage from adjacent ecoregions LDEQ ensures that any

criteria set for subsegments included within the eLMRAP ecoregion would be accurate.

3. Monitoring data shows that Northshore waterbodies are achieving 5.0 mg/l of dissolved oxygen year-round.
  - o Monitoring “ambient” data for DO is not as scientifically stringent as the continuously collected monitoring data used to develop this criteria. Continuous use monitoring data allows for examination of the full DO cycle, taking into account the natural high and low points in DO that occur. In comparison, ambient data is a single “grab sample” typically taken at some point between 6 am and 12 pm, and may not account for diurnal swings in DO.
4. Evidence demonstrates that the Northshore waterbodies – and the Tchefuncte in particular – are not like the other waterbodies in the eastern LMRAP or the western LMRAP.
  - o Tulane/GRN argue that the Northshore waterbodies are significantly different from the remainder of the LMRAP, citing ambient DO data that show slightly higher DO values. As discussed above, ambient data does not give a complete analysis of the DO within a watershed. More stringent methods need to be used to establish criteria. LDEQ’s work to revise and ground-truth the watershed subsegments established that the watershed subsegments belong in the LMRAP ecoregion, and where needed, subsegment borders were refined.
5. LDEQ’s newly published draft integrated report for 2016 shows that a number of the Northshore waterbodies are meeting 5.0 mg/l
  - o Northshore waterbodies are meeting 5.0 mg/L for ambient samples. While samples may reach higher DO values, the criterion being set is a minimum. The criterion is the tenth percentile of data collected during the critical period between 6 am and 12 pm, representing the minimum acceptable level of DO that could be possible. Again, ambient monitoring data is not as thorough as continuous monitoring, as explained in number 3, above. Higher DO levels occurring in a waterbody that is typically

characterized by low DO, as most of the waterbodies in the LMRAP ecoregion are, may indicate impacts of urbanization, hydromodification, and pollution.

6. EPA must disapprove LDEQ's application of the revised DO criterion to estuarine and tidally influenced waters.
  - o The revised DO criterion applies only to inland streams. While these streams may be tidally influenced or connected to estuaries, this is in fact a characteristic of streams within the entire ecoregion. As such, the reference streams used and the findings of the eLMRAP UAA and the resulting DO criterion are appropriate.
  - o Additionally, the state has adequately explained that the LMRAP ecoregion as a whole is a transitional zone, in which the landscape changes from the surrounding ecoregions. The extent of tidal influence is always being affected by rainfall and stream flow in freshwater systems and storm severity and cycles, resulting in a fluid state of salinity across the ecoregion.

#### ***Watershed Subsegments approved based on eLMRAP UAA***

The eLMRAP UAA, as discussed above, demonstrated that the DO criterion established for streams in the western portion of the LMRAP as a result of the earlier western Barataria-Terrebonne (BT) UAA are appropriate for the eastern portion of the LMRAP. The DO criterion remains 5.0 mg/L (for inland areas) or 4.0 mg/L (for estuarine areas) for the months of December through February. The study used continuous monitoring of DO at six least impacted reference stream sites to compare to seven from the BTUAA. Physical and biological (fish) data were also collected. There were no significant differences in DO or physical and biological data found between the eastern and western portions of the LMRAP ecoregion, and as such LDEQ concluded that assigning the same criterion to seasonally affected streams was an appropriate action. EPA concurs with this finding in the eLMRAP UAA. As such, EPA approves the change to the following watershed subsegments without further investigation: 040201, 040303, 040305, 040306, 040401, 040402, 040403, 040404, 040503, 040506, 040508, 040601, 040604, 040605,



040606, 040702, 040705, 040809, 040907, 040915, 040916, 040917, 041101, 041201, 041202.

