EPA Responses to Comments for Dissolved Oxygen, Nutrients, pH, and Mercury TMDLs in the Red River, Sabine River, and Terrebonne Basins, Louisiana

Prepared for:

United States Environmental Protection Agency, Region 6
Water Quality Protection Division
Permits, Oversight, and TMDL Team
Dallas, TX

Contract Number 68-C-02-108

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LDEQ Comments (Set 1)

November 26, 2007

Diane Smith (6WQNP)
Environmental Protection Specialist
Water Quality Protection Division
U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

RE: Comments on Federal Register: October 25, 2007 (Volume 72, Number 206) [FRL-8487-3], Clean Water Act Section 303(d): Availability of 34 Total Maximum Daily Loads (TMDL) in Louisiana

Dear Ms. Smith:

The Louisiana Department of Environmental Quality appreciates the opportunity to review the above referenced Notice and hereby submits the enclosed comments on the TMDLs prepared by EPA Region 6 for waters listed in the Red, Sabine and the Terrebonne Basins in Louisiana.

If you have any questions, please contact me at 225-219-3554.

Sincerely,

David M. Hughes
Environmental Scientist
Water Quality Assessment Division

Enclosure(s)
c: (w/enclosure)
Linda Levy, LDEQ
Barbara Romanowsky, LDEQ

General Comments

1. If any unresolved LDEQ comments to these TMDLs become the basis for an EPA Region 6 objection of an LDEQ drafted permit or permittee objection/appeal of an LDEQ drafted permit, LDEQ shall relinquish permitting authority to EPA Region 6.

EPA Response: In accordance with Section 1.C of the NPDES MOA (Revision 1, April 28, 2004) between LDEQ and EPA, EPA has the responsibility of providing technical and other assistance on a continuing basis, including interpretation and implementation of Federal regulations, policies, and guidelines on permitting and enforcement matters. The MOA further states that LDEQ has primary responsibilities for implementing the LPDES program in Louisiana, including applicable sections of the Federal Clean Water Act, applicable state legal authority, the applicable requirements of 40 CFR Parts 122-125 and any other applicable federal regulations, establishing LPDES program priorities with consideration of EPA Region 6 and national NPDES goals and objectives.

In developing the TMDLs, EPA strives to use the most accurate available information for the point sources. Also, during the public comment period if any entity including LDEQ, permittee or public has provided any significant data or information that is relevant to the calculations of the TMDLs, EPA has reviewed those data or information and revised the TMDLs as appropriate.

2. Based on the large number of incorrect point source references and terminated permits included in these TMDLs, LDEQ suggests that EPA place more emphasis of QA/QC on point source data for valid TMDL results. Utilization of LDEQs Electronic Document Management System (DEMS) [sic] provides all necessary permitting information on the point source discharger inventory that has been retrieved. If additional training on utilizing EDMS is necessary to produce accurate models and TMDLs, please contact us to arrange further instruction.

EPA Response: Data collection started in 2005 for these TMDLs. Field monitoring was scheduled for September 2005. Due to Hurricanes Katrina and Rita, field monitoring could not occur in September 2005 and was rescheduled the following summer to sample during critical conditions. Permit data has been updated in the final TMDL reports with the assistance of LDEQ staff.

EPA feels its contractors have learned the EDMS system over the years and with the addition of the online system, modelers are able to verify data collected while still in the office.

Specific Comments

Bayou Rigolette and Iatt Lake TMDL for DO (101301, 101302)

1. Section 2.4 Point Sources on page 2-2 of the TMDL states that eleven point sources were identified within subsegment 101301 with a summary of the permit information in Table 2.2. Table 2.2 on page 2-4 of the TMDL lists only 9 facilities. If there are two additional point sources they need to be included in Table 2.2.

EPA Response: The correct number of point sources was originally 9, but revisions due to comments immediately below changed the number to 7. Revisions to point source information in this report are listed in the responses to the comments immediately below.

2. Table 2.2 Summary of Information for Point Sources.
    a. LA0039110 issued to Aurora Park Subdivision was terminated 12/15/03 upon issuance of general permit LAG560232.

    EPA Response: The permit number has been changed from LA0039110 to LAG560232 in Tables ES.5, ES.6, 2.2, 6.5, and 6.6; in Figure A.3; and in the input file for the TMDL program (Appendix O). The effluent BOD_5 used for this facility was changed from seasonal concentrations (20 mg/L in summer and 30 mg/L in winter) to 20 mg/L year round in accordance with the limits on page 4 of the LAG560232 permit.

    b. LAG560004 was terminated on 3/27/07. The facility closed 11/15/05.

    EPA Response: This permit has been removed from Tables ES.5, ES.6, 2.2, 6.5, and 6.6; Figure A.3; and the input file for the TMDL program (Appendix O). The model runs and TMDL calculations have been adjusted accordingly.

    c. LAG480069, 199th Support Battalion was terminated on 12/4/04 because the facility's wastewater was routed to the Town of Colfax POTW.

    EPA Response: This permit has been removed from Table 2.2 and Figure A.3. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

3. Section 6.2 Ammonia Toxicity Calculations. Because subsegments 101301 and 101302 were not listed as impaired for ammonia and because the projection model demonstrated that the ammonia nitrogen loadings are low enough that the ammonia toxicity criteria will not be exceeded under critical conditions, a sentence needs to be added to Section 6.2 to explain that the ammonia nitrogen

and organic nitrogen loads as represented in Table 6.6 for the point source dischargers do not need to be placed in the respective LPDES permits.

EPA Response: Text has been added to this section of the report and to the Executive Summary to clarify that permit limits may not be needed for these parameters, but that determination will be made during the permitting process by LDEQ, not as part of the TMDL. If LDEQ determines that there is no reasonable potential for a discharger to exceed the effluent concentrations of ammonia nitrogen and organic nitrogen in these TMDLs, then the permit can omit these parameters and still comply with federal regulations that require permits to be consistent with TMDLs.

4. Section 6.01 DO TMDL. The first or second paragraph in this section needs to include a statement that *reductions from point source discharges are not required as a result of this TMDL*.

EPA Response: Section 6.01 and the Executive Summary have been revised to include this clarification.

Mercury TMDL for Bayou Dorcheat (100501)

1. Section 4.4.2 Wasteload Allocation. The third sentence of this paragraph states that "the WLA for point source contributions was set to the design flow multiplied by the mercury water quality criterion (0.012 µg/l)". This is applicable to the POTWs identified in Tables 2.3 and 4.2. However neither table accurately reflects the design capacity of the POTWs identified.

EPA Response: The flows for Cullen and Springhill have been updated in Tables 2.3 and 4.2 and in the TMDL calculations based on the comments immediately below concerning these two point sources. The Town of Sibley STP has been removed from Tables 2.3 and 4.2 and from the TMDL calculations because further review of documents from EDMS showed that the facility is actually in subsegment 100502 (the facility discharges into Brushy Creek, which flows into Lake Bistineau downstream of 100501).

2. The flow in mgd of the following facilities should be changed in Table 2.3.
    a. LA0032301, Town of Cullen WWTF. As per 7/1/05 final permit, the design capacity is 0.3 mgd.
    b. LA0033227, City of Springhill STP. As per 8/1/05 final permit, the design capacity is 1.5 mgd.
    c. LA0075396, Town of Sibley STP. As per 4/1/06 final permit, the design capacity is 0.2 mgd.

