

Changes to Draft 2012 Integrated Report Assessments and Categories

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Office of Environmental Services
Water Permits Division

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The Louisiana Department of Environmental Quality (LDEQ) made seven categories of changes to the original 2012 Integrated Report (IR) during the extended review period following the public notice period which was held from January 25, 2012 to February 29, 2012. The changes reflect new water quality data, assessments, and corrected or updated Total Maximum Daily Load (TMDL) status information. The changes and rationale for each change are described below.

1. Assessment of Caney Lake (081505)

The original 2012 IR assessment indicated two of five ambient fecal coliform samples from 2008 (40%) exceeded the primary contact recreation (PCR) criterion of 400 MPN (Most Probable Number)/100 mL. Integrated Report (IR) assessments for fecal coliforms specify no more than 25% of samples may exceed the PCR criterion during the swimming season of May through October. Detailed analysis of the 2008 data set indicated the exceedances followed extreme rainfall events. Therefore, LDEQ coordinated with local stakeholders to conduct an intensive water quality sampling project to determine the nature and extent of fecal coliform concerns in the watershed.

Lake sampling was conducted weekly at ten sites from April 10, 2012 through June 19, 2012. Following this period, sampling changed to monthly from July 10, 2012 through October 10, 2012. Summary results of this sampling for data from May 1, 2012 through October 10, 2012 can be found in table 1. Based on data from this project, only 4.3% of samples collected during the swimming season exceeded the PCR criterion. Therefore, the assessment of PCR use for the 2012 IR has been changed to fully supported.

Table 1. Caney Lake (081505) samples collected during 2012 swimming season, May 1, 2012 – October 10, 2012.

Site	Site Description	Sample Size	Average (MPN/100 mL)	Maximum (MPN/100 mL)	Samples > 400 MPN/100 mL During Swimming Season	Percentage Exceeding PCR Criterion
0807	Dam	12	250	1,333	2	
4261	1st arm from dam	12	40	230	0	
4262	2nd arm from dam	12	62	130	0	
4263	3rd arm from dam	12	49	310	0	
4264	4th arm from dam	12	70	280	0	
4265	5th arm from dam	12	28	96	0	
4266	Headwater arm	12	34	86	0	
4267	Centerline west	12	54	480	1	
4268	Centerline central	12	14	106	0	
4269	Centerline east	12	19	116	0	
4307	Head of headwater arm	6	163	380	0	
4308	Head of 4th arm from dam	6	766	2,600	3	
4309	Head of 3rd arm from dam	6	147	280	0	
Totals		138	101	2,600	6	4.3%

2. Application of coastal mercury TMDL to inland subsegments impaired due to mercury in fish

During review of the 2012 Integrated Report, LDEQ recognized that EPA TMDLs for nine coastal subsegments impaired due to mercury in fish tissue have been completed and are in place for inland water bodies within what EPA refers to as the TMDL “study area.”

http://www.epa.gov/waters/tmdl/docs/6hgLATMDLsReport_05Jun28.pdf

EPA’s study area consisted of all or portions of nine coastal Louisiana basins. The entire basin for six of nine basins in the study area is included in the TMDL, while three basins are partially included. LDEQ determined which inland subsegments reported with the suspected cause of impairment “mercury in fish tissue” are suitable for IR category (IRC) 4a based on association with EPA’s coastal mercury TMDL. Table 2 shows which subsegments previously reported in IRC 5 for mercury in fish tissue have been changed to IRC 4a.

Table 2. Subsegments with impairments due to mercury in fish tissue that will be changed from Integrated Report category 5 to Integrated Report category 4a based on EPA’s coastal TMDL for mercury.

Subsegment Number	Subsegment Description
LA030103_00	Calcasieu River-From Rapides-Allen Parish line to Marsh Bayou (Scenic)
LA030201_00	Calcasieu River-From Marsh Bayou to saltwater barrier (Scenic)
LA030702_00	English Bayou-From headwaters to Calcasieu River
LA030801_00	West Fork Calcasieu River-From confluence with Beckwith Creek and Hickory Branch to mainstem of Calcasieu River
LA030802_00	Hickory Branch-From headwaters to West Fork Calcasieu River
LA030803_00	Beckwith Creek-From headwaters to West Fork Calcasieu River
LA030804_00	Little River-From headwaters to West Fork Calcasieu River
LA030806_00	Houston River-From Bear Head Creek at LA-12 to West Fork Calcasieu River
LA050301_00	Bayou Nezpique-From headwaters to Mermentau River; includes intermittent portion of Beaver Creek
LA050301_00556751	Crooked Creek Reservoir-Located within subsegment LA050301_00. This unit is added for advisory tracking purposes only and is not a subsegment as defined by LAC 33:IX.1123.A. et seq. No other assessment is made for this lake.
LA050501_00	Bayou Queue de Tortue-From headwaters to Mermentau River
LA050601_00	Lacassine Bayou-From headwaters to Grand Lake
LA050603_00	Bayou Chene-From headwaters to Lacassine Bayou; includes Bayou Grand Marais
LA060102_00	Cocodrie Lake

