

May 13, 2011

Tulane Environmental Law Clinic

Via Email to smith.diane@epa.gov

Ms. Diane Smith Environmental Protection Specialist Water Quality Protection Division U.S. Environmental Protection Agency, Region 6 1445 Ross Avenue Dallas, TX 75202- 2733

Re: Comments In Support of EPA's Proposed Disapproval of Louisiana's Failure to List Three Water Quality Limited Segments in Nearshore Water of Gulf of Mexico; FRL 9294-5

Dear Ms. Smith:

Please consider the following comments in support of EPA's April 13, 2011, proposed addition of subsegments 120806, 070601, and 021102 to Louisiana's 2008 303(d) list, and assignment of a priority ranking. The comments also object to EPA's failure to disapprove Louisiana's 2008 delisting of over 100 waterbodies without any supporting documentation, as well as EPAs decision to not add the Mississippi River and nearshore Gulf waters as impaired by Nitrate/Nitrite and Phosphorous pollution. The Tulane Environmental Law Clinic submits these comments on behalf of the Gulf Restoration Network (GRN) and the Louisiana Environmental Action Network (LEAN). GRN and LEAN reserve the right to rely on all public comments submitted on this proposed action.

Introduction

The hypoxic zone in the Gulf of Mexico has been a consistently present and growing problem for years. Levels of low dissolved oxygen have not been confined to the depths of federal waters and beyond, but affect the Louisiana coastal waters as well. Louisiana regulations prohibit levels of dissolved oxygen below 5 mg/l in saline waters during all seasons and at all depths. La. Admin. Code tit. 33, § 1113.C.3.c. The waters EPA is proposing to add to Louisiana's 303(d) list show persistent levels of dissolved oxygen not only below Louisiana's numeric criterion, but also below hypoxic conditions of 2 mg/l.

When the Clean Water Act (CWA or "the Act") was enacted, it provided for States to identify waters for which the effluent limitations required by the Act are not stringent enough to implement the water quality standard. CWA § 303(d)(1)(A), 33 U.S.C. § 1313(d)(1)(A). For these waters, States must issue Total Maximum Daily Loads (TMDLs) of pollutants. CWA § 303(d)(1)(C), 33 U.S.C. § 1313(d)(1)(C). Subsequently, States periodically update this list of

impaired waters ("303(d) list") and submit the list to EPA for approval. CWA §303(d)(2), 33 U.S.C. §1313(d)(2).

The EPA has interpreted the language of the Act to allow States to avoid placing impaired waters on the 303(d) list if they met certain conditions; namely, that other pollution control requirements are stringent enough to attain water quality standards within a reasonable amount of time. *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act*, EPA, July 29, 2005 ("2006 Guidance"); 40 CFR § 130.7(b)(1). This designation is known as Category 4b. Louisiana placed the subsegments at issue in Category 4b despite admitting that they were impaired for dissolved oxygen, relying upon the Gulf Hypoxia Action Plan (GHAP) as the required control expected to attain water quality standards. However, the GHAP, a voluntary plan which does not even have adequate funding to meet its own goals, fails in numerous ways to qualify as a required control.

The EPA, in issuing its decision on Louisiana's 303(d) list, properly recognized this and placed subsegments 120806, 070601 and 021102 on Louisiana's 303(d) list as impaired for dissolved oxygen. Additionally, EPA properly decided to assign a priority ranking to the subsegments. However, EPA should revise the priority rankings and accelerate the development of TMDLs for these waters.

The EPA should also disapprove of Louisiana's removal of over 100 waterbody impairment combinations from the 303(d) list (Category 5) without any justification, and its removal of nearly 100 waterbodies from Category 4 with no evidence to support the removal.

I. SUBSEGMENTS 120806, 070601 AND 021102 OF LOUISIANA'S COASTAL WATERS VIOLATE THE NUMERIC CRITERIA FOR DISSOLVED OXYGEN, AND EPA PROPERLY PLACED THEM ON THE 303(D) LIST.

