EXHIBIT

G

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

Jenniffer Sheppard
Office of Environmental Services
Louisiana Department of Environmental Quality
P.O. Box 4313
Baton Rouge, LA. 70821-4313

Re: EPA Comments on Draft *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, 2008)

Dear Ms. Sheppard:

I would like to commend the Louisiana Department of Environmental Quality (LDEQ) and its staff in the development and preparation of the draft use attainability analysis (UAA) for the eastern Lower Mississippi River Alluvial Plains (LMRAP).

After its review of this draft document, the United States Environmental Protection Agency (EPA) does not have any significant points of concern. We would, however, suggest that the last paragraph of the executive summary, on pg. 6, and Table 4, on pg. 23, be modified to clarify that estuarine waters or tidally influenced streams or segments are not targeted in this study and/or proposed for criteria revision. As the narrative and table currently reads, it appears that all waters, including estuarine segments in the eastern LMRAP, are subject to the proposed dissolved oxygen (DO) criteria revision. The reference sites selected for this component of the study did not include estuarine waters, and it would be inappropriate to adopt proposed DO criteria for estuarine segments without analysis of estuarine references. By revising the narrative and table, LDEQ would eliminate such confusion before proceeding with rulemaking.

We look forward to working with LDEQ on the subsequent revisions to the water quality standards. If you have any questions or concerns, please contact me at (214) 665-9736.

Sincerely,

Matt Hubner
Water Quality Standards Coordinator
Watershed Management Section

cc: Sandra Stephens, Water Quality Standards, LDEQ

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (40% Postconsumer)

LDEQ Response to EPA R6 Comments:
Draft 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

EPA R6 Comment

The United States Environmental Protection Agency (EPA) suggested that the last paragraph of the executive summary, on pg.6, and Table 4, on pg. 23, be modified to clarify that estuarine waters or tidally influenced streams or segments are not targeted in this study and/or proposed for criteria revision. As the narrative and table currently reads, it appears that all waters, including estuarine segments in the eastern LMRAP, are subject to the proposed dissolved oxygen (DO) criteria revision. The reference sites selected for this component of the study did not include estuarine waters, and it would be inappropriate to adopt proposed DO criteria for estuarine segments without analysis of estuarine references. By revising the narrative and table, LDEQ would eliminate such confusion before proceeding with rulemaking.

LDEQ Response

The characterization of Louisiana subsegments as "estuarine" in the water quality standards has been instrumental to the implementation of a 4 mg/L dissolved oxygen criterion and site-specific minerals (TDS, Cl, and SO4) criteria in Louisiana's coastal and/or coastal hydrology-influenced water bodies. As LDEQ continues to move forward with the use of an ecoregion approach as an effective means to refine the dissolved oxygen criteria across the state, the "estuarine" classification is no longer needed for implementation of the dissolved oxygen criterion in areas with ecoregion-based dissolved oxygen criteria; the estuarine ecology of an area is fundamentally incorporated into the ecoregion delineations. However, the "estuarine" characterization remains necessary to the implementation of site-specific minerals criteria.

The Use Attainability Analysis (UAA) for the revision of dissolved oxygen criteria in the eastern Lower Mississippi River Alluvial Plains (LMRAP) Ecoregion does cover tidally-influenced reference waters and some areas with estuarine characteristics. The Louisiana Water Quality Standards Regions (Ecoregions) document (i.e., the delineation document) outlines the geospatial data sets used to refine the state's ecoregion boundaries. Revisions to the northern boundary of the eastern LMRAP Ecoregion were heavily based on tidal influence and biological communities associated with estuarine and tidally-influenced environments. Revisions to the southern boundary of the eastern LMRAP Ecoregion were based primarily on observed land form (soil type, geology, and land use) and vegetation. Also important to note is the presence of some freshwater marsh areas in the Coastal Deltaic Marsh (CDM) Ecoregion.

With use of the ecoregion approach, there will inevitably be areas of transition where the predominant characteristics of one ecoregion meet the predominant characteristics of another ecoregion.[1] LDEQ considered the varying characteristics of transition zones when refining the state's ecoregion boundaries; however, LDEQ understands that additional refinements to ecoregion boundaries may be required or that site-specific criteria development processes may be needed to address conditions that may not be adequately covered by an ecoregion approach.

[1] From "Perspectives on the Nature and Definition of Ecological Regions," by James M. Omernik, 2004, Environmental Management, 34, Suppl. 1, pp. S27-S38.

EXHIBIT

I

Sandy Stephens

From: Hubner, Matt <Hubner.Matt@epa.gov>
Sent: Thursday, November 07, 2013 1:17 PM
To: Sandy Stephens
Cc: Jenniffer L. Sheppard; Crocker, Philip
Subject: RE: LMRAP UAA Question

Sandy,

Thanks for the response. I believe you answered my questions. I'll be getting back to y'all on this very soon.

Matt

Matt Hubner
Life Scientist
AR & LA Standards Coordinator
EPA Region 6
214-665-9736

From: Sandy Stephens [mailto:Sandy.Stephens@LA.GOV]
Sent: Thursday, November 07, 2013 11:18 AM
To: Hubner, Matt
Cc: Jenniffer L. Sheppard; Crocker, Philip
Subject: RE: LMRAP UAA Question

Hi Matt,

I'm just getting caught up myself after being out for a week. Hopefully, I can answer your questions.