EPA Response: The flows in Table 2.3 have been updated.

3. The flow in mgd of the facilities in Table 4.2 should be changed as defined above. The Mercury load in g/yr and lb/day should be changed as follows:
    a. LA0032301, Town of Cullen, 4.97 g/yr and 0.00003 lb/day
    b. LA0033227, City of Springhill, 24.85 g/yr and 0.00015 lb/day.
    c. LA0075396, Town of Sibley, 3.31 g/yr and 0.00002 lb/day.

EPA Response: The flows and loads in Table 4.2 have been updated.

4. The total mercury load in g/yr and lb/day in Table 4.2 should be adjusted to account for the corrected flows.

EPA Response: The total load in Table 4.2 (and the corresponding total load in Tables 4.6 and ES.1) has been updated and also expressed in lbs/day.

5. Table 4.2 incorrectly states the Mercury Load in lb/day for the Town of Minden is 0.24 E-5 when it should be 0.24 E-3 or 0.00024 lb/day.

EPA Response: The load for Minden has been corrected in Table 4.2.

6. Mercury WLAs for point source dischargers should not be represented in scientific notation in any mercury TMDL. LDEQ does not utilize scientific notation in its LPDES permits for representation of small effluent loadings. Using g/year and scientific notation for lb/day misleadingly suggest a larger loading than what may be in the permit.

EPA Response: The values have been changed from scientific notation to decimals in the lb/day column in Table 4.2. A column for lbs/day has been added to Table 4.6 and the values in Table ES.1 are now shown in lbs/day instead of g/yr.

Bayou Pierre TMDL for DO and Nutrients (100601)

1. Table 2.3 Summary of information for Point Sources.
    a. LA0068608 was terminated 4/25/03. Stormwater coverage is not required for SIC 82, considered an auxiliary school bus establishment. This permit can be removed from the TMDL.

    EPA Response: This permit has been removed from Table 2.2 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

    b. LA0109029 was allowed to expire. MSGP coverage, LAR05N525 was issued 5/26/06. Also covered under LAG670095 for hydrostatic test discharges.

EPA Response: Table 2.2 and Figure A.1 have been updated to include the two new permit numbers in place of the old permit number. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary. EPA appreciates this specific information because documents for this facility show up in EDMS under two different AI numbers (122081 and 43014), one of which has no indication that permit numbers LAR05N525 or LAG670095 exist.

c. LAG540655, South Shreve Townhouses. The facility has changed names to Town Homes on E. Kings, LLC.

EPA Response: This facility name has been changed in Tables 2.2 and 6.3.

d. LAG830163, Morris & Dickson Co., Ltd. Permit coverage terminated 5/18/07. This permit can be removed from the TMDL.

EPA Response: This permit has been removed from Table 2.2 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

e. LAG830203, Koerner's Service Center. Permit coverage terminated 3/12/07, facility closed. This permit can be removed from the TMDL.

EPA Response: This permit has been removed from Table 2.2 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

f. WG-040084, Jones Environmental Inc, Roadrunner Carwash. As per a phone call 7/16/93, this all wastewaters from this carwash enter the City of Shreveport POTW for treatment. This permit can be removed from the TMDL.

EPA Response: This permit has been removed from Table 2.2 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

2. Section 7.4 Nutrient TMDLs – Because the TMDL states that no measurements of total phosphorus or total nitrogen were available for the sanitary discharges, concentrations were assumed based on median and average concentrations for treated wastewater reported in the Technical Guidance Manual for Developing TMDLs (EPA 1997). Because the concentrations were assumed at an average and reductions were not required, LDEQ assumes that the total nitrogen and total phosphorus concentration and loadings represented in Table 7.4 are not to be placed in subsequent LPDES permits for the two identified facilities.

EPA Response: The nutrient TMDL for Bayou Pierre has been revised so that allowable nitrogen loads are based on the DO modeling and allowable phosphorus loads are calculated as the allowable nitrogen loads divided by the naturally occurring ratio of nitrogen to phosphorus. The last paragraph in Section 7.3 states that implementation of this nutrient TMDL should start with monitoring requirements to determine whether or not permit limits are necessary. Because point source discharges represent a small portion of the total nutrient loading, it is possible that no reductions of point source discharges may be needed as a result of this TMDL.

TMDLs for DO for Black Lake Bayou (100702), Black Lake and Clear Lake (100703) and Saline Bayou (100803)

1. Table 2.3 Point Sources
    a. LA0049484, North Pond. This wastewater treatment plant belongs to the Town of Ringgold. The TMDL should be updated to address ownership rather than the facility name.

    EPA Response: The facility ownership has been added to this entry in Tables ES.3 and 2.3 and in the input file for the TMDL program (Appendix P).

    b. LA0053261, Town of Gibsland. The flow in gpd for this facility should be updated to the facility's design capacity as permitted of 150,000.

    EPA Response: This flow has been updated in Tables ES.3 and 2.3 and in the WLA calculations.

    c. LA0091391, Acme Brick Dixie plant. This permit was allowed to expire on 10/31/05. Notification by the facility indicated the facility was closed and dismantled on 10/1/04. This permit can be removed from the TMDL.

    EPA Response: This permit has been removed from Table 2.3 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

    d. LA0107171, Athens Tool Shop. The facility is named Tesco Services. LA0107171 was terminated 1/21/05 upon issuance of LAG480478. Tesco Services is located later in Table 2.3. LA0107171 should be removed from the TMDL.

    EPA Response: This permit has been removed from Table 2.3 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

e. LAG560094, Athens Wastewater Treatment Facility. The design flow for this POTW is 40,000 gpd.

EPA Response: The effluent flow rate that was used for this facility has been revised to be 40,000 gpd in Tables ES.3, 2.3, and 6.7, and in the WLA calculations.

f. WP4113, Raley Pit. 8/6/96 inspection confirmed facility no longer in operation. Permit can be removed from TMDL.

EPA Response: This permit has been removed from Table 2.3 and Figure A.1. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

g. LAG541156, Natchitoches Parish Consolidated School District. The Type of Discharge for this permit should be changed from Residential Subdivision to Elementary School.

EPA Response: This change has been made in Table 2.3.

h. LAG541229, Lakeview Jr. & Sr. High School. The Type of Discharge for this permit should be changed from Residential Subdivision to Middle and High School.

EPA Response: This change has been made in Table 2.3.

2. All above corrected information in Table 2.3 should additionally be updated in Tables ES.7 and 6.7.

EPA Response: These changes have been made throughout the report as necessary.

3. Executive Summary – the last sentence to the fourth paragraph should be changed to read, No reductions in point source loads were needed to maintain the DO standard of 5.0 mg/l in the winter season. No reductions in point source loads were needed to maintain the DO standard during either the summer or winter seasons, *therefore no change in permit limits is required as a result of this TMDL.*

EPA Response: This statement has been added to the Executive Summary.

Boggy Bayou TMDL for DO and Nutrients

1. Table 2.2 List of Point Source Discharges in Subsegment 100602.
   a. LA0103632, SWEPCO C&D Landfill. Effluent limitations and conditions for Type III landfills in Louisiana are permitted to be consistent with 40

CFR 445, Effluent guidelines for Landfills Point Source Category. Given the nature of the wastewater generated at landfills being contact stormwater and the use of settling ponds as the main treatment technology, landfills generally go for extended periods of time without discharge to waters of the state. TMDL design flows applicable to point source loadings usually involve low-flow events because the volumes associated with point sources generally do not decrease with decreased stream flow. As a result the highest concentrations associated with specific point source loads are expected under low flow conditions.