A. The Data Supports EPA's Finding that Dissolved Oxygen Levels in the Three Subsegments Fall Below Louisiana's Numeric Criteria.

Louisiana's numeric criterion for coastal marine waters is 5mg/l. La. Admin. Code tit. 33, § 1113.C.3.c. This criterion applies during all seasons and at all depths.

EPA's supporting data in its administrative record, upon which LDEQ also based its finding of impairment, clearly shows that dissolved oxygen in all three subsegments consistently fell below the numeric criterion during the summer months. In particular, the data collected by LUMCON in 2008 shows conditions below the numeric criterion in all three subsegments as part of one of the largest hypoxic zones on record. LUMCON, '*Dead Zone' Again Rivals Record Size*, July 28, 2008, *available at*:

http://www.gulfhypoxia.net/Research/Shelfwide%20Cruises/2008/PressRelease08.pdf. LUMCON's yearly cruise consistently finds hypoxia in the coastal waters of Louisiana, including the years 2004-08.

EPA and LDEQ also correctly concluded that the data was collected from trustworthy organizations using reliable methods of data collection. EPA Decision Document for Louisiana's 2008§ 303(d) List, Dec. 17, 2010, ("EPA Decision Document") at 7. The data in the

Administrative Record shows substantial impairment of all three subsegments in greater than 10% of the samples collected. Subsequent data collected since 2008 verifies these findings, and proves that they are not merely aberrations. *See* Attachment 1, LUMCON Press Release 2010 Dead Zone.

Given that this consistent sampling data showing levels of dissolved oxygen far below the numeric criterion into hypoxic levels in repeated summers, EPA and LDEQ correctly concluded that all three subsegments are impaired for dissolved oxygen.

B. Observable, Narrative Data Confirms the Presence of the Dead Zone in Louisiana's Coastal Waters.

The hypoxic zone which pervades the Gulf of Mexico is commonly referred to as the Dead Zone for good reason, because fish, shrimp, and other aquatic life are unable to survive in it. During the 2007 annual LUMCON cruise to monitor the size of the hypoxic zone, the team also found that areas were identifiable as oxygen deficient by both the lack of trawlers and deep water aquatic life swimming at the surface.

In the 2007 press release on the hypoxic zone, Nancy Rabalais and her team reported that a clear indicator of the presence of hypoxia was the observation of crabs, eels and other bottom life at the surface attempting to escape the hypoxic waters. Attachment 2: LUMCON, *Dead Zone Size Near Top End*, July 28, 2007. In addition, the team observed a lack of shrimp trawlers throughout the large area. *Id*.

Then again in 2009, Rabalais and her team commented that crabs, eels, and other bottom life were swimming at the surface during their cruise, indicating a lack of dissolved oxygen. Attachment 3: LUMCON, *Dead Zone Size Diminished in 2009*, July 30, 2009. In addition, the team found "jubilees" near Grand Isle's barrier islands. *Id.* Jubilees are the forced movement of shrimp, crabs and fish to the shallow waters due to the movement of low oxygen waters. *Id.*

Observable phenomena such as bottom life swimming at the surface or moving to shallow waters only confirms what the numeric data establishes: that the coastal waters of Louisiana are impaired for dissolved oxygen. Additionally, the lack of shrimp trawlers in an area is an indicator that they are unable to catch anything significant in those areas, signifying a lack of dissolved oxygen and that the area is incapable of supporting aquatic life.

II. EPA'S PROPOSAL TO PLACE THE SUBSEGMENTS ON THE 303(D) LIST IS CORRECT BECAUSE THE GULF HYPOXIA ACTION PLAN IS NOT A REQUIRED CONTROL AND WILL NOT ACHIEVE ATTAINMENT OF THE WATER QUALITY STANDARD IN A REASONABLE AMOUNT OF TIME.

