UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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NOV 18 2011

Mr. Mark R. Vickery, P.G.
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Dear Mr. Vickery:

Thank you for submitting Texas' 2010 Clean Water Act ("CWA" or "the Act") Section 303(d) list of water quality limited water bodies. The Environmental Protection Agency (EPA) has conducted a complete review of this submission, dated September 17, 2010 and all supporting documentation and information.

Based on its review, EPA has determined that Texas' 2010 list of water quality limited segments (WQLSs) still requiring TMDLs meets the requirements of Section 303(d) of the CWA and EPA's implementing regulations. Therefore, by this letter, EPA hereby approves Texas' decision to list all assessment units found in the 2010 Texas 303(d) List as submitted. Please note that EPA identified one assessment unit (Drum Bay, 2435OW_01) that was excluded from the 303(d) list due to an administrative oversight. The Texas Commission on Environmental Quality has agreed to address this oversight in calendar year 2011 so as to assure the correct classification of this assessment unit in the State's integrated report. As such, EPA will defer action on the exclusion of this assessment unit from the 2010 303(d) list until it takes action on the 2012 303(d) list due April 1, 2012. Documentation supporting EPA's determination in this matter is contained in the enclosed record of decision.

In 2005, EPA issued guidance for integrating the development and submission of 2006 Section 305(b) water quality reports and Section 303(d) lists of impaired waters. See Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act, July 29, 2005. EPA provided supplemental guidance to assist in the preparation and review of 2008 integrated water quality reports in October 2006, and again for 2010 integrated water quality reports in May 2009. See Memorandum from Diane Regas, Director, Office of Wetlands, Oceans, and Watersheds, Office of Water, EPA Headquarters, to Water Division Directors, Regions 1 – 10, "Information Concerning 2008 Clean Water Act Section 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions", October 12, 2006 and see also Memorandum from Suzanne Schwartz, Acting Director, Office of Wetlands, Oceans, and Watersheds, Office of Water, EPA Headquarters, to Water Division Directors, Regions 1 – 10, "Information Concerning 2010 Clean Water Act Section 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions", May 5, 2009. These guidance documents recommend that States develop an integrated report on the quality of their waters by placing all waters into one of five assessment categories. If a State follows this guidance, category 5 of the integrated report constitutes the State's Section 303(d) list. The State of Texas has developed an integrated report consistent with this guidance. Therefore, today's action is limited to only those waters found in category 5 of the integrated report.

Texas' Section 303(d) list submission includes 438 water body segments including 718 assessment units. A total of 1012 impairments were identified by assessment unit. The State listings are based on assessment methodologies and data and information described in the State submittal. EPA acknowledges and supports the State's approach of retaining on the list all previously listed waters until new data and information are available to support a change in their assessment. Priority rankings for all listed waters are established as required by Section 303(d) and its implementing regulations. Priorities are established based on the severity of pollution and the uses assigned to those waters, as well as other factors. As of August 25, 2010, 37 waterbody segments (54 assessment units) were targeted for TMDL development within the next two years, consistent with the targeting requirement of 40 C.F.R. §130.7(b)(4).

TCEQ's public participation process included solicitations of public comment through public/stakeholder meetings, mailing lists, web site postings, and the Texas Register. A responsiveness summary, prepared by the State, explained how the State considered public comment in the final listing decisions.

We commend you for your efforts to develop the 2010 Section 303(d) list of water quality limited water bodies. If you have questions on any of the above information, feel free to give me a call at 214/665-3187 or have your staff contact Mike Schaub at 214/665-7314.

Sincerely,

WK Honker

William (Bill) K. Honker, P.E.
Acting Director
Water Quality Protection Division

Enclosure: record of decision

Review of Texas' 2010 Section 303(d) Water Body List

Date of Transmittal Letter from State: September 17, 2010
Date of Receipt by EPA: September 24, 2010

I. Statutory and Regulatory Background

A. Identification of WQLSs for Inclusion on Section 303(d) List

Section 303(d)(1) of the Clean Water Act (CWA) directs States to identify those waters within its jurisdiction for which effluent limitations required by §301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The §303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of §303(d).