EPA Response: Based on information provided by LDEQ during a conference call on December 17, 2007, discharges from the SWEPCO Landfill are considered to have insignificant oxygen demand and are not included in the DO TMDL calculations. Information for this facility has been revised based on the comment above, additional searching in EDMS, and a review of the facility's April 2004 application and November 2007 notice of intent (NOI). The AI number has been corrected and the general permit for landfills (LAG780000) has been identified because it appears that the facility's coverage is currently in the process of being transferred from the individual permit to the general permit. The effluent flow rate has been set to 30,000 gpd, which is the effluent pumping capacity listed in both the application and NOI.

b. LAG480011, LA Lift and Equipment. The AI Number referenced the table is incorrect. The correct AI is 10216.

EPA Response: This AI number has been corrected in Table 2.3. EPA appreciates this specific information.

2. Section 7.3 Calculations for TMDL Components of the Nutrient TMDL assumes effluent concentrations for sanitary wastewater of 6 mg/l total phosphorus and 16 mg/l total nitrogen. These numbers were obtained by averaging the median concentration values from Table A-17 of the Technical Guidance Manual for Developing TMDLs (USEPA 1997). Other draft EPA TMDLs (ex. TMDLs for DO and Nutrients in Selected Subsegments in the Upper Terrebonne Basin) utilize default values of 7 mg/l total phosphorus and 23 mg/l total nitrogen from same Table A-17. LDEQ requests that EPA use consistent average (mean) default values for total phosphorus and total nitrogen in its TMDLs. Because the concentrations were assumed at an average and reductions were not required, LDEQ assumes that the total nitrogen and total phosphorus concentration and loadings represented in Table 7.4 are not to be placed in subsequent LPDES permits for the identified facilities.

EPA Response: The nutrient TMDL for Boggy Bayou has been revised so that allowable nitrogen loads are based on the DO modeling and allowable phosphorus loads are calculated as the allowable nitrogen loads divided by the

naturally occurring ratio of nitrogen to phosphorus. The last paragraph in Section 7.4 states that implementation of this nutrient TMDL should start with monitoring requirements to determine whether or not permit limits are necessary. Because point source discharges represent a small portion of the total nutrient loading, it is possible that no reductions of point source discharges may be needed as a result of this TMDL.

Bayou Dorcheat TMDL for DO (100501)

1. Section 4.10 Point Source Data Inputs states that point source flows and water quality concentrations were set to the average effluent concentrations reported on their DMRs for September 2005. Why wouldn't permitted flows and concentrations as represented in Appendix B be utilized as input data to determine if they are adequate? Using one month to determine This September 2005 information is listed in Table ES.3.

EPA Response: For the calibration, DMR values were used instead of permitted flows and concentrations because the objective of the calibration simulation is to represent as closely as possible the conditions that actually occurred during the calibration time period. The permitted effluent flows and concentrations in Appendix B were used for the projection simulations and TMDL calculations, which represent allowable loadings for critical conditions.

2. Appendix B. List of Point Sources for Bayou Dorcheat. The following information for the identified point source dischargers should be changed as follows:
    a. LA0032301, Cullen WWTP, permitted flow is 300,000.

    EPA Response: This flow has been updated in Tables ES.3 and 6.3, in Appendix B, and in the WLA calculations.

    b. LAG570016, Village of Dixie Inn, effluent limitations for BOD_5 are 10 mg/l monthly average and 15 mg/l weekly average.

    EPA Response: These permit limits have been updated in Appendix B and incorporated into the WLA calculations.

    c. LA0020401, Town of Cotton Valley, permit does not contain effluent limitations for NH_3-N.

    EPA Response: The ammonia nitrogen limits for this facility have been removed from Appendix B and the WLA calculations have been updated by assuming 5 mg/L of ammonia nitrogen plus organic nitrogen based on typical relationships between CBOD5 and ammonia nitrogen plus organic nitrogen in the LTP. The ratio of ammonia nitrogen to organic

nitrogen in the effluent is assumed to be 2:1 (for a mechanical treatment system).

d. LA0033227, City of Springhill, permitted flow is 1.5 MGD and effluent limitations are 5 mg/l monthly average and 8 mg/l weekly average BOD_5 for the months of April – October and 10 mg/l monthly average and 15 mg/l weekly average BOD_5 for the months of November – March. Limits for NH_3-N are 2 mg/l monthly average and 4 mg/l weekly average year round.

EPA Response: The flow rate and permit limits for this facility have been corrected in Appendix B and in the WLA calculations.

e. LA0074276, BFI Webster Parish Municipal Landfill. Given the nature of the wastewater generated at landfills being contact stormwater and the use of settling ponds as the main treatment technology, landfills generally go for extended periods of time without discharge to waters of the state. TMDL design flows applicable to point source loadings usually involve low-flow events because the volumes associated with point sources generally do not decrease with decreased stream flow. As a result the highest concentrations associated with specific point source loads are expected under low flow conditions.

EPA Response: This facility has been removed from WLA calculations.

f. LA0101656, belongs to the Webster Parish Police Jury and is a maintenance barn. Effluent limits are COD of 200 mg/l average and 300 mg/l maximum.

EPA Response: The facility name and COD permit limits have been added to Appendix B. No other changes have been made based on this comment.

g. LA0104639, Haynesville Pump Station. The appropriate permit number for this facility is LAG300014. This permit requires a TOC limit of 50 mg/l maximum.

EPA Response: The permit number has been corrected and the TOC permit limit has been added to Appendix B. No other changes have been made based on this comment.

h. LA0105759, Cotton Valley Gas Plant was terminated upon issuance of LAG480471. The type of discharge is boiler blowdown.

EPA Response: The permit number has been corrected and the type of discharge has been added to Appendix B. No other changes have been made based on this comment.

i. LAG830109 was terminated 10/10/05 due to closure of the site. This permit can be removed from the TMDLs.

EPA Response: This permit has been removed from Figure A.3 and Appendix B. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

j. WP5014, LDI Side Winder, according to a 9/6/02 inspection this facility is closed. The permit can be removed from the TMDL.

EPA Response: This permit has been removed from Figure A.3 and Appendix B. This permit was not previously included in the model or in the TMDL calculations, so no further revisions were necessary.

3. Section 5.4 Point Source Inputs. The point source flows for Cullen, Minden and Dixie Inn need to be adjusted as per the information provided above.

EPA Response: The updated point source flow for Cullen (0.30 MGD) has been included in Tables ES.3 and 6.3, in Appendix B, and in the TMDL calculations. The comments above did not mention a flow for the Minden nor Village of Dixie Inn STPs. The flow for Dixie Inn was already correct in the draft TMDL (75,000 gpd according to the Statement of Basis in the 2005 permit) and required no revisions. The flow for Minden was not changed.