Table 2. Subsegments with impairments due to mercury in fish tissue that will be changed from Integrated Report category 5 to Integrated Report category 4a based on EPA’s coastal TMDL for mercury.

Subsegment Number	Subsegment Description
LA110201_00537846	Old River (Nibletts Bluff)-Located within subsegment LA110201_00. This unit is added for advisory tracking purposes only and is not a subsegment as defined by LAC 33:IX.1123.A. et seq. No other assessment is made for this river.

3. Turbidity and fecal coliform impairments changed to Integrated Report Category 4a

Eight water body impairment combinations (WIC), one for turbidity and seven for fecal coliform, were inadvertently placed in IRC 5 in the draft 2012 IR rather than IRC 4a (TMDL completed). The IRC change is due to an error in the original 2012 IR and Assessment Database (ADB) reporting. When using ADB, WICs reported as IRC 4a and later found to be fully supporting the criterion are removed from the most recent IR cycle information in ADB. As a result, no record of TMDL completion remains in the current and future IR/ADB reporting cycles. Historical TMDL information is still available in archived ADB data sets. Furthermore, if a WIC was historically listed as IRC 4a, then reported as fully supporting, and then later reassessed as impaired, it is not readily apparent within ADB that a TMDL has been completed for the impairment. Therefore, WICs with completed TMDLs may be inadvertently reported as IRC 5 instead of IRC 4a. This was the case for these eight WICs. Based on this mistake in ADB IRC reporting, seven WICs for fecal coliforms and one WIC for turbidity are being changed from IRC 5 to IRC 4a. Table 3 lists the WICs being changed to IRC 4a. This is not a change in assessment. It is only a correction of IRC and TMDL tracking in ADB. LDEQ has updated IR review procedures to prevent such erroneous listings in future IRs.

Table 3: Water body impairment combinations changing from Integrated Report category 5 to Integrated Report category 4a.

Subsegment Number	Subsegment Description	Suspected Impairment
LA060101_00	Spring Creek-From headwaters to Cocodrie Lake (Scenic)	Turbidity
LA060208_00	Bayou Boeuf-From headwaters to Bayou Courtableau	Fecal Coliform
LA060401_00	Bayou Teche-From Keystone Locks and Dam to Charenton Canal	Fecal Coliform
LA060701_00	Tete Bayou	Fecal Coliform
LA060703_00	Bayou du Portage	Fecal Coliform

Table 3: Water body impairment combinations changing from Integrated Report category 5 to Integrated Report category 4a.

Subsegment Number	Subsegment Description	Suspected Impairment
LA060801_00	Vermilion River-Headwaters to LA-3073 bridge	Fecal Coliform
LA060802_00	Vermilion River-From LA-3073 bridge to ICWW	Fecal Coliform
LA060901_00	Bayou Petite Anse-From headwaters to Bayou Carlin	Fecal Coliform

4. Combining suspected impairments for turbidity, total suspended solids, and sedimentation/siltation into one suspected turbidity impairment in Louisiana’s Integrated Report

During the course of TMDL PACE development with the EPA, Region 6, the LDEQ identified five subsegments with varying combinations of suspected impairment due to turbidity, total suspended solids (TSS), and sedimentation/siltation. The 2012 IR lists 10 WICs on five subsegments for turbidity, TSS, or sedimentation/siltation. The 10 WICs are on the draft 303(d) list as IRC 5 (TMDL required) or 5RC (TMDL required but LDEQ is proposing to evaluate for criteria revisions). The suspected impairments were applied to the designated uses of Fish and/or Wildlife Propagation (FWP) and Outstanding Natural Resource Waters (ONRW).