EPA regulations provide that States do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the CWA, (2) more stringent effluent limitations required by State or local authority, and (3) other pollution control requirements required by State, local, or federal authority. See 40 C.F.R. §130.7(b)(1).

B. Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing §303(d) lists, States are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the State's most recent §305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any §319 nonpoint assessment submitted to EPA. See 40 C.F.R. §130.7(b)(5). In addition to these minimum categories, States are required to consider any other data and information that is existing and readily available. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available. See Guidance for Water Quality-Based Decisions: The TMDL Process, EPA Office of Water, 1991, Appendix C ("EPA's 1991 Guidance"). While States are required to evaluate all existing and readily available water

quality-related data and information, States may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring States to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 C.F.R. §130.7(b)(6) require States to include as part of their submissions to EPA documentation to support decisions to rely or not rely on particular data and information and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; (3) a rationale for not using existing and readily available data and information; and (4) any other reasonable information requested by the Region.

C. Priority Ranking

EPA regulations also codify and interpret the requirement in §303(d)(1)(A) of the CWA that States establish a priority ranking for listed waters. The regulations at 40 C.F.R. §130.7(b)(4) require States to prioritize waters on their §303(d) lists for TMDL development, and also to identify those water quality limited segments (WQLSs) targeted for TMDL development in the next two years. In prioritizing and targeting waters, States must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See §303(d)(1)(A). As long as these factors are taken into account, the CWA provides that States establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and state or national policies and priorities. See 57 FR 33040, 33045 (July 24, 1992), and EPA's 1991 Guidance.

II. A Description of the State of Texas' Final Submission

EPA Region 6 received the *2010 Texas Integrated Report – Texas 303(d) List (Category 5)* on September 24, 2010. The Texas Commission on Environmental Quality (TCEQ) submitted the final list along with supporting documentation that included the following:

- *2010 Guidance for Assessing and Reporting Surface Water Quality in Texas*, describing the data used to prepare the 2010 Texas Water Quality Inventory and §303(d) list, as well as the screening and assessment methods used in evaluating the data;

- *2010 Texas Integrated Report – Response to Public Comment*, which includes TCEQ's responses and a summary of any actions taken in response to each public comment received during the public comment period of February 5, 2010 to March 8, 2010;

- *2010 Texas Integrated Report Index of Water Quality Impairments*, which lists all category 4 and 5 waters in the integrated report.

- *2010 Water Body Assessments by River Basin*, which includes assessment data used to determine use support for all water bodies assessed in 2010;

- *Executive Summary: 2010 Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d)*, which provides background on the State's integrated report, a summary of the categories to which water bodies were assigned, and a summary of recent changes to the 303(d) list between 2008 and 2010;

- *Use Support Summary: 2010 Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d)*, which describes monitoring and assessment information compiled for each of Texas's major water body types: streams, reservoirs, estuaries, and gulf waters as well as overall use attainment status of uses for each of the water body types;

- *2010 Texas Water Quality Inventory Water Bodies Evaluated*, a list of all water bodies assessed in 2010;

- *2010 Texas Integrated Report - Water Bodies and Parameters Removed from the 303(d) List*, including the reasons for their removal;

- *2010 Water Bodies and Impairments Added to the Texas 303(d) List*, including the subcategory in category 5 to which they were assigned;

- *2010 Texas Integrated Report - Water Bodies with Concerns for Use Attainment and Screening Levels;*

- *2010 Texas Integrated Report – Potential Sources of Impairments and Concerns;*

- *2010 Texas Integrated Report Categories by Segment;*

- *Benefits and Costs of Surface Water Quality Programs;*

- *Trophic Classification of Texas Reservoirs;*

- *2010 Assessment Unit Station Relationship Changes;*

- *Schedule to Develop TMDLs in 2011 for Category 5 Water Bodies* showing the schedule of planned TMDL submission;

- Electronic data files summarizing the assessment results for EPA's Assessment Database, including:

    - Designated uses;
    - Summary of the attainment status for each designated use;
    - Description of the water body size and location;
    - Assigned category for each assessment unit (AU);
    - Parameters not meeting water quality standards (WQSs);
    - Sources identified with each parameter which did not meet WQSs.