***Watershed Subsegments approved after further investigation***

Several subsegments required further investigation based on concerns raised by Tulane/GRN—Primarily those with portions outside of the ecoregion boundaries. These are subsegments 040807, 040808, 040903, 040912, 040913, and 040914. In addition to the changes in the DO criterion, LDEQ refined the boundaries of these (and all other) subsegments in the LMRAP ecoregion. This was accomplished by LDEQ through extensive ground-truthing which refined the boundaries to reflect the most current conditions. EPA R6 reviewed LDEQ's November 17, 2014 document "Explanation Of Subsegment Revisions In Lower Mississippi River Alluvial Plains, Southern Plains Terrace And Flatwoods, And Coastal Deltaic Marshes Ecoregions," finding that all modifications to ecoregion boundaries and watershed subsegments were scientifically based. The purpose of the refinements in most cases was to ensure that the subsegment boundary did not include waterbodies that drained into adjacent ecoregions. By excluding drainage from adjacent ecoregions, LDEQ established that the subsegments matched the characteristics of the LMRAP ecoregion. In the future, LDEQ likely will update the ecoregion boundary to include these subsegments. The following discussion provides the rationale for revisions to each subsegment boundary in question.

- For subsegments 040807 and 040808: These segments were originally one larger subsegment. Specifically subsegment 040807 was split to exclude drainage from the Southern Plains Terrace and Flatwoods (SPTF) ecoregion and the eastern boundary was adjusted to exclude Bogue Falaya River drainage. While a significant portion of subsegment 040807 lies outside the LMRAP boundary, that portion is ecologically similar to the remainder of the LMRAP ecoregion.
- Subsegment 040903: This subsegment did not undergo any boundary changes, but has a substantial area outside the current eLMRAP ecoregion boundary. LDEQ's evaluation places this subsegment within LMRAP, therefore the subsegment is ecologically similar to the LMRAP ecoregion, and thus the lower DO criteria is

applicable.

- Subsegment 0040912: this subsegment was split to exclude SPTF drainage and lies within the eLMRAP ecoregion boundaries.
- Subsegments 040913 and 040914: These subsegments were split to exclude drainage from the Coastal Deltaic Marshes (CDM) ecoregion, which lies to the south of the subsegments. Both subsegments have small portions which lie outside the current LMRAP ecoregion boundary.

EPA understands that as the landscape in and surrounding this ecoregion can change from year to year, due to both natural and anthropogenic causes, the ecoregion boundaries can shift in minor ways as well. Given the transitional nature of the eLMRAP ecoregion, its boundary will fluctuate with these changes in landscape. For subsegments that lie on or cross the ecoregion boundary, including subsegments 040506, 040702, 040706, 040807, 040903, 040907, 040912, 040913, and 040914, routine reevaluation of the ecoregion boundary and subsegment may be required.

EPA supports the boundary adjustments made to the watershed subsegments, and, while further revision may be needed in the future, does not believe that the subsegments with portions outside the current ecoregion boundary line show sufficient evidence to be excluded from the eLMRAP ecoregion. As such, EPA approves the revisions to DO criterion for these subsegments.