A. The Gulf Hypoxia Action Plan Is Not a Required Control.

Category 4b is a designation which allows a State to avoid placing an impaired waterbody on its 303(d) list where it can prove that water quality standards will be achieved with other required control measures within a reasonable amount of time. 2006 Guidance; 40 C.F.R. § 130.7(b)(1). For a State to place an impaired water in category 4b rather than category 5 (the 303(d) list), EPA requires the State to demonstrate that six elements are met. 2006 Guidance;

see also EPA, Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions, Oct. 12, 2006. A state's demonstration must include:

(1) a statement of the problem causing the impairment, (2) a description of the proposed implementation strategy and supporting pollution controls necessary to achieve water quality standards, including the identification of point and nonpoint source loadings that when implemented assure the attainment of all applicable water quality standards, (3) an estimate or projection of the time when water quality standards will be met, (4) a reasonable schedule for implementing the necessary pollution controls, (5) a description of, and schedule for, monitoring milestones for tracking and reporting progress to EPA on the implementation of the pollution controls, and (6) a commitment to revise as necessary the implementation strategy and corresponding pollution controls if progress towards meeting water quality standards is not being shown.

2006 Guidance at 54.

LDEQ, in placing the subsegments in category 4b, admitted that the segments were impaired for dissolved oxygen, but argued that the Gulf Hypoxia Action Plan (GHAP) meets the EPA's six requirements. LDEQ Decision Documents, Appendix G, Attachment 1: *Response to comments concerning Gulf of Mexico hypoxic zone*, August 25, 2009 ("LDEQ Hypoxia Response"), at 5. Interestingly, LDEQ never stated anywhere in its decision that the GHAP met the statutory or regulatory standard. It never represented (nor did it demonstrate) that the GHAP was an "other required control measure [] expected to result in the attainment of an applicable water quality standard in a reasonable period of time." 40 C.F.R. § 130.7(b)(1)(iii).

Likely LDEQ never made this representation because it could not demonstrate the GHAP is a required control measure that will result in the Gulf waters meeting the dissolved oxygen criterion in a reasonable period of time. The GHAP is not required, and will not result in the Gulf waters meeting the dissolved oxygen criterion anytime in the foreseeable future. It is not "required" because, in its own description, the GHAP states that it will rely on voluntary measures and support other programs to reduce the size of the hypoxic zone. *Gulf Hypoxia Action Plan 2008* ("2008 GHAP") at 8, *available at*

http://water.epa.gov/type/watersheds/named/msbasin/ upload/2008_8_28_msbasin_ghap 2008_update082608.pdf.

EPA has explained what elements must be present for control measures to be considered "requirements." Among other things, the state must describe the "authority…under which the controls are required" and "the availability of dedicated funding for the implementation of the controls." 2006 Guidance at 55. The GHAP states that it will reach its goals by "Encourag[ing] actions that are voluntary." 2008 GHAP at 8. Nowhere in the plan does it state the authority for requiring or implementing controls. Similarly, the GHAP has no dedicated funding available. EPA correctly noted that the GHAP's current resources are insufficient to attain its goals. EPA Decision Document at 11.

Thus, by its plain terms, the GHAP cannot be considered a required control measure that will ensure attainment of water quality standards within a reasonable period of time. As this is the statutory standard, the GHAP cannot substitute for a TMDL and cannot justify placement of these waters into Category 4b rather than Category 5. But if EPA's more detailed requirements are examined, the GHAP still fails to meet the six requirements. LDEQ claims that the GHAP contains the pollution controls necessary to satisfy the second element by describing the GHAP's description of "needed" management measures to achieve nonpoint source load reductions, its call for development of additional strategies by 2013, its reference to other programs' incentives, and the fact that it addresses "communication to increase awareness of hypoxia." LDEQ Hypoxia Response at 6. None of these strategies are pollution controls. Nor does LDEQ discuss implementation of any of the GHAP's strategies. EPA properly that the plan did not identify any specific point or non-point source controls needed to achieve its goals, and thus that it did not satisfy the second element. EPA Decision Document at 11.