When a combination of two or more WICs for turbidity, TSS, and sedimentation/siltation are reported in the IR for a single subsegment, a single TMDL is developed for the combination. For example, TMDLs were developed by Tetra Tech for the subsegments 040301, 040401, and 040903. The TMDLs were developed for one parameter and reported in a single document, *FINAL TMDLs for Total Suspended Solids, Sediment, and Turbidity for Selected Subsegments in the Lake Pontchartrain Basin, Louisiana* (Tetra Tech, Inc. 2012, http://www.epa.gov/waters/tmdl/docs/41568_ponch_tss_tmdl_2012f.pdf).

In this example, subsegment 040301 was assessed with the WICs of TSS and turbidity. Subsegment 040401 was assessed with sedimentation/siltation and turbidity, while 040903 was assessed with turbidity. This single TMDL report addressed all three WICs by “using TSS as a surrogate for turbidity to establish a loading for the TMDLs.” (Tetra Tech, 2012, Executive Summary, page ii). Likewise, LDEQ delists TSS and sedimentation/siltation WICs if the turbidity criterion is met for a subsegment.

Based on EPA’s TMDL development process and LDEQ’s IR reporting protocol described above, for IR reporting purposes LDEQ has combined the three impairments into a single suspected impairment for turbidity. This will reduce the TMDL PACE count from 10 WICs for multiple but related impairments to five WICs

for turbidity. The IRC for four of the five WICs will remain as 5 or 5RC, according to the original IRC listing. A TMDL was finalized on March 28, 2012 for the fifth WIC on subsegment 040401, placing this WIC in IRC 4a. Table 4 lists the affected subsegments, the original WICs, and how the WICs will be combined into the single suspected impairment of turbidity. This is not a change in assessment. It is only a modification to the tracking and reporting of existing impairments in the ADB system.

Table 4. Multiple water body impairment combinations to be combined into the single suspected impairment of turbidity.

Subsegment Number	Subsegment Description	F W P¹	O N R²	Multiple Causes of Impairment (IRC³)	Single Impairment (IRC³)
1. LA020201_00	Bayou Des Allemands-From Lac Des Allemands to old US-90 (Scenic)	X	X	Turbidity (5RC)	1. Turbidity (5RC)
2. LA020201_00	Bayou Des Allemands-From Lac Des Allemands to old US-90 (Scenic)	X	X	Total Suspended Solids (5RC)	
3. LA020301_00	Bayou Des Allemands-From US-90 to Lake Salvador (Scenic)	X	X	Total Suspended Solids (5)	2. Turbidity (5)
4. LA020301_00	Bayou Des Allemands-From US-90 to Lake Salvador (Scenic)	X	X	Turbidity (5)	
5. LA030201_00	Calcasieu River-From Marsh Bayou to saltwater barrier (Scenic)		X	Total Suspended Solids (5)	3. Turbidity (5)
6. LA030201_00	Calcasieu River-From Marsh Bayou to saltwater barrier (Scenic)		X	Turbidity (5)	
7. LA040401_00	Blind River-From Amite River Diversion Canal to mouth at Lake Maurepas (Scenic)	X	X	Turbidity (5)	5. Turbidity (4a ⁴)
8. LA040401_00	Blind River-From Amite River Diversion Canal to mouth at Lake Maurepas (Scenic)	X	X	Sedimentation/Siltation (5)	
9. LA120401_00	Bayou Penchant-From Bayou Chene to Lake Penchant	X	X	Total Suspended Solids (5)	6. Turbidity (5)
10. LA120401_00	Bayou Penchant-From Bayou Chene to Lake Penchant	X	X	Turbidity (5)	

¹ FWP – Fish and Wildlife Propagation Use

² ONR – Outstanding Natural Resource Use

³ IRC – Integrated Report Category

⁴ TMDL finalized 3/28/2012

5. Revision of IRC from 5 to 4a due to recently completed TMDLs

Water body impairment combinations found in table 5 were changed from IRC 5 to IRC 4a based on completion of TMDLs during the review period subsequent to the public notice period which ended February 29, 2012. Changes to IRC 4a were made in the ADB system and resulting IR spreadsheet used for Appendix A of the report. This is not a change in assessment. It is only an update in the tracking of TMDL completion in the ADB system.

Table 5. Water body impairment combinations changed from IRC 5 to IRC 4a during period between 2012 IR public notice and final submittal to EPA.