### **III. Literature Cited**

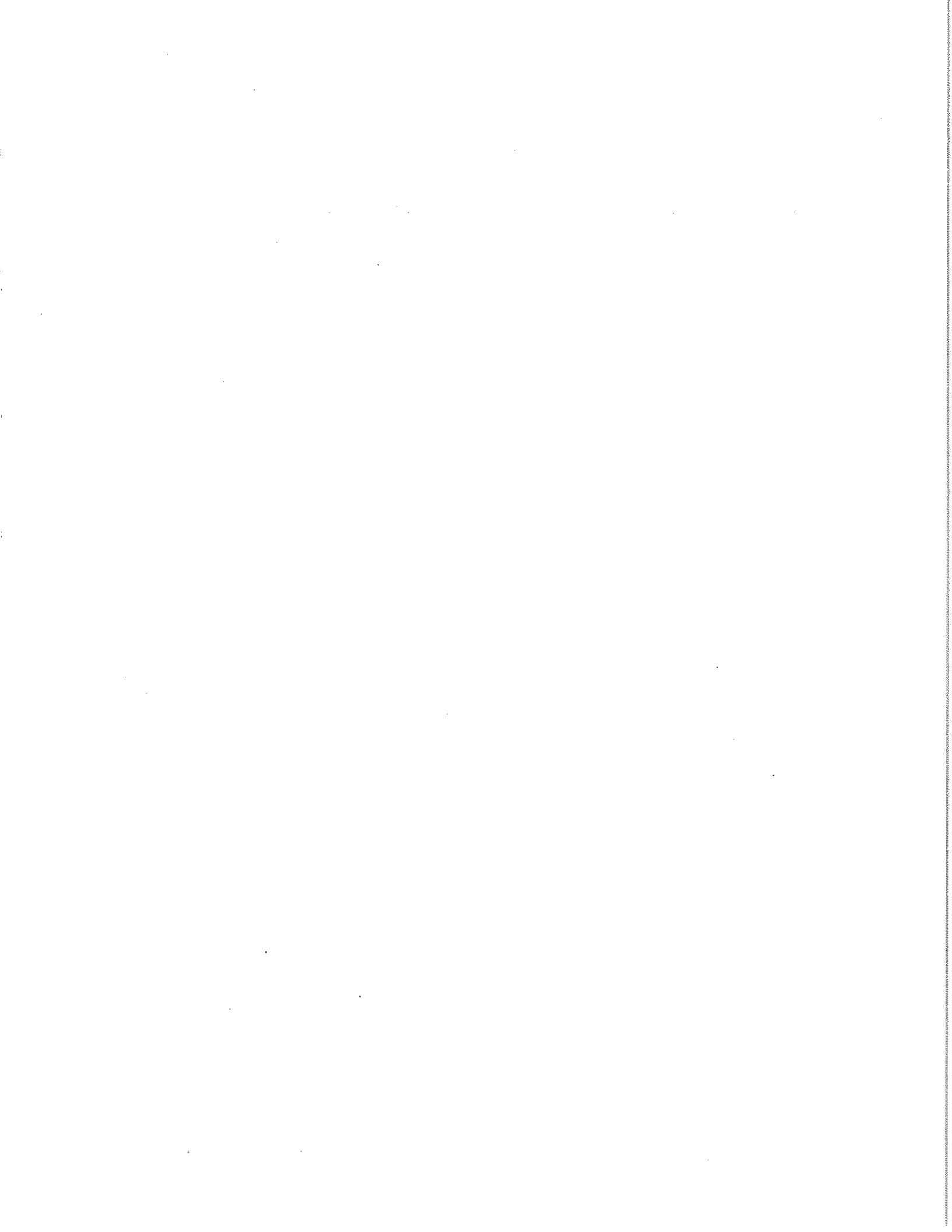
LDEQ Water Permits Division, Explanation Of Subsegment Revisions In Lower Mississippi River Alluvial Plains, Southern Plains Terrace And Flatwoods, And Coastal Deltaic Marshes Ecoregions, November 17, 2014

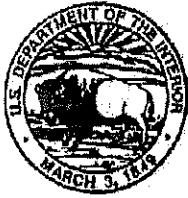
LDEQ Water Permits Division, Use Attainability Analysis of Inland rivers and Streams in the Eastern Lower Mississippi River Alluvial Plains Ecoregion for Review of Dissolved Oxygen Water Quality Criteria, June 7, 2013.

LDEQ Water Quality Assessment Division, Use Attainability Analysis of Barataria and

Terrebonne Basins for Revision of Dissolved Oxygen Water Quality Criteria, May 9, 2008.

U.S. EPA and LDEQ, Memorandum Of Agreement: Establishment Of Ecoregion-Based Dissolved Oxygen Criteria And Assessment Methods, January 10, 2008.





## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
646 Cajundome Blvd.  
Suite 400  
Lafayette, Louisiana 70506



May 18, 2016

Mr. Elliot B. Vega  
Assistant Secretary  
Office of Environmental Services  
Louisiana Dept. of Environmental Quality  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

Dear Mr. Vega:


Please reference our March 22, 1996, Memorandum of Understanding (MOU) with the Louisiana Department of Environmental Quality (LDEQ) regarding federally listed threatened and endangered species, and the Louisiana Pollutant Discharge Elimination System (LPDES) program. In accordance with the terms of that MOU, the Fish and Wildlife Service (Service) is pleased to provide LDEQ with the enclosed current list of sensitive areas (i.e., waters deemed important for the conservation of threatened and endangered species). In September 1996, our agencies developed an implementation strategy for the Scope-of-Work section of the subject MOU. That strategy (which has been updated annually since 1997) included a list of sensitive areas, types of permits, notices of intent, substances of concern, and listed species for which the Service has requested coordination, in accordance with provisions of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