4. Three point sources were included in the model - all POTWS (Cullen, Dixie Inn, and Minden). The combined oxygen demanding load from these three facilities based on the flow and permit limits used in the model is about 1167 lbs/day. The calculated TMDL in the model (minus SOD) is about 21,446 lbs/day for summer and 24,605 lbs/day for winter. It appears all three have limits based on the state sanitary effluent limitations policy. The state policy states, "Individual dischargers may request alternate permit limits by performing an individual analysis which is supervised and approved by the Department." It also says, "NOTE: The LDEQ reserves the right to assign an effluent limitation based upon an individual discharge analysis, regardless of any previously established effluent limitation." This TMDL is an 'individual analysis'. This understood, based on the TMDL the limits for these three POTWs can be changed from 10/15 to 30/45.

EPA Response: The modeling in this report simulated discharges from the Town of Cullen STP into Braley Creek (a tributary of Bayou Dorcheat), but the reach representing Braley Creek was not a calibrated reach because resources were not available to collect field data for tributaries. LDEQ is not required to have calibrated modeling to change the permit limits for this facility, but EPA

believes that there is considerable uncertainty in the model inputs for Braley Creek. Small tributaries with relatively low gradients and negligible upstream flow during critical conditions cannot usually support a municipal discharge at secondary treatment levels. EPA recommends that Cullen's current permit limits (10 mg/L $CBOD_5$ and 6.08 mg/L ammonia nitrogen monthly average) should not be relaxed to secondary treatment levels unless it is justified by additional modeling using site-specific field data.

Discharges from the City of Minden STP were also simulated in this report with tributary reaches that are uncalibrated. A calibrated model was developed for this discharge by Limno-Tech, Inc. in 1984. The Limno-Tech report recommended a permit limit of 5 mg/L $CBOD_5$ based on their calibrated model results for the tributary of Bayou Dorcheat into which Minden discharges. Limno-Tech's recommendations are consistent with typical assimilative capacities of small tributaries as stated in the paragraph above in regard to Cullen. EPA recommends that Minden's current permit limits (10 mg/L $CBOD_5$ monthly average) should not be relaxed to secondary treatment levels unless it is justified by additional modeling using site-specific field data.

The Village of Dixie Inn STP currently has permit limits for advanced treatment (10 mg/L $CBOD_5$). This discharge was simulated in this report at the existing treatment level (i.e., no relaxation) because significant nonpoint source reductions are required. Relaxation of point source treatment levels would not be appropriate given the required reductions from nonpoint sources.

Flat River TMDL for DO & Nutrients

1. Section 7.4 Nutrient TMDLs assumes effluent concentrations for sanitary wastewater of 6 mg/l total phosphorus and 23 mg/l total nitrogen. These numbers were from the Technical Guidance Manual for Developing TMDLs (USEPA 1997). Other draft EPA TMDLs utilize differing default values for total phosphorus and total nitrogen from same Table A-17. LDEQ requests that EPA use consistent average (mean) default values for total phosphorus and total nitrogen in its TMDLs. Because the concentrations were assumed at an average and reductions were not required, LDEQ assumes that the total nitrogen and total phosphorus concentration and loadings represented in the nutrient TMDL are not to be placed in subsequent LPDES permits for the identified facilities.

EPA Response: The nutrient TMDL for Flat River has been revised so that allowable nitrogen loads are based on the DO modeling and allowable phosphorus loads are calculated as the allowable nitrogen loads divided by the naturally occurring ratio of nitrogen to phosphorus. The last paragraph in Section 7.4 states that implementation of this nutrient TMDL should start with monitoring requirements to determine whether or not permit limits are necessary. Because point source discharges represent a small portion of the total

nutrient loading, it is possible that no reductions of point source discharges may be needed as a result of this TMDL.

2. Table ES.3 should include the LPDES Permit numbers for the first three dischargers identified.

EPA Response: The missing LPDES permit numbers have been added to Table ES.2.

3. Section 6.0 DO TMDL. This section needs to include a statement that *reductions from point source discharges are not required as a result of this TMDL*.

EPA Response: A statement has been added to Section 6.0 to clarify the fact that point source reductions are not required.

TMDLs for DO and Nutrients in Selected Subsegments of the Upper Terrebonne Basin

1. Having multiple pages of tables in the executive summary makes the report very overbearing, specifically because the tables are repeated later again in the document.

EPA Response: EPA will remove the WLA tables from the Executive Summary.

2. EPA and its contractors need to work with LDEQ to get the point source inventory correct for this TMDL prior to finalization. LDEQ understands the large scope of this TMDL and the numerous facilities covered. However an accurate and complete point source inventory is necessary.

EPA Response: EPA will work with LDEQ to ensure that the point source inventory is updated prior to the finalization of the report.

3. Section 6.1 DO TMDLs requires reductions to three point source discharges. This paragraph is excellent in demonstrating the three facilities for which effluent limits must be reduced. However it is silent for the remaining numerous facilities. This section also needs to include a statement that *reductions from other point source discharges are not required as a result of this TMDL*.

EPA Response: EPA will add this statement to the text. EPA has added text to the *TMDL Implementation Strategies* section describing a Use Attainability Study, which suggests new dissolved oxygen criterion. This TMDL may be revised on the basis of the new criterion. Point source effluent limits for BOD, ammonia, and organic nitrogen may change as the result of a revised TMDL, however it is expected that they be implemented until such time as this TMDL is revised.

4. The point source WLA tables represented in this TMDL are incomplete and confusing. It is hard to understand why some discharges of treated sanitary wastewater were considered in the nutrient WLA but not in the BOD WLA and likewise for the ammonia WLA. Should not all discharges of treated sanitary wastewater be considered potential contributors of BOD, DO, ammonia, and nutrients? The WLA tables in Section 6 need to be revisited to verify accuracy.

EPA Response: EPA acknowledges a page of BOD WLAs were missing from the draft report. These will be included in the final draft. These final WLA tables will include allocations for BOD, ammonia, and organic nitrogen for all potential contributors. Because no reductions to nutrients were required, it is assumed that the point sources may continue to discharge at their current concentration level of nutrients and not make any deleterious effect on water quality. Any increase in nutrient effluent concentrations could require additional monitoring and modeling and a revision to this TMDL.

5. The department has received an application for upgrade to LA0068501, West Baton Rouge Parish Westport Wastewater Treatment Facility. They are planning to upgrade from 0.3 MGD to 0.4 MGD in order to handle additional growth and development in the area. Please modify their loadings and point source discharger information throughout the TMDL to reflect this upgrade.

EPA Response: EPA will update this flow in the document, the model, and WLA calculations.

6. Section 6.2 Nutrient TMDLs assumes effluent concentrations for sanitary wastewater of 7 mg/l total phosphorus and 23 mg/l total nitrogen. These numbers were from the Technical Guidance Manual for Developing TMDLs (USEPA 1997). Other draft EPA TMDLs utilize differing default values for total phosphorus and total nitrogen from same Table A-17. LDEQ requests that EPA use consistent average (mean) default values for total phosphorus and total nitrogen in its TMDLs. Because the concentrations were assumed at an average and reductions were not required, LDEQ assumes that the total nitrogen and total phosphorus concentration and loadings represented in the nutrient TMDL are not to be placed in subsequent LPDES permits for the identified facilities.

EPA Response: EPA has removed WLAs for nutrients and added the following statement: "Because no reductions to nutrients were required, it is assumed that the point sources may continue to discharge at their current concentration level of nutrients and not make any deleterious effect on water quality. Any increase in nutrient effluent concentrations could require additional monitoring and modeling and a revision to this TMDL."