Next, LDEQ stated that the GHAP has an estimate of when water quality standards will be met, as its goal is to reduce the hypoxic zone by 50% by 2015. LDEQ Hypoxia Response at 6. However, the hypoxic zone has only grown in size since the inception of the GHAP. Its total lack of progress renders its 2015 goal meaningless, and until it contains more stringent requirements, its 50% reduction goal will remain unattainable. LDEQ also claims that the GHAP has a schedule by which the pollution controls will be implemented because it has a goal of reducing 50% by 2015. *Id.* at 7. As EPA correctly noted, a goal date is not a schedule for implementation.

With regard to the proposed strategy to achieve the standards, the GHAP targets a 45% reduction in total discharges of nitrogen and phosphorus into the Gulf, which it states that nonpoint sources are responsible for 78% and 66% of, respectively. 2008 GHAP at 22. However, without required controls on non-point sources, the GHAP cannot meet its own goals of nutrient reduction. Of course, EPA correctly notes that, even if the GHAP were to achieve its goal reductions, Louisiana does not explain or support how this would lead to the Gulf subsegments attaining the dissolved oxygen standard.

One of the most significant inadequacies of the GHAP in constituting a "required" control stems from its complete lack of any mechanism for tackling the point source contribution to the Gulf waters' impairment, in direct contrast to a TMDL. The GHAP contains goals which rely upon voluntary actions and inadequate funding, and focuses mainly on nonpoint sources. However, even the GHAP says that basin point sources represent 22% of nitrogen and 34% of phosphorus loads to the Gulf. EPA Decision Document at 11. Further, the EPA's Science Advisory Board affirmed in 2007 that "point sources are a more significant contributor [to the hypoxic zone] than previously thought." U.S. EPA, Science Advisory Board, *Hypoxia in the Northern Gulf of Mexico*, (Dec. 21, 2007) ("2007 SAB Study"), at ii, *available at* http://www.epa.gov/owow_keep/msbasin/pdf/sab_report_2007. pdf.

The Clean Water Act gives States the authority to regulate point sources and to place effluent limitations upon them to attain Water Quality Standards. CWA § 301(b)(1)(A), 33 U.S.C. § 1311(b)(1)(A). Addressing the problem through point sources is not only required by the Act, but is a major component of a TMDL. CWA § 303(d), 33 U.S.C. § 1313(d). The GHAP cannot be considered a "required" control where it does not provide any system to stem

point source pollution. Nor does LDEQ discuss in its Decision how the GHAP will help reduce the point source contributions to the Gulf dissolved oxygen impairment.

B. The Hypoxic Zone Has Grown In Size Since the Inception of the GHAP, and No Basis Exists for a Finding That It Can Achieve Water Quality Standards in a Reasonable Amount of Time.

The GHAP has yet to achieve any measurable improvement to the hypoxic zone. In the decade since the GHAP was first implemented, the size of the hypoxic zone has remained relatively unchanged. Last year, the Dead Zone, as measured by LUMCON in 2010, was one of the largest ever. LUMCON Press Release 2010 Dead Zone.

The GHAP offers no specific or required controls, and no timetable for their introduction, but generally states that it will work with states to develop nutrient reduction strategies. Without descriptions of actual controls and a schedule for their implementation, including point source controls, the GHAP is too open-ended to suffice in achieving anything within a reasonable amount of time. As EPA regulations require that the control measures will attain water quality standards in a reasonable amount of time, the GHAP does not meet this requirement.

III. EPA'S PRIORTIY RANKING DOES NOT PROPERLY TAKE INTO ACCOUNT THE URGENCY OF ACTION REQUIRED TO REDUCE THE HYPOXIC ZONE.