III. Analysis of the State of Texas' Submission

A. Identification of Waters and Consideration of Existing and Readily Available Water Quality-Related Data and Information

EPA reviewed the State's submission, and concludes that the State developed its §303(d) list in compliance with §303(d) of the Act and 40 C.F.R. §130.7. EPA's review is based on its analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters that are required to be listed.

According to TCEQ's *2010 Guidance for Assessing and Reporting Surface Water Quality in Texas*, TCEQ considered all existing and readily available water quality-related data and information to develop the list. The list was developed based primarily on the data available in the TCEQ integrated database. The TCEQ integrated database includes data collected by TCEQ, the U. S. Geological Survey, the Texas Department of State Health Services (TDSHS), the Texas Parks and Wildlife Department, the Texas State Soil and Water Conservation Board, the Texas General Land Office, numerous cities, and the Texas Clean Rivers Program Planning Agencies (and associated partners). Other routine data and information was considered from sources such as fish consumption

advisories, aquatic life closures, and oyster waters closures issued by TDSHS. TCEQ also solicited data and information during a formal public comment period from February 5, 2010 to March 8, 2010. TCEQ posted a draft list and supporting documentation on the TCEQ website for public review during this comment period.

EPA reviewed TCEQ's description of the data and information it considered and its methodology for identifying waters. The State indicated "the value and accuracy of all data are evaluated by the TCEQ water quality staff." For those waters being approved on the 2010 section 303(d) list, EPA concludes that the State properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 C.F.R. §130.7(b)(5).

The State also provided its rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters in the submitted document *2010 Texas Integrated Report – Response to Public Comment*. TCEQ considered all data, information, and public comments received during the public comment period. However, there were some restrictions regarding time and data quality. TCEQ generally only considers data collected during the most recent seven-year assessment period (December 1, 2001 to November 30, 2008) and up to ten years, if needed, to attain a minimum number of samples for assessment. The State's decision to restrict the use of data and information for these reasons is reasonable and appropriate. The State also requires that data be collected under a TCEQ-approved quality assurance project plan or that documentation of the quality assurance methodology be made available for TCEQ to evaluate.

The State has demonstrated, to EPA's satisfaction, good cause for not including on its 2010 §303(d) list all waters found in the document *2010 Texas Integrated Report - Water Bodies and Parameters Removed from the 303(d) List*. This document identifies one of the following reasons for no longer listing each of 85 water body segment-pollutant pairs (133 AU-pollutant pairs) on the 2010 §303(d) list:

1) A TMDL has been developed by TCEQ and approved by EPA for this parameter (Category 4a).

2) Expected to meet water quality standards in the near future due to other State, local, or federal requirements (Category 4b).

3) Non-support of the water quality standards is not caused by a pollutant and cannot be addressed by a TMDL (Category 4c).

4) The most recent set of data demonstrates that water quality standards are now met.

5) Meets a revised water quality standard.

6) Because of a new procedure for listing and based on a review of data used in the original listing, the applicable water quality standards are now met.

7) Error in the basis for the original listing.

8) The water body ID of this water body changed, because of a correction or a new segment.

As provided in 40 C.F.R. §130.7(b)(6)(iv), EPA requested that the State more fully demonstrate good cause for not including on the 2010 §303(d) list several specific waters identified in the document *2010 Texas Integrated Report - Water Bodies and Parameters Removed from the 303(d) List* as well as other specifically identified waters not currently on the 2010 list for which data were existing and readily available. In response, the State promptly provided additional data and information on these waters. EPA finds that the State has generally demonstrated good cause to remove waters from the 2010 §303(d) list or to not otherwise add specifically identified waters to the list. All such information pertaining to the State's "good cause" demonstration for several specifically identified waters is found in the administrative record for the 2010 §303(d) list action. A brief discussion of EPA's action to approve the exclusion of a few waters of note from the 2010 list is provided below.