EPA has also added the following language to the Executive Summary:
"The dissolved oxygen TMDL establishes load limitations for oxygen-demanding substances and goals for reducing those pollutants. When

oxygen-demanding substances are controlled and limited to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. Implementing the dissolved oxygen TMDL through future wastewater discharge permits, if required, and implementing best management practices to control and reduce runoff of soil and oxygen-demanding pollutants from nonpoint sources in the watershed will also control and reduce the nutrient loading from those sources."

Comments from Exxon Mobil Corporation

From: lynn.a.sanguedolce@exxonmobil.com
To: Diane Smith/R6/USEPA/US@EPA 11/26/2007 04:35 PM
cc: mustafa.golan@epa.gov
Subject: Comments on "Clean Water Act Section 303(d): Availability of 34 Total Maximum Daily Loads (TMDL) in Louisiana" published in the Federal Register on October 25, 2007 (72 FR 60666)

November 26, 2007

Attention: Diane Smith, Environmental Protection Specialist Water Quality Protection Division U.S. Environmental Protection Agency Region 6
1445 Ross Ave.
Dallas, TX 75202-2733
email: smith.diane@ epa.gov
cc: mustafa.golan@epa.gov

Exxon Mobil Corporation submits the attached comments on the Environmental Protection Agency's (EPA's) "Clean Water Act Section 303(d): Availability of 34 Total Maximum Daily Loads (TMDL) in Louisiana" published in the Federal Register on October 25, 2007 (72 FR 60666).

Exxon Mobil Corporation (ExxonMobil) is a publicly-traded petroleum and petrochemical company and has an interest in this issue because of its or its Affiliates' operations in the area.

The major points of our comments are as follows:

Identification of Point Sources - ExxonMobil or its Affiliates own or operate several facilities in the Port Allen area with point source discharges. Only one facility (ExxonMobil Port Allen Lube Plant) and one outfall (Outfall 201) for that facility were identified in the TMDL analysis for the Intracoastal Waterway - Morgan City to Port Allen Route - Port Allen Locks to Bayou Sorrel Locks (Subsegment 120109). The evaluation of point sources (See Report Section 2.5.1) did not include a discussion of the criteria used to determine whether a facility would be considered as a point source in developing the TMDL. We would like to know which criteria were used.

- Were facilities with de minimus discharges included in the analysis?
- Were process outfalls included in the point source analysis or only sanitary outfalls?
- Were facilities with Biological Oxygen Demand (BOD) in their permits only included in the analysis?

- Were correlations between other oxygen demand parameters and BOD used to assess a facility's oxygen demand? If so, what were those correlations?

Implementation of TMDL - For a point source that was not included in the analysis and was not assigned a waste load allocation, does EPA propose that the TMDL apply, and, if so, how does EPA propose that the TMDL would be implemented?

In the absence of such clarifications, we believe we cannot provide the most meaningful comments on the report. We request that EPA provide clarification of the issues requested above and extend the comment period to allow for further discussion of these issues.

If you have further questions, please don't hesitate to contact me at (703-846-7401) or lynn.a.sanguedolce@exxonmobil.com.

Regards,
Lynn Anne Sanguedolce, Ph.D.

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EPA Response: It would be helpful to know to which facilities you are referring. Some facilities in that area were not included in the TMDL since, even though located in the impaired subsegment, discharge in the Mississippi River. Only discharges that would affect biological demand were included in the TMDL, therefore hydrostatic test water and most process wastewaters were not included. In addition, stormwater discharges were not included since they do not discharge during critical low flow periods. In addition, several permits were omitted in the draft TMDL WLA tables.

Permit limits and the type of facility and discharges were taken into account when reviewing facilities. If a facility was not included in the report then it may be assumed that it may discharge at current discharge levels. Some permits were not included due to lack of flow information in the permit and DMRs consistently reporting "No Discharge." These facilities were considered de minimus.

EPA will not extend the original comment period.

LDEQ Comments (Set 2)

November 28, 2007

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

RE: Comments on Federal Register: October 30, 2007 (Volume 72, Number 209) [FRL-8488-8], Clean Water Act Section 303(d): Availability of 20 Total Maximum Daily Loads (TMDLs) in Louisiana

Dear Ms. Smith:

The Louisiana Department of Environmental Quality appreciates the opportunity to review the above referenced Notice and hereby submits the enclosed comments on the TMDLs prepared by EPA Region 6 for waters listed in the Red and the Terrebonne Basins in Louisiana.

If you have any questions, please contact me at 225-219-3554.

Sincerely,

David M. Hughes
Environmental Scientist
Water Quality Assessment Division

Enclosure(s)
c: (w/enclosure)
Linda Levy, LDEQ
Barbara Romanowsky, LDEQ

General Comments

1. If any unresolved LDEQ comments to these TMDLs become the basis for an EPA Region 6 objection of an LDEQ drafted permit or permittee objection/appeal of an LDEQ drafted permit, LDEQ shall relinquish permitting authority to EPA Region 6.

EPA Response: In accordance with Section 1.C of the NPDES MOA (Revision 1, April 28, 2004) between LDEQ and EPA, EPA has the responsibility of providing technical and other assistance on a continuing basis, including interpretation and implementation of Federal regulations, policies, and guidelines on permitting and enforcement matters. The MOA further states that LDEQ has primary responsibilities for implementing the LPDES program in Louisiana, including applicable sections of the Federal Clean Water Act, applicable state legal authority, the applicable requirements of 40 CFR Parts 122-125 and any other applicable federal regulations, establishing LPDES program priorities with consideration of EPA Region 6 and national NPDES goals and objectives.

In developing the TMDLs, EPA strives to use the most accurate available information for the point sources. Also, during the public comment period if any entity including LDEQ, permittee or public has provided any significant data or information that is relevant to the calculations of the TMDLs, EPA has reviewed those data or information and revised the TMDLs as appropriate.

Specific Comments

TMDLs for DO and Nutrients in Selected Subsegments of the Middle Terrebonne Basin

1. Having multiple pages of tables in the executive summary makes the report very overbearing, specifically because the tables are repeated later again in the document.

EPA Response: EPA will remove the WLA tables from the Executive Summary.

2. EPA and its contractors need to work with LDEQ to get the point source inventory correct for this TMDL prior to finalization. LDEQ understands the large scope of this TMDL and the numerous facilities covered. However an accurate and complete point source inventory is necessary.

EPA Response: EPA will work with LDEQ to ensure that the point source inventory is updated prior to the finalization of the report.

3. Section 6.1 DO TMDLs does state that there were no reductions for WLAs. In order for affected facilities to understand what this means, a statement should be added to the document that states *reductions from point source discharges are not required as a result of this TMDL*.

EPA Response: EPA will add this statement to the text. These final WLA tables will include allocations for BOD, ammonia, and organic nitrogen for all potential contributors. Because no reductions to nutrients were required, it is assumed that the point sources may continue to discharge at their current concentration level of nutrients and not make any deleterious effect on water quality. Any increase in nutrient effluent concentrations could require additional monitoring and modeling and a revision to this TMDL.

EPA has added text to the *TMDL Implementation Strategies* section describing a Use Attainability Study, which suggests new dissolved oxygen criterion. This TMDL may be revised on the basis of the new criterion. Point source effluent limits for BOD, ammonia, and organic nitrogen may change as the result of a revised TMDL, however it is expected that they be implemented until such time as this TMDL is revised.