EPA properly assigned the subsegments at issue a priority ranking pursuant to CWA § 303(d), 33 U.S.C. § 1313(d). Congress intended for all waters on the 303(d) list to have a priority ranking based upon the severity of the pollution for the States to develop TMDLs. *Id.* Therefore, EPA properly determined that, in placing the subsegments on Louisiana's 303(d) list, a priority ranking was necessary.

However, in assigning a priority ranking for TMDL development, the EPA assigned all three subsegments the lowest ranking of 8-13 years. Congress discussed the priority ranking of waters in section 303(d)(1)(A) of the Clean Water Act, 33 U.S.C. § 1313(d)(1)(A), and EPA guidance supplements this language. Section 303(d)(1)(A) of the Clean Water Act requires that States take into account the designated use of the waters and the severity of the pollution in establishing priority rankings. The EPA supplemented these requirements in its 1991 guidance, which it relied upon in making its determination of priority ranking for these subsegments. EPA Decision Document at 2. However, EPA did not properly rank the waters based upon these factors.

EPA should rank the Gulf coastal water subsegments higher based upon the severity of the pollution there. Hypoxic conditions can persist for several months of the year, and make the marine environment unsuitable for aquatic life. LUMCON, *What is Hypoxia?* http://www.gulfhypoxia.net/Overview/. Once waters reach hypoxic levels, they have fallen far below the lower limit of dissolved oxygen necessary to support aquatic life as determined by Louisiana. This represents severe pollution impacting a designated use, and the data proves that it is still growing. The priority ranking assigned by EPA will allow the problem to grow even worse before beginning to address it, which will make the solution that much harder to achieve.

Additionally, in its 1991 guidance, EPA provides that States should consider economic factors and the degree of public support when setting a priority ranking. A look at these factors argues in favor of a higher ranking than the one EPA proposes to establish, which is the lowest ranking possible.

The coastal waters of Louisiana and the aquatic life that inhabit them are a vital economic resource for Louisiana and its coastal communities as well as the nation as a whole. EPA itself has recognized this. *See* http://www.epa.gov/gmpo/about/facts.html. Low levels of dissolved oxygen create large areas where trawlers are unable to catch anything significant. The LUMCON 2007 press release stated that areas with low dissolved oxygen were noticeable by the lack of any trawlers in the area. The seafood industry represents a multi-billion dollar industry and is the livelihood of many Louisiana residents. The low levels of dissolved oxygen reduce the total area which can be fished and trawled, thereby also reducing the ability of the local communities to earn a living. The importance of these waters to the livelihood of the people of Louisiana requires a higher priority ranking than the one EPA issued.

There is also currently strong public support for the restoration and preservation of these waters. Over the years hundreds, if not thousands of letters, postcards, and emails have been sent to the EPA stating the importance of reducing nitrogen and phosphorous pollution and reducing the size of the Dead Zone. *See* Attachment 4. Because the waters are an important part of the local economy, there is a tremendous amount of public support and interest in making sure that the waters remain a viable resource. These are high profile areas, and the current priority ranking of 8-13 years does not reflect the public's desire to get them cleaned up.

Taking the severity of pollution, the economic consideration, and the public support for the area into account, EPA should set a higher priority ranking than the 8-13 year priority ranking. The Coastal Goal of the GHAP is to "reduce or make significant progress toward reducing the five-year running average areal extent of the Gulf of Mexico hypoxic zone to less than 5,000 square kilometers by the year 2015." 2008 GHAP at 8. Given this goal, we recommend that the priority ranking be 4-5 years, which would at least show progress to the 2015 goal.