As we have done in the past, the Service intends to continue that implementation strategy (enclosed) for this federal fiscal year (October 2015 through September 2016). We have also reviewed the revised subsegment boundaries LDEQ provided us on March 21, 2016. We have also enclosed some specific species information that should provide additional guidance in determining whether LDEQ should coordinate with the Service for certain permitted discharges to the listed sensitive waterbodies. In addition, please take note of the inclusion of selenium in the list of substances of interest in Section II.2.1.

The Service appreciates the continuing cooperation of LDEQ in the conservation of federally listed species. If you or your staff have any comments or require further information, please have them contact Ms. Amy Trahan (337/291-3126) of this office.

51 MAY 20 2016

Sincerely,



Darryl Clark  
Acting Field Supervisor  
Louisiana Ecological Services Office

Enclosures

cc: Mr. Matt Hubner, EPA, 6WQ-EW, Dallas, TX  
Mr. Scott Guilliams, LDEQ-WQAD, Baton Rouge, LA  
Mr. Bruce Fielding, LDEQ, Baton Rouge, LA  
Ms. Heather Babin, LDEQ, Baton Rouge, LA  
Ms. Steph Braden, LDEQ, Baton Rouge, LA  
LDWF, Natural Heritage Program, Baton Rouge, LA

**2015-2016 Implementation Strategy for the  
Louisiana Department of Environmental Quality  
and the U.S. Fish and Wildlife Service  
Memorandum of Understanding**

**Section II. Scope of Work**

**Section II.1** LDEQ and the Service will follow the procedures described in the MOU. The Service, by November 1, 2016, will provide LDEQ a list of all federally listed threatened and endangered species in Louisiana that are dependant on aquatic habitat.

<u>SPECIES</u>	<u>HYDROLOGIC SUBSEGMENTS</u>
Alabama (= inflated) heelsplitter mussel	040101, 040103, 040302
Fat pocketbook mussel	070101, 070201
Atlantic sturgeon, critical habitat*	040102, 040103, 040301, 040302, 040303, 040304, 040305, 040401, 040402, 040501-040503, 040505, 040601, 040602, 040604, 040701-040704, 040801-040804, 040901, 040902, 040904, 040905, 040906, 040908, 040910, 040911, 041001, 041002, 041301, 041302, 041401, 041701, 041702, 041703, 041704, 041901, 042001-042004, 042201, 042202, 042203-042206, 042207, 042209, 070601, 090101-090107, 090201-090208, 090301, 090401, 090501, 090506
	<i>*See Addendum for additional information.</i>
Louisiana pearlshell mussel	060208, 060209, 101301, 101302
Louisiana quillwort	040804, 040904, 090501, 090506
Pallid sturgeon	010101, 010201, 010501, 010502, 010801-010803, 070101, 070103, 070201, 070301, 070502, 100101, 100201
Pink mucket pearly mussel	080101, 080401, 080701

Rabbitsfoot mussel	080101, 080401, 080701
Ringed map (= sawback) turtle	090101-090106 (excluding 090104), 090201-090207, 090501, 090502
West Indian manatee	040302, 040401, 040403, 040501, 040502, 040503, 040601, 040602, 040702, 040902, 040904, 040906, 040908, 040911, 041001, 041002, 041701, 041703, 041704, 042001, 042101, 042202

Section II.2 LDEQ and the Service will follow the procedures described in the MOU except that the Service will only request coordination on those permits that fall into one or more of the following seven categories:

1. The proposed permit occurs in a subset of sensitive waters defined as those subsegments where the following species occur, and the regulated discharge contains one or more of the substances listed below:

<u>SPECIES</u>	<u>HYDROLOGIC SUBSEGMENTS</u>
Alabama (= inflated) heelsplitter mussel	040101, 040103, 040302
Fat pocketbook mussel	070101, 070201
Atlantic sturgeon, critical habitat*	040102, 040103, 040301, 040302, 040303, 040304, 040305, 040401, 040402, 040501-040503, 040505, 040601, 040602, 040604, 040701- 040704, 040801-040804, 040901, 040902, 040904, 040905, 040906, 040908, 040910, 040911, 041001, 041002, 041301, 041302, 041401, 041701, 041702, 041703, 041704, 041901, 042001-042004, 042201, 042202, 042203-042206, 042207, 042209, 070601, 090101-090107, 090201-090208, 090301, 090401, 090501, 090506

\*See Addendum for additional information.