4. Because the projection model demonstrated that the ammonia loadings are low enough that the ammonia toxicity criteria will not be exceeded under critical conditions, a sentence needs to be added to Section 6.1.3 to explain that the ammonia nitrogen concentrations and loadings as represented in Table 6-5 and 6-7 for the point source dischargers do not need to be placed in the respective LPDES permits.

EPA Response: Text has been added to this section of the report to clarify that permit limits may not be needed for these parameters, but that determination will be made during the permitting process by LDEQ, not as part of the TMDL. If LDEQ determines that there is no reasonable potential for a discharger to exceed the effluent concentrations of ammonia nitrogen and organic nitrogen in these TMDLs, then the permit can omit these parameters and still comply with federal regulations that require permits to be consistent with TMDLs.

5. Section 6.2 Nutrient TMDLs assumes effluent concentrations for sanitary wastewater of 7 mg/l total phosphorus and 23 mg/l total nitrogen. These numbers were from the Technical Guidance Manual for Developing TMDLs (USEPA 1997). Other draft EPA TMDLs utilize differing default values for total phosphorus and total nitrogen from same Table A-17. LDEQ requests that EPA use consistent average (mean) default values for total phosphorus and total nitrogen in its TMDLs. Because the concentrations were assumed at an average and reductions were not required, LDEQ assumes that the total nitrogen and total phosphorus concentration and loadings represented in the nutrient TMDL are not to be placed in subsequent LPDES permits for the identified facilities.

EPA Response: EPA has removed WLAs for nutrients and added the following statement: "Because no reductions to nutrients were required, it is assumed that the point sources may continue to discharge at their current concentration level of nutrients and not make any deleterious effect on water quality. Any increase

in nutrient effluent concentrations could require additional monitoring and modeling and a revision to this TMDL."

EPA has also added the following language to the Executive Summary:

"The dissolved oxygen TMDL establishes load limitations for oxygen-demanding substances and goals for reducing those pollutants. When oxygen-demanding substances are controlled and limited to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. Implementing the dissolved oxygen TMDL through future wastewater discharge permits, if required, and implementing best management practices to control and reduce runoff of soil and oxygen-demanding pollutants from nonpoint sources in the watershed will also control and reduce the nutrient loading from those sources."

TMDLs for DO and Nutrients in Selected Subsegments of the Lower Terrebonne Basin

1. The fifth paragraph of the Executive summary states that reductions of existing point source and nonpoint source loads were required for the projection simulation to show maintenance of the DO standard, 5 mg/l, while Section 6.1 states that there are no reductions for WLAs.

EPA Response: EPA will correct the text in the Executive Summary.

2. Section 6.1 DO TMDLs does state that there were no reductions for WLAs. In order for affected facilities to understand what this means, a statement should be added to the document that states *reductions from point source discharges are not required as a result of this TMDL*.

EPA Response: EPA will add this statement to the text. These final WLA tables will include allocations for BOD, ammonia, and organic nitrogen for all potential contributors. Because no reductions to nutrients were required, it is assumed that the point sources may continue to discharge at their current concentration level of nutrients and not make any deleterious effect on water quality. Any increase in nutrient effluent concentrations could require additional monitoring and modeling and a revision to this TMDL.

EPA has added text to the *TMDL Implementation Strategies* section describing a Use Attainability Study, which suggests new dissolved oxygen criterion. This TMDL may be revised on the basis of the new criterion. Point source effluent limits for BOD, ammonia, and organic nitrogen may change as the result of a revised TMDL, however it is expected that they be implemented until such time as this TMDL is revised.

3. Section 6.2 Nutrient TMDLs assumes effluent concentrations for sanitary wastewater of 7 mg/l total phosphorus and 23 mg/l total nitrogen. These numbers were from the Technical Guidance Manual for Developing TMDLs (USEPA

1997). Other draft EPA TMDLs utilize differing default values for total phosphorus and total nitrogen from same Table A-17. LDEQ requests that EPA use consistent average (mean) default values for total phosphorus and total nitrogen in its TMDLs. Because the concentrations were assumed at an average and reductions were not required, LDEQ assumes that the total nitrogen and total phosphorus concentration and loadings represented in the nutrient TMDL are not to be placed in subsequent LPDES permits for the identified facilities.

EPA Response: EPA has removed WLAs for nutrients and added the following statement: "Because no reductions to nutrients were required, it is assumed that the point sources may continue to discharge at their current concentration level of nutrients and not make any deleterious effect on water quality. Any increase in nutrient effluent concentrations could require additional monitoring and modeling and a revision to this TMDL."

EPA has also added the following language to the Executive Summary: "The dissolved oxygen TMDL establishes load limitations for oxygen-demanding substances and goals for reducing those pollutants. When oxygen-demanding substances are controlled and limited to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. Implementing the dissolved oxygen TMDL through future wastewater discharge permits, if required, and implementing best management practices to control and reduce runoff of soil and oxygen-demanding pollutants from nonpoint sources in the watershed will also control and reduce the nutrient loading from those sources."

TMDLs for DO for Cypress Bayou Reservoir and Black Bayou Reservoir

1. Table 2.3 Point Sources for Subsegments 100404 and 100405 shows that LA0111252 was inactivated in 2003 because the only discharge is stormwater that is not associated with industrial activity. This is a great example of proper utilization of LDEQs Electronic Document Management System to gain accurate point source discharger information.

EPA Response: EPA acknowledges this statement.

LDEQ General TMDL Comments

Summary of Persistent Problems with TMDLs Developed by EPA Region 6 for Louisiana Waters

For Parameters Other Than Dissolved Oxygen and Nutrients

1. Inadequate or erroneous science
    a. Application of in-stream criteria at "end-of-pipe" without allowing for mixing with upstream flow (resulting in unnecessarily stringent wasteload allocations).

EPA Response: TMDLs and allocations are set to provide environmental protection under all conditions, including critical low flow periods. Setting WLAs using in-stream criteria ensures that in-stream criteria are met downstream of a discharge location.

    b. The use of inappropriate sites for flow data when more appropriate sites are available and/or faulty calculations of flow from available data (resulting in inaccurate TMDL calculations).

EPA Response: EPA reviews flow data locations and feels it chooses the most appropriate flow location site for the TMDLs being developed.

    c. The use of monthly water yield for flow data instead of measured flows is inappropriate and can result in inaccurate TMDL calculations.

EPA Response: Monthly water yield is used only for TMDLs in southern Louisiana. In these areas flows are tidally influenced, drainage areas are often indeterminate, and many bayous and canals do not have flow gage records available. EPA feels that using monthly water yields is acceptable for estimating pollutant loadings from land in these areas.

    d. Water quality data supposedly copied from our web site often does not agree with the web site data (resulting in errors in the statistical analysis and causing inaccurate TMDL calculations).

EPA Response: This comment is not applicable for these TMDLs. During the course of the development of these TMDLs, ambient water quality data were not available online. All ambient water quality data were obtained directly from LDEQ staff or field studies.

    e. The EPA uses average flow for TMDLs of chlorides, sulfates, and TDS rather than harmonic mean flow as called for by our regulations (resulting in inaccurate TMDL calculations).