IV. EPA MUST ALSO DISAPPROVE LDEQ'S REMOVAL OF OVER ONE HUNDRED WATERBODIES FROM THE 303(D) LIST.

In its 2008 Integrated Report, LDEQ proposed to delist over 100 waterbodies by removing them from Category 5. LDEQ delisted one hundred thirty waterbody-impairment combinations, when compared to the 2006 list. Similarly, LDEQ removed 99 waterbody-pollutant combinations from Category 4, with no evidence to support these removals. *See* Attachment 5: Spreadsheet 2008 IRC 5 and 4 De-listings. However, LDEQ did not support the delistings or the removals with any documentation, which is required under the law.¹ 40 C.F.R. § 130.7(b)(6) requires that "[e]ach State shall provide documentation

¹ If LDEQ provided any documentation to EPA to support the delistings, none of these materials were publicly noticed. GRN and LEAN object to EPA reliance on documentation for delistings that were not made available to the public. EPA itself has stated the necessity of States allowing the public to comment not only on the contents of the Integrated Report, but also the States' supporting documentation. "A state or territory should provide the public an opportunity to review and comment on an integrated assessment of the status of <u>all</u> waters within its jurisdiction.

to the Regional Administrator to support the State's determination to list or not to list its waters as required by §§ 130.7(b)(1) and 130.7(b)(2). This documentation must include a description of the methodology used to develop the list and a description of the data and information used to identify the waters." 40 C.F.R. §130.7(b)(6)(i) and (ii). Additionally, where EPA requests it, states must "demonstrate good cause for not including a water or waters on the list." *Id.* at §130.7(b)(6)(iv).

Many of the 2008 delistings are waterbodies that had been listed as Category 5 in 2006, but which LDEQ reclassified as Category 3. Category 3, according to EPA, represents waterbodies where "[t]here is insufficient available data and/or information to make a use support determination." 2006 Guidance at 47. In response to GRN and LEAN objections to the 2008 Integrated Report, LDEQ asserted that the "required documentation" for its delisted water body segments were "implicit in the overall assessment methodology described in the Rationale. . .." LDEQ Decision Document, Appendix G, *Public Comments on the 2008 Integrated Report and Louisiana Department of Environmental Quality's Response to Comments*, Aug. 25, 2009 ("LDEQ Response to Comments") at G1, #3. By this standard, LDEQ could remove water body segments from the 303(d) list without further justification other than a description of the program's overall testing methodology. However, LDEQ must provide <u>specific</u> justification for each delisted water body.

A mere change in approach to how LDEQ wishes to treat 303(d)-listed waterbodies is insufficient under the law. Indeed, it would appear incongruous for a waterbody to have been listed based on data, whether monitoring data or "evaluative" data, and then for LDEQ to declare that it has insufficient data. Once the waterbody is listed, unless a TMDL (or other sufficient control) is completed, LDEQ must actively provide data supporting a decision to delist it. This is supported by EPA guidance. EPA guidance on good cause states:

Good cause includes, but is not limited to, more recent and accurate data, more sophisticated water quality modeling, flaws in the original analysis that led to the waterbody being listed, or changes in conditions, e.g. new control equipment, or elimination of discharges. Where a waterbody was previously listed based on certain data or information, and the state or territory removes the waterbody without developing or obtaining any new information, EPA will carefully evaluate the state's or territory's re-evaluation of the available information, and will not approve such removals unless the state's or territory's submission describes why it is appropriate under the current regulations to remove each affected waterbody.

2002 Guidance at 3.

Accordingly, because LDEQ lacked the supporting documentation required by law, EPA must additionally disapprove this portion of LDEQ's list.

This integrated assessment will include . . . supporting data and information used to develop the Integrated Report." EPA, 2002 Integrated Water Quality Monitoring and Assessment Report Guidance, Nov. 19, 2001 ("2002 Guidance"), at 3.