Louisiana pearlshell mussel	060208, 060209, 101301, 101302
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Louisiana quillwort	040804, 040904, 090501, 090506
Pallid sturgeon	010101, 010201, 010501, 010502, 010801-010803, 070101, 070103, 070201, 070301, 070502, 100101, 100201
Pink mucket pearly mussel	080101, 080401, 080701
Rabbitsfoot mussel	080101, 080401, 080701
Ringed map (= sawback) turtle	090101-090107 (excluding 090104), 090201-090206, 090501, 090502
West Indian manatee	040302, 040401, 040403, 040501, 040502, 040503, 040601, 040602, 040702, 040902, 040904, 040906, 040908, 040911, 041001, 041002, 041701, 041703, 041704, 042001, 042101, 042202

#### Substances

Endosulfan  
Hexachlorobenzene  
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)  
Arsenic  
Chromium III  
Chromium VI  
Zinc  
Cadmium  
Copper  
Lead  
Mercury  
Nickel  
Cyanide  
Pentachlorophenol (PCP)  
Selenium; or

2. The proposed permit is for a major (i.e., flow of one million gallons per day or more) sanitary sewage treatment facility (not covered under a General Permit for Class I, II, III, or IV Sanitary Dischargers), and is located in the sensitive areas described in Section II.2.1; or
3. The proposed permit is for a landfill (other than those covered under Construction/Demolition Debris and Woodwaste Landfill [LAG780000] and

Municipal Solid Waste Landfill [LAG660000] General Permits) and is located in the subset of sensitive areas described in Section II.2.1; or

4. The proposed permit is for a facility applying for coverage under the General Permit for Cement, Concrete, and Asphalt Facilities (LAG110000) and is located in the sensitive areas described in Section II.2.1; or
5. The proposed permit is for an electrical generating facility located in the sensitive areas described in Section II.2.1; or
6. The proposed permit is for a sand and gravel operation (including those applying for coverage under the General Permit for Sand and Gravel Extraction Facilities [LAG490000]) and is located in a subset of sensitive waters expected to support the Louisiana quillwort (subsegments 040804, 040904, 090501, 090506), the Alabama heelsplitter mussel, the Louisiana pearlshell mussel, the fat pocketbook mussel, the pink mucket pearly mussel, the rabbitsfoot mussel, the Atlantic sturgeon, the pallid sturgeon, or the ringed map turtle; or,
7. The proposed permit is for a facility utilizing a cooling water intake structure that is regulated under §316(b) of the Clean Water Act and is located in the sensitive areas described in Section II.2.1.

If a proposed permit falls into one or more of the above categories, the proposed discharge may affect a listed species and coordination should be initiated with the Service to: (1) determine if an adverse effect exists, and (2) explore ways to remove the effect.

Because hydrologic subsegments often cover large geographic areas, it is expected (for species with restricted distributions) that some proposed permits located in sensitive areas may not affect a species because the species is not actually present at that proposed discharge site. However, if an effect exists and that effect can be removed, a "not likely to adversely affect" determination will be made by LDEQ on the modified permit and submitted to the Service for concurrence. If no agreement can be reached between the Service and LDEQ, procedures for consulting with EPA as outlined in the MOU will be followed.

Based on LDEQ effluent limitations established for the protection of aquatic life and maintenance of the receiving waters as aquatic habitat, proposed permits not falling into those above-described categories are not likely to adversely affect listed species; therefore, no coordination with the Service is required. Similarly, no further coordination with the Service is required for any permits (individual or general) that would be renewed under the LPDES program for which the Service has already reviewed and provided concurrence, provided that those permits contain more stringent limitations and/or do not contain any changes/modifications in permit limitations.