EPA Response: Comment does not apply to these TMDL reports.

f. The EPA has treated non-conservative parameters such as temperature and TSS as conservatives (resulting in unnecessarily stringent wasteload allocations and nonpoint percentage reductions).

EPA Response: Comment does not apply to these TMDL reports.

g. In a TMDL for temperature, the EPA calculated the heat content of a lake from $0^{o}C$ rather than $0^{o}K$ and failed to address evaporation from the lake.

EPA Response: Comment does not apply to these TMDL reports.

2. A significant portion of the flow/watershed was not taken into consideration while calculating the TMDL (resulting in inaccurate TMDL calculations).

EPA Response: The water quality models in these TMDLs were developed using the main stem of water flowing through the subsegment and its tributaries. EPA feels that all the contributing areas of the subsegment have been included.

3. Combined point source wasteload allocations for an entire basin/segment/ subsegment that do not accommodate all existing dischargers and do not include a margin of safety/growth for existing facilities or addition of new facilities (possibly resulting in unnecessarily stringent wasteload allocations which could cause major restrictions to the number and size of future permit renewals and new permits).

LDEQ TMDLs give facilities within the watershed, that are not a part of the model, allocations based on state policy. Thus all of the facilities that we are aware of within a subsegment are accounted for in the TMDL. LDEQ wasteload allocations contain a margin of growth to allow for facility expansions and new facilities. In those cases where the wasteload is increased or the discharge point is relocated, the Louisiana Technical Procedures provide that an increase in the total wasteload of 10 percent or more or a change in discharge location of 15 percent or more (of the wasteload) will trigger a recalculation of the TMDL and allocations.

EPA Response: For these TMDLs all facilities that have the potential to impact water quality relating to the TMDL have been given individual allocations. A future growth is included for the summed WLA to account for growth and additional facilities. In addition, the TMDLs include a margin of safety, some of which if necessary can be used for growth and additional facilities if additional data and information supports that there will be adequate MOS remaining.

4. The EPA used weak correlations between TSS and turbidity to develop linear regression equations. From turbidity's numeric criteria, these equations were used to determine numeric criteria for TSS (resulting in EPA assigning numeric criteria for TSS to Louisiana streams, which conflicts with LDEQ's regulatory intentions). LDEQ takes exception to EPA's continued use of a TMDL "endpoint" in the absence of promulgated water quality criteria. TMDL's seriously impact both point and nonpoint sources and as such should not be capriciously developed for substances for which no numerical water quality criteria exists. While the methodology used for developing the endpoint is the methodology LDEQ uses for establishing water quality criteria, use of this number as the basis for a TMDL without promulgation is unacceptable.

EPA Response: The only TMDL for turbidity or TSS in this group of reports was the TSS TMDL for subsegment 120206. The correlation coefficients (R squared) for this TMDL were 0.73 and 0.97, both of which are considered good for this type of analysis.

5. By definition, load-duration curves describe the contribution of each constituent as a function of overland flow. Most of the data trend shows an inverse relationship between flows and constituent concentrations (i.e., constituent concentrations decrease with increasing flow). This trend indicates that impairments are contributed by a constant background source. Because of these factors, the proposed BMPs, which seek to reduce constituent concentrations by mitigating overland inflows, could fail to yield even the slightest reduction in the targeted impairments.

EPA Response: Comment does not apply to these TMDL reports.

6. Many of the load-duration curves are based on the relationship between flow and drainage area. This relationship is not valid for most of the targeted waterbodies. Most of these waterbodies are tidally influenced or they are controlled by man-made control structures.

EPA Response: Comment does not apply to these TMDL reports.

7. The landuse data used in many of these reports appears to be 10-15 years old. Much of the landuse has changed within that time due to new agricultural practices/and crop-type changes, subsidence, and urban expansion.

EPA Response: Land use data for these TMDLs are from 2001 imagery, which is the most recent land use data available for these areas. Because the land use data are provided as supplementary information and are not used in the TMDL calculations, the age of the land use data does not affect the TMDL allocations. Although land use data was not necessary in developing TMDL allocations for the TMDL reports, this information will be used in the development of TMDL implementation plans. As the State of Louisiana develops the TMDL

implementation plans, the land use information for the impaired watersheds will be "*ground-truth*" to validate its accuracy.

8. The EPA has, in several cases, added small point source dischargers to a LDEQ TMDL and subtracted that loading from the non-point "load allocation". We do not agree with this practice. The LDEQ TMDLs are specific to the 303(d) listed stream and are not calculated to apply to the entire watershed.

   To the extent that these small/distant dischargers impact the 303(d) stream, they were already accounted for in the LDEQ TMDL as part of the distributed non-point loading, and the EPA is therefore accounting for them twice. The LDEQ has recently started listing the known small/distant dischargers separately and giving them state policy limitations. EPA needs to do that as well in their TMDLs developed for Louisiana.

EPA Response: EPA included small/distant dischargers to these TMDLs. Their WLAs are not taken from NPS load allocations.

9. Discharges were estimated for the facilities with no justification as to how the estimates were calculated (which could result in inaccurately calculated WLA loads).

EPA Response: EPA did not estimate discharges for these TMDLs without justification. Information was obtained from permits, DMRs, and other information in EDMS. Some assumptions concerning point source discharges were necessary, such as whether a municipal STP was a mechanical or lagoon system. Documentation of these assumptions is included in the TMDL reports.

10. TMDL Load Calculations - Louisiana regulations state: "For chlorides, sulfates and total dissolved solids, criteria are to be met below the point of discharge after complete mixing. Because criteria are developed over a long-term period, harmonic mean flow will be applied for mixing." (33:IX.1115.C.8) The flow which should have been used to calculate both the current and TMDL loadings should have been the harmonic mean flow.

EPA Response: Comment does not apply to these TMDL reports.

11. LDEQ strongly objects to establishing a TMDL for a constituent which does not have a numerical water quality criteria especially when a valid constituent which does have a criteria is available for use in protecting the water from the same type of pollution. The sources of input data for this TMDL are not adequately documented. An adequate margin of safety was not used in the establishment of the TMDL. Numerous point source and nonpoint sources were not identified and received no allocations in the TMDL. LDEQ expects the same high standard of data documentation, presentation and justification from EPA which is required in the TMDLs prepared by LDEQ. EPA has not met this standard.

EPA Response: In cases where the water quality impairment is based on a parameter for which there is a numeric criterion but for which allocations do not make sense (e.g. dissolved oxygen and turbidity), TMDLs are expressed using parameters that are causing the impairment but have no numeric criterion. For cases where TSS is truly the primary cause for turbidity, EPA believes that this is conceptually similar to DO TMDLs developed by LDEQ and others. LDEQ takes waterbodies that are impaired due to DO (for which there is a numeric criterion) and expresses the TMDLs in terms of CBOD, NBOD, and SOD. These three parameters are the primary cause of DO violations but there are no numeric criteria for any of the three parameters. In both cases, the subsegment is considered impaired due to the parameter that has a numeric criterion (turbidity or DO), and the TMDLs are being expressed as allowable loads of other parameters for which there is no numeric criterion (TSS or BOD).

EPA has made an effort to include sources of information in TMDL reports and will continue to do so.

For these TMDLs EPA assigned the margin of safety on the basis of recommendations in the latest version of the *Standard Operating Procedure for Louisiana Maximum Daily Load Technical Procedures* document (LTP).