Yes, there are some estuarine waters in the eastern LMRAP. However, since the sites sampled in the eastern LMRAP, that were used to prove/disprove similarity with the western LMRAP, did not include any estuarine water bodies, we are not proposing to revise the criteria for the estuarine water bodies in the eastern LMRAP. Oh by the way, there were some revisions to the criteria in some estuarine water bodies resulting from the BTUAA.

I hope this helps to answer your question. If not, please feel free to call or email Jenniffer or myself.

Thanks,
Sandy Stephens

From: Hubner, Matt [mailto:Hubner.Matt@epa.gov]
Sent: Friday, November 01, 2013 4:32 PM
To: Jenniffer L. Sheppard
Cc: Sandy Stephens; Crocker, Philip
Subject: LMRAP UAA Question

Hi Jenniffer,

I'm wrapping up my review of the draft LMRAP UAA. My apologies for the long delay in getting back to you. Juggling 2 states and a government shutdown in the mix doesn't help! I also wanted to go back and get familiar with the history of the BTUAA and the previous work done on the western portion of the LMRAP and CDP.

EXHIBIT
J

Review: Evaluation of LDEQ Draft Rule and Supporting Documents for Dissolved Oxygen (DO) Criteria Revisions in eastern Lower Mississippi River Alluvial Plains (LMRAP) Ecoregion.

Reviewers: Melinda McCoy, 214-665-8055
Rob Cook, 214-665-7141

Review Date: December 18, 2014

Comments:

1. Clarifying LAC 33:IX.1123, Table 3 to ensure 2.3 mg/L DO criterion applies to streams only. The June 7, 2013, eastern LMRAP UAA for the revision of DO criteria explains that the recommended 2.3 mg/L DO criterion (applicable Mar-Nov) applies to streams in the eastern LMRAP. However, as currently presented in the draft rule revisions for LAC 33:IX.1123, Table 3 and given the applicability statement at LAC 33:IX.1113.C (see italics below), the 2.3 mg/L DO criterion (applicable Mar-Nov) would [incorrectly] apply to all waters (not just the stream waterbody type) within the subsegments identified.

   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…

   The applicability to streams only needs to be clarified in LA's WQS, especially for those subsegments that include various waterbody types. Clarification could be accomplished by adding an EndNote to LAC 33:IX.1123, Table 3. For example, an EndNote could be added to the row that reads "Lake Pontchartrain Basin (04)" with an accompanying description at the end of the table to clarify that the ecoregion-based 2.3 mg/L DO criterion applicable Mar-Nov only applies to streams, with the 5.0 mg/L criterion applying Dec-Feb in streams and year round to other waterbody types within the subsegment.

2. Use of "Ecoregion boundary" in subsegment descriptions. LDEQ revised the description for subsegment 040302 from "Amite River – From LA-37 to Amite River Diversion Canal" to "Amite River – From La. Highway 37 to *LMRAP Ecoregion boundary*" (italics added for emphasis). The following is a list of all subsegments in which LDEQ has similarly referred to the ecoregion boundary in subsegment descriptions:
   - 040302 and 040306
   - 040902 and 040913
   - 040904 and 040914
   - 040905 and 040915
   - 040908 and 040917
   - 041204

   While we understand that subsegment boundaries were revised to better reflect ecoregion boundaries (and do not have concerns with this approach), we believe it would be clearer (for on-the-ground reference/ implementation) to refer to latitude/longitude or actual physical features (e.g., distance + direction from nearby road or highway crossing) in the subsegment descriptions rather than referring to "ecoregion boundary." (Note that this comment only pertains to the subsegment descriptions themselves, not to the boundary delineations.)

Questions (for informal discussion):

We appreciate LDEQ's December 10, 2014, response to a comment in EPA's November 25, 2013, technical approval of the eastern LMRAP UAA for the revision of DO criteria. EPA's comment pertained to the appropriateness of applying the 2.3 mg/L DO criterion to estuarine segments and tidally-influenced streams. LDEQ's response indicates that the eastern LMRAP UAA does cover tidally-influenced reference waters and some areas with estuarine characteristics.

- Given the above, we assume that LDEQ plans to apply the 2.3 mg/L DO criterion (applicable Mar through Nov) to all streams (including those tidally-influenced) within the "estuarine" subsegments, not just to inland, freshwater streams (please confirm).
- Were eastern LMRAP reference sites 0264 (Pass Manchac) and 3496 (Middle Bayou) among the noted tidally-influenced reference waters? (We assume so, given the much higher specific conductivity levels at these two sites compared to others.) Also, we were wondering if LDEQ could elaborate on why there was such a high total abundance at site 0264. Were there other reference sites also considered to be tidally-influenced? (Table D-1 of the eastern LMRAP UAA indicates that Striped Mullet and Gulf Menhaden were both highly abundant and present in 12 and 5 collections, respectively).
- As we understand, the objective of eastern LMRAP UAA was to complete a qualitative and quantitative ecological comparison between streams in the eastern and western portions of the LMRAP ecoregion. The purpose for the comparison was to evaluate the appropriateness of applying the Mar-Nov 2.3 mg/L DO criterion (originally developed for streams in the western portion of the LMRAP) to streams in the eastern portion of the LMRAP. If there was a greater prevalence of tidally-influenced reference streams in the eastern LMRAP compared to the western LMRAP (which seems to be the case), can LDEQ elaborate on how this difference was considered in the comparison and in the ultimate determination that it would still be appropriate to apply the 2.3 mg/L DO criterion to streams in the eastern LMRAP? (Note that we only pose these questions to further our general understanding of how LDEQ considered this topic in its evaluation; our questions are not intended to express a position one way or the other on the topic.)