Water Body Subsegment	Waterbody Description	Suspected Impairment	Date TMDL Finalized
LA040102	Comite River-From Wilson-Clinton Hwy. To White Bayou	Fecal Coliform	3/28/2012
LA040103	Comite River-From White Bayou to Amite River	Fecal Coliform	3/28/2012
LA040201	Bayou Manchac-From headwaters to Amite River	Fecal Coliform	3/28/2012
LA040303	Amite River-Amite River Diversion Canal to Lake Maurepas	Mercury	3/28/2012
LA040304	Grays Creek-From headwaters to Amite River	Fecal Coliform	3/28/2012
LA040305	Colyell Creek; includes tributaries and Colyell Bay	Fecal Coliform	3/28/2012
LA040401	Blind River-Amite River Diversion canal to Lake Maurepas	Turbidity	3/28/2012
LA040401	Blind River-Amite River Diversion canal to Lake Maurepas	Mercury	3/28/2012
LA040403	Blind River-From headwaters to Amite River Diversion Canal	Mercury	3/28/2012
LA040501	Tickfaw River-From Mississippi state line to LA-42	Total Dissolved Solids	3/28/2012
LA040501	Tickfaw River-From Mississippi state line to LA-42	Mercury	3/28/2012
LA040503	Natalbany River-From headwaters to Tickfaw River	Fecal Coliform	3/28/2012
LA040504	Yellow Water River-From headwaters to Ponchatoula Creek	Fecal Coliform	3/28/2012
LA040504	Yellow Water River-From headwaters to Ponchatoula Creek	Total Dissolved Solids	3/28/2012
LA040505	Ponchatoula Creek and Ponchatoula River	Oxygen Demand	3/28/2012
LA040505	Ponchatoula Creek & Ponchatoula River	Fecal Coliform	3/28/2012
LA040603	Selsers Creek-From headwaters to South Slough	Fecal Coliform	3/28/2012
LA040701	Tangipahoa River-From Mississippi state Line to I-12	Mercury	3/28/2012
LA040703	Big Creek-From headwaters to Tangipahoa River	Fecal Coliform	3/28/2012

Table 5. Water body impairment combinations changed from IRC 5 to IRC 4a during period between 2012 IR public notice and final submittal to EPA.

Water Body Subsegment	Waterbody Description	Suspected Impairment	Date TMDL Finalized
LA040801	Tchefuncte River-From headwaters to Bogue Falaya River	Mercury	3/28/2012
LA040802	Tchefuncte River-From Bogue Falaya River to LA-22	Oxygen Demand	3/6/2012
LA040901	Bayou Lacombe-From headwaters to US-190	Oxygen Demand	3/2/2012
LA040905	Bayou Liberty	Mercury	3/28/2012
LA040906	Bayou Liberty	Mercury	3/28/2012
LA040910	Salt Bayou	Fecal Coliform	3/28/2012
LA041201	Bayou Labranche	Oxygen Demand	3/28/2012
LA041302	Lake Pontchartrain Drainage Canals	Fecal Coliform	3/28/2012

6. Removal of “Pesticides” insufficient data listings from Integrated Report

The LDEQ has reevaluated Clean Water Act 305(b) and 303(d) (Integrated Report (IR)) assessments for the insufficient data listings for “Pesticides” affecting twenty-eight water body subsegments (Attachment 1). The assessments were first reported during the early to mid-1990s. LDEQ based the impairment assessments on a non-data-driven process known as an “evaluative assessment.” Evaluative assessments reported during that time period were made on the presumption that pesticides *may* be present due to agricultural activities in the watershed. There was no supporting water quality data to support the assessments, and no individual, specific pesticide was reported.

Since that time period, LDEQ has discontinued the use of evaluative assessments and successfully removed many impairment and insufficient data listings originally reported using evaluative assessments. In 2004, the twenty-eight pesticides impairment listings were changed to insufficient data listings. The change was made with EPA Region 6 approval. At the time, Region 6 recognized the pesticide listings were originally included in the IR with no supporting data and, therefore, more properly categorized as having insufficient data to make an assessment. EPA Region 6 did not disapprove the change to insufficient data. As a result of these changes the pesticide listings for the twenty-eight water bodies are no longer on Louisiana’s §303(d) list of impaired waters.

EPA Region 6 recommended, and LDEQ agrees, the twenty-eight pesticides insufficient data listings found in table 6 should be removed from the Integrated Report due to the lack of data used in the original evaluative assessments. Therefore, LDEQ has removed the twenty-eight pesticides insufficient data listings from Louisiana’s Water Quality Integrated Report. LDEQ will continue to evaluate available information to determine the potential for inclusion of specific pesticides in future IRs based on validated data and promulgated criteria.