**Section II.3** LDEQ and the Service will follow the procedures described in the MOU. Based on effluent limitations established for the protection of aquatic life and maintenance of the receiving waters as aquatic habitat, the Service has determined that the following general permits are not likely to adversely affect listed species; and therefore, no coordination is required:

Automotive Facilities and/or Repair Shops (LAG470000)  
 C & D Landfills (LAG780000)  
 Concentrated Animal Feeding Operations (LAG010000)  
 Dewatering Petroleum Tanks (LAG300000)  
 Exterior Vehicle Wash Wastewater (LAG750000)  
 Hydrostatic Test Wastewater (LAG670000)  
 Light Commercial Facilities (LAG480000)  
 Multi-Sector General Stormwater (LAR050000)  
 Municipal Solid Waste Landfills (LAG660000)  
 Oil and Gas Activities (LAG330000)  
 Petroleum UST Systems Cleanup (LAG830000)  
 Potable Water Treatment Plants (LAG380000)  
 Sanitary Discharge Class I (LAG530000)  
 Sanitary Discharge Class II (LAG540000)  
 Sanitary Discharge Class III (LAG560000)  
 Sanitary Discharge Class IV (LAG570000)  
 Small Municipal Separate Storm Sewer Systems (LAR040000)  
 Storm Water for Construction Activities (LAR100000)  
 Storm Water for Small Construction Activities (LAR200000)  
 Treated Groundwater (LAG940000)  
 Vessel Cleaning and Repair and Shipyards (LAG030000)  
 Oil and Gas (Territorial Seas) (LAG260000)  
 Short Term General Permit (LAG420000)

**Section II.4** LDEQ and the Service will follow the procedures outlined in this section. LDEQ will send a list of anticipated renewals for all permits falling in all sensitive areas as defined under Section II.1, and all other information as detailed in this section.

**Section II.5** LDEQ and the Service will follow the procedures described in the MOU.

**Addendum to Sections II.1 and II.2 of the  
Implementation Strategy for the  
Louisiana Department of Environmental Quality (LDEQ)  
and the U.S. Fish and Wildlife Service (Service)  
Memorandum of Understanding (MOU)**

A. Species-specific information regarding the Gulf sturgeon:

The Atlantic sturgeon (*Acipenser oxyrinchus desotoi*), federally listed as a threatened species, is an anadromous fish that occurs in many rivers, streams, and estuarine waters along the northern Gulf coast between the Mississippi River and the Suwannee River, Florida. In Louisiana, Atlantic sturgeon have been reported at Rigolets Pass, rivers and lakes of the Lake Pontchartrain basin, and adjacent estuarine areas. Spawning occurs in coastal rivers between late winter and early spring (i.e., March to May). Adults and sub-adults may be found in those rivers and streams until November, and in estuarine or marine waters during the remainder of the year. Sturgeon less than two years old appear to remain in riverine habitats and estuarine areas throughout the year, rather than migrate to marine waters. Habitat alterations such as those caused by water control structures that limit and prevent spawning, poor water quality, and over-fishing have negatively affected this species.

On March 19, 2003, the Service and the National Marine Fisheries Service (NMFS) published a final rule in the Federal Register (Volume 68, No. 53) designating critical habitat for the Atlantic sturgeon in Louisiana, Mississippi, Alabama, and Florida. Portions of the Pearl and Bogue Chitto Rivers, Lake Pontchartrain east of the Lake Pontchartrain Causeway, all of Little Lake, The Rigolets, Lake St. Catherine, and Lake Borgne within Louisiana were included in that designation. The primary constituent elements essential for the conservation of Gulf sturgeon are those habitat components that support feeding, resting, sheltering, reproduction, migration, and physical features necessary for maintaining the natural processes that support those habitat components; those elements should be considered when determining potential project impacts. The primary constituent elements for Atlantic sturgeon critical habitat include:

- abundant prey items within riverine habitats for larval and juvenile life stages, and within estuarine and marine habitats for juvenile, sub-adult, and adult life stages;
- riverine spawning sites with substrates suitable for egg deposition and development, such as limestone outcrops and cut limestone banks, bedrock, large gravel or cobble beds, marl, soapstone, or hard clay;
- riverine aggregation areas, also referred to as resting, holding and staging areas, used by adult, sub-adult, and/or juveniles, generally, but not always, located in holes below normal riverbed depths, believed necessary for minimizing energy expenditures during freshwater residency and possibly for osmoregulatory functions;
- a flow regime (i.e., the magnitude, frequency, duration, seasonality, and rate-of-change of freshwater discharge over time) necessary for normal behavior, growth,

and survival of all life stages in the riverine environment, including migration, breeding site selection, courtship, egg fertilization, resting, and staging; and necessary for maintaining spawning sites in suitable condition for egg attachment, egg sheltering, resting, and larvae staging;

- water quality, including temperature, salinity, pH, hardness, turbidity, oxygen content, and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages;
- sediment quality, including texture and other chemical characteristics, necessary for normal behavior, growth, and viability of all life stages; and
- safe and unobstructed migratory pathways necessary for passage within and between riverine, estuarine, and marine habitats (e.g., a river unobstructed by a permanent structure, or a dammed river that still allows for passage).

In that critical habitat designation, responsibility for consultation with specific Federal agencies was also identified for the Service and for the NMFS. For estuarine and marine waters in Louisiana, the NMFS is responsible for consultations regarding impacts to the sturgeon and its critical habitat with all Federal agencies, except the Department of Transportation, the Environmental Protection Agency, the U.S. Coast Guard, and the Federal Emergency Management Agency, which consult with the Service. Therefore, please contact Dr. Stephania Bolden (727/824-5312) in St. Petersburg, Florida, for information concerning that species and its critical habitat within marine waters.

B. Specific information regarding listed subsegments for the Atlantic sturgeon:

In an effort to provide more accurate information for the Atlantic sturgeon and their known locations and potential habitats than what is listed in Sections II.1 and II.2 of the MOU, the Service offers the following specific information for individual subsegments that are listed for the Atlantic sturgeon.

1. For the following subsegments, the Service requests review of those permits that would discharge into either the primary waterbody or its perennial primary tributaries:

040301 – Amite River and perennial primary tributaries  
 040302 – Amite River and perennial primary tributaries  
 040303 – Amite River (Diversion Canal) and perennial primary tributaries  
 040304 – Perennial primary tributaries of the Amite River  
 040305 – Perennial primary tributaries of the Amite River  
 040401 – Blind River and perennial primary tributaries  
 040402 – Amite River Diversion Canal and perennial primary tributaries  
 040501 – Tickfaw River and perennial primary tributaries  
 040502 – Tickfaw River, Blood River, and perennial primary tributaries  
 040503 – Natalbany River and perennial primary tributaries  
 040505 – Ponchatoula Creek and River, and perennial primary tributaries

040701 – Tangipahoa River and perennial primary tributaries  
040702 – Tangipahoa River and perennial primary tributaries  
040801 – Tchefuncte River and perennial primary tributaries  
040804 – Bogue Falaya River and perennial primary tributaries  
040901 – Bayou Lacombe and perennial primary tributaries  
040902 – Bayou Lacombe and perennial primary tributaries  
040905 – Bayou Liberty and perennial primary tributaries  
040906 – Bayou Liberty and perennial primary tributaries

2. For the following subsegments, the Service requests review of those permits that would discharge into the primary waterbody only:

040102 – Comite River only  
040103 – Comite River only  
040601 – Pass Manchac and North Pass only  
040602 – Lake Maurepas only  
040604 – Owl Bayou only  
040703 – Big Creek and East Fork only  
040704 – Chappepeela Creek (both branches) only  
040803 – Tchefuncte River only  
040904 – All primary streams only  
040908 – Bayou Bonfouca only  
041702 – Bayou Sauvage and Chef Menteur Pass only

3. For the following subsegments, the Service requests review of those permits that would discharge into any waterbody within the subsegment:

040802, 040910, 041001, 041002, 041701, 041703, 041704, 041901, 042001,  
042003, 042201 – 042207, 042209, 070601, 090101 – 090107, 090201 – 090208,  
090301, 090401, 090501, 090506