These TMDLs are not intended to be an implementation study and therefore do not include specific nonpoint sources loads. An additional study will be required to identify and accurately quantify specific nonpoint sources of pollutants during the implementation of these TMDLs.

Initial point source information is obtained from LDEQ using their internal databases. EDMS is then reviewed for pertinent information. Point sources not receiving WLAs were deemed not significant.

12. The EPA has developed TMDLs for parameters that are not on the court ordered list or that should, by their own stated justification, have been delisted (resulting in unnecessary load restrictions as well as increased workload for EPA and LDEQ staff).

EPA Response: All parameters and subsegments in these TMDLs are on the final 2004 303(d) list of impaired waterbodies.

13. Cocodrie Lake is not on the court ordered list for these parameters. EPA claims that it is mentioned in a consent order, but the LDEQ has no documentation of that order.

EPA Response: Comment does not apply to these TMDL reports.

For Dissolved Oxygen and Nutrients

1. Inadequate or erroneous science
    a. The use of inappropriate sites for flow data when more appropriate sites are available and/or faulty calculations of flow from available data (resulting in inaccurate TMDL calculations).

EPA Response: EPA reviews flow data locations and feels it chooses the most appropriate flow location site for the TMDLs being developed.

b. Incorrect calculations/determinations of critical flows.

EPA Response: Critical flows in non-tidal areas were estimated from published 7Q10 flow values and adjusted for drainage area, which is a widely accepted procedure. For non-tidal area, if the 7Q10 is less than 0.1 cfs, for the summer critical period, then 0.1 cfs is used, as referenced in the LTP. For tidal areas, the critical flows were set to one-third the average tidal flow. If these procedures were deviated from, on the basis of professional judgment, an explanation was included in the text. For example in certain instances, flows and dispersion for projection simulations were set to the same values used in the calibration simulations because there was no evidence of correlation between low DO values and low flow conditions.

c. Inappropriate use of LDEQ's defaults for calibration and projection modeling.

EPA Response: The primary LDEQ default values used in the DO models were the temperature correction coefficients (theta) from the LTP and the default critical low flows from the LTP. Other model inputs were typically estimated from field data or other sources; they were not LDEQ defaults.

d. Omission of hydrologic data which was used as the basis for the TMDL is unacceptable.

EPA Response: Hydrologic data for these TMDLs are included in appendices.

e. Omission of field notes, measurements, and lab reports which were used as the basis for the TMDL is unacceptable.

EPA Response: EPA will include field notes in a separate appendix on a CD-ROM that will be available on request. Each report includes a section summarizing the field data that are relevant to the subsegments addressed by that report.

f. The amount of data actually collected is inadequate to support the TMDL model and conclusions.

EPA Response: While additional data is useful, it is not always feasible to be collected. EPA believes the data collected for these TMDLs is adequate for TMDL modeling.

g. The calibration is not calibrated acceptably or adequately.

EPA Response: EPA believes the models used in these TMDLs have been acceptably and adequately calibrated.

h. Inappropriate interpretation and use of Chlorophyll a data.

EPA Response: Chlorophyll a data have been included in the initial conditions in models where algae were believed to have a significant impact on DO, which is the normal use for chlorophyll a in steady state DO models where the full nutrient-algal cycle is not being simulated.

i. Inadequate data to appropriately analyze the tributaries.

EPA Response: Sufficient resources were not available to collect detailed field data on tributaries, however, the major tributaries contributions were included in the TMDLs through model calibrations.

j. Omission of key tributaries.

EPA Response: EPA feels key tributaries have been included in these TMDLs.

2. Incomplete and/or inaccurate discharger inventory
   a. Some known facilities are missing.

EPA Response: Initial point source information is obtained from LDEQ using their internal databases. EDMS is then reviewed for pertinent information. Point sources not receiving WLAs were deemed not significant.

b. Apparently the DMRs were not reviewed.

EPA Response: WLAs are based on permit flows and limits. When a permit does not contain flow information the DMRs are reviewed to obtain an appropriate flow.

c. Discharges were estimated for the facilities with no justification as to how the estimates were calculated (which could result in inaccurately calculated WLA loads).

EPA Response: EPA did not estimate discharges for these TMDLs with no justification. Information was obtained from permits, DMRs, and other information in EDMS.

d. Loads were estimated for the facilities with no justification as to how the estimates were calculated.

EPA Response: The TMDL section of these reports describes how facility loads were estimated.

e. Overly conservative handling of dischargers:

The EPA has, in several cases, added small point source dischargers to a LDEQ TMDL and subtracted that loading from the non-point "load allocation". We do not agree with this practice. The LDEQ TMDLs are specific to the 303(d) listed stream and are not calculated to apply to the entire watershed.

To the extent that these small/distant dischargers impact the 303(d) stream, they were already accounted for in the LDEQ TMDL as part of the distributed non-point loading, and the EPA is therefore accounting for them twice. The LDEQ has recently started listing the known small/distant dischargers separately and giving them state policy limitations. EPA needs to do that as well in their TMDLs developed for Louisiana.

EPA Response: EPA included small/distant dischargers to these TMDLs. Their WLAs are not taken from NPS load allocations.

3. Water quality data supposedly copied/downloaded from our web site often does not agree with the web site data (resulting in errors in the statistical analysis and causing inaccurate TMDL calculations).

EPA Response: This comment is not applicable for these TMDLs. During the course of the development of these TMDLs, ambient water quality data were not available online. All ambient water quality data were obtained directly from LDEQ staff or field studies.

4. The presence of a year-round criterion for DO does not relieve EPA of the responsibility to perform winter season projection modeling.

EPA Response: TMDLs are developed to be protective during all conditions. It is EPA's feeling that if a TMDL is protective of critical conditions, usually during the summer months, the TMDL will be protective during other times. Observed dissolved oxygen data has been reviewed and supports this conclusion.

5. Inconsistencies between the Tabular information presented in the report and the same information presented in the Appendices. Inadequacies in the information presented (missing overlay files for example).

EPA Response: These reports have gone through a thorough QA/QC process to correct any known inconsistencies. This comment appears to refer to TMDL reports from previous years.

6. Inappropriate determinations/use of the MOS.

EPA Response: For these TMDLs, EPA has used methods consistent with the LTP.

7. The Consultants confuse information from one TMDL with information from another. Remnant tables and sentences from some previous TMDL appear in the report. Before delivering reports to Region 6, EPA's paid consultants should be responsible for carefully proofing final submittals and checking for errors made when cutting and pasting language among multiple TMDL reports.

EPA Response: These reports have gone through a thorough QA/QC process to correct any known errors. This comment appears to refer to TMDL reports from previous years.

8. The poor quality of all EPA TMDLs is a direct result of inadequate funding. The Consultants do not gather enough field data, measurements or samples to support the development of technically sound and complete TMDLs.

EPA Response: EPA acknowledges this comment. EPA feels that it meets all requirements for TMDL development. EPA chooses its methods on the basis of data available and the technical requirements of the TMDL. All methods used by EPA have been verified as technically sound methods in TMDL development.

9. The EPA has developed TMDLs for parameters that are not on the court ordered list or that should, by their own stated justification, have been delisted (resulting in unnecessary load restrictions assigned to sources as well as increased workload for EPA and LDEQ staff).

EPA Response: All parameters and subsegments in these TMDLs are currently on the final 2004 303(d) list of impaired waterbodies.