Table 6. Louisiana Department of Environmental Quality subsegments currently reported with the suspected cause of impairment “Pesticides” on the 2010 and draft 2012 Integrated Reports.

Subsegment Code	Waterbody Description	Suspected Causes	Basis for Original Suspected Impairment
LA010701	Bayou Teche - Berwick to Wax Lake Outlet	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA040401	Blind River - From Amite River Diversion Canal to mouth at Lake Maurepas (Scenic)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA040504	Yellow Water River - Origin to Ponchatoula Creek	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA040908	Bayou Bonfouca - LA Highway 433 to Lake Pontchartrain (Estuarine)	Pesticides	Original 1996 evaluative assessment based on non-objective, subjective guidance
LA070203	Devil's Swamp Lake and Bayou Baton Rouge	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA070503	Capitol Lake	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA070504	Monte Sano Bayou - From U.S. Hwy. 61 to the Mississippi River confluence	Pesticides	Original 1996 evaluative assessment based on non-objective, subjective guidance
LA100306	Kelly Bayou - Arkansas State Line to Black Bayou	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA100406	Flat River - Headwaters to Loggy Bayou	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA100506	Loggy Bayou - Flat River to Red River	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA101606	Bayou Cocodrie - Wild Cow Bayou to Red River	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120105	Chamberlin Canal	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120108	False River	Pesticides	Original 1988 evaluative assessment based on non-objective, subjective guidance

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Subsegment Code	Waterbody Description	Suspected Causes	Basis for Original Suspected Impairment
LA120109	Intracoastal Waterway - Morgan City to Port Allen Route - Port Allen Locks to Bayou Sorrel Locks	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA120201	Lower Grand River and Belle River - Bayou Sorrel Lock to Lake Palourde (includes Bay Natchez, Lake Natchez, Bayou Milhomme, and Bayou Long)	Pesticides	Original 1990 evaluative assessment based on non-objective, subjective guidance
LA120202	Bayou Black - Intracoastal Waterway to Houma	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120204	Lake Verret and Grassy Lake	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120205	Lake Palourde	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120301	Bayou Terrebonne - Thibodaux to boundary between segments 1203 and 1206, at Houma	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120302	Company Canal - From Bayou Lafourche to Intracoastal Waterway (Name changed to Bayou Folse)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120303	Lake Long (Name changed to Bayou L’Eau Bleu)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120501	Bayou Grand Caillou - Houma to Bayou Pelton	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120502	Bayou Grand Caillou - From Bayou Pelton to the boundary between segments 1205 and 1207 (Estuarine)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120503	Bayou Petite Caillou - From Bayou Terrebonne to Klondyke Road Bridge	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120504	Bayou Petite Caillou - Klondyke Road Bridge to boundary between segments 1205 and 1207 (Estuarine)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance

Table 6. Louisiana Department of Environmental Quality subsegments currently reported with the suspected cause of impairment “Pesticides” on the 2010 and draft 2012 Integrated Reports.

Subsegment Code	Waterbody Description	Suspected Causes	Basis for Original Suspected Impairment
LA120505	Bayou Du Large - Houma to Marmande Canal	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120506	Bayou Du Large - Marmande Canal to the boundary between segments 1205 and 1207 (Estuarine)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance
LA120605	Bayou Pointe Au Chien - Source to boundary between segments 1206 and 1207 (Estuarine)	Pesticides	Original 1992 evaluative assessment based on non-objective, subjective guidance

7. Removal of chlorine suspected impairment from Monte Sano Bayou (070504)

The LDEQ has reevaluated the Clean Water Act IR suspected impairment of chlorine on Monte Sano Bayou (070504). This assessment was first reported during the early to mid-1990s based a non-data-driven process known as an “evaluative assessment.” Evaluative assessments reported during that time period were made on the presumption that a suspected impairment *may* be present due to land use practices or potential dischargers in the watershed. There was no supporting water quality data to support the assessment.

Since that time period, LDEQ has discontinued the use of evaluative assessments and successfully removed many impairment and insufficient data listings originally reported using evaluative assessments. Prior to 2004, the chlorine listing was placed in IRC 2 indicating insufficient data to make an assessment; specifically in this case, no data. In 2004, the listing was changed to IRC 5 due to a Consent Decree placed upon U.S. EPA. The impairment has remained in IRC 5 since the 2004 IR. Due to the lack of data used in the original evaluative assessments LDEQ has removed the chlorine listing from Louisiana’s Water Quality Integrated Report.