V. EPA MUST ADDITIONALLY DISAPPROVE OF LDEQ'S FAILURE TO LIST THE THREE COASTAL SUBSEGMENTS FOR NUTRIENTS.

The low dissolved oxygen that the Gulf subsegments suffer from is a result of the nitrogen and phosphorus flowing into the Northern Gulf of Mexico.² Because of this, these subsegments must also be listed for phosphorus and nitrate/nitrite. EPA's own Science Advisory Board confirmed this in a 2007 study. The Board found confirmed that the hypoxic zone in the northern Gulf is "primarily related to nutrient loads from the Mississippi Atchafalaya River basin." 2007 SAB Study at ii. Yet, in its proposed decision reasoning for not listing the Gulf subsegments for nutrients, EPA states that the low dissolved oxygen in the Dead Zone is "likely a function of many variables." EPA Decision Document at 13. EPA should provide support for this statement, which contradicts the findings of its Science Advisory Board.

For its part, LDEQ adds no support for not listing the Gulf subsegments for nutrients. Its reasoning for not listing these subsegments for phosphorus and nitrate/nitrite was that, because no nutrient criteria have been developed for these pollutants, it could not make an accurate assessment of attainment. LDEQ Response to Comments at G4, #23. This, however, is not accurate. LDEQ does have criteria in place for nutrients; they are narrative rather than numeric. These criteria are contained at La. Admin. Code tit. 33, § 1113.B.8, and state that "The naturally occurring range of nitrogen-phosphorous ratios shall be maintained." Because of all of the studies confirming the contribution of nitrogen and phosphorus to the existence of the Dead Zone, it is apparent that the naturally occurring range of nutrients is not present in the Dead Zone.

Therefore, EPA should also disapprove Louisiana's failure to list the three Gulf subsegments as impaired for phosphorus and nitrate/nitrite.

VI. EPA MUST ALSO DISAPPROVE OF LDEQ'S FAILURE TO LIST MISSISSIPPI AND ATCHAFALAYA SUBSEGMENTS FOR NUTRIENTS.

As Gulf hypoxia is caused by nitrogen and phosphorus pollution emanating from the Mississippi and Atchafalaya Rivers, and given the hypoxia problem has increased over the past decade, these subsegments (00101, 070201, 070301, 070401, 010101, 010201, 010301, 010401, 010501) should be added to the 303(d) list.

Conclusion

EPA's proposed decision to list Louisiana Gulf of Mexico subsegments 120806, 070601, and 021102 on Louisiana's 303(d) list as impaired for dissolved oxygen is correct, and should be finalized. The data relied upon by EPA, plus more recent data, is valid, and supports the determination that subsegments 120806, 070601 and 021102 violate Louisiana's numeric criteria for dissolved oxygen.

² See 2007 SAB Study; National Research Council Committee on the Mississippi River and the Clean Water Act, *Mississippi River Water Quality and the Clean Water Act: Progress, Challenges and Opportunities*, 44-45, 74 (2008), *available at* http://nap.edu/catalog.php?record_id=12051; Gulf Hypoxia Action Plan (2008), *available at* http://www.epa.gov/msbasin/taskforce /pdf/ghap2008.pdf.

Further, LDEQ has not identified any required control measure other than a TMDL that can achieve the water quality standard within a reasonable period of time. The GHAP does not support a category 4b listing for the subsegments because none of its provisions can be considered "requirements," and its goals are not supported by funding, schedules for achievement, or implementation.

Additionally, the EPA's decision to assign a priority ranking to the subsegments was proper and supported by law, though EPA did not properly take into account the statutory requirements of the Clean Water Act or its own guidelines in assigning that rank. Consideration of the requirements of the Act mandates a higher priority ranking.

EPA must also disapprove of LDEQ's removal of over one hundred waterbodies from the 303(d) list and nearly one hundred waterbodies from IRC Category 4 without offering any supporting documentation.

Last, EPA should disapprove of LDEQ's failure to list these three subsegments of the Gulf and nine subsegments of the Mississippi and Atchafalaya Rivers as impaired for nitrate/nitrite and phosphorus. EPA's own Science Advisory Board confirmed that the Dead Zone is primarily the result of nutrient loadings, and that significant reductions of nitrogen and phosphorus are essential to curing the Dead Zone.

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