<u>Discussion of EPA's deferred action on the State's exclusion of Drum Bay (segment 2435OW) from the 2010 303(d) list</u>

In comments on the draft 2010 303(d) list, EPA requested that AU 2435OW_01 within Drum Bay (area adjacent to Christmas Bay) be maintained on the 303(d) list for bacteria if this water was "restricted" or "prohibited" to oyster harvest by the Texas Department of State Health Services based on existing or historic water quality data showing high fecal indicator levels above the water quality criterion. In its response to this comment, TCEQ agreed that this portion of Drum Bay should be on the 303(d) list and that this change would be made prior to its submission to EPA. However, this change was not actually made in the final version of the list submitted to EPA. It remained in category 4c of the State's integrated report. In discussions with TCEQ, it became apparent that this was an unintended administrative oversight by TCEQ.

In order to address EPA's concerns and the need to reclassify the oyster water impairment in Drum Bay (Segment 2435OW) in the integrated report, TCEQ committed to incorporate this water body into the existing approved Upper Gulf Coast Oyster Waters Bacteria TMDL. This will be facilitated through the development of new information that will support amending the TMDL to accommodate this additional impairment. TCEQ also committed to include this amendment to the TMDL in its update of the State's water quality management plan (WQMP) in calendar year 2011.

By virtue of the agreement between EPA and TCEQ that this portion of Drum Bay is impaired and in need of a TMDL, and the State's commitment to take immediate action to incorporate Drum Bay into an existing TMDL in the very near future, EPA will defer any action on the State's placement of 2435OW_01 in category 4c of the 2010 integrated report until it takes action on the State's 2012 303(d) list. As a part of its review of the 2012 303(d) list, EPA will assess the status of the Upper Gulf Coast Oyster Waters Bacteria TMDL and verify whether Drum Bay has been incorporated into this TMDL. If Drum Bay is incorporated into this TMDL as planned, EPA understands that Drum Bay will be re-assigned to category 4a of the State's 2012 integrated report. If the TCEQ is unable to finalize the information necessary to support the WQMP update, EPA would expect that the affected area of Drum Bay would be placed back on the 303(d) list until the WQMP update has been approved.

Discussion of applicability of water quality standards to Harris County channelized ditches and streams

In its 2010 revisions to the State's water quality standards, TCEQ adopted site-specific aquatic life uses and dissolved oxygen criteria for unclassified channelized ditches and streams in Harris County. These uses and criteria apply generically to perennially flowing "concrete lined and maintained" and "unmaintained" channelized ditches and streams throughout Harris County. A limited aquatic life use applies to "concrete lined and maintained" channelized ditches and streams. An intermediate aquatic life use applies to "unmaintained" channelized ditches and streams. EPA has since approved these changes to the State's water quality standards.

The flow status and observed channel types determine the applicability of aquatic life uses and criteria to these waters. In practice, these are determined using TCEQ or Clean Rivers Program partner agency-collected data and information, and/or the analysis of aerial photographs and maps of the region. In future list cycles, we understand that TCEQ will add a new descriptor to the assessment database to better describe the applicable uses of urban channelized ditches and streams and that this information can be provided in reports that accompany the integrated report. This information will greatly assist EPA in its review of future

integrated reports. As a part of these future reviews, EPA may periodically request data and information used to assign aquatic life uses to unclassified urban channelized ditches and streams in Harris County to verify the aquatic life uses and associated criteria being applied in these waters.

Discussion of water toxicity study to re-assess 12 assessment units (AUs) in the Sabine River Basin

In 2006, nine AUs within the Sabine River Basin were considered for inclusion on the 2006 303(d) list for toxicity in water. These AUs are within the following segments: 0502B (Caney Creek, AUs_01, _02) 0503D (Little Cow Creek, AU_01), 0504 (Toledo Bend Reservoir, AU_01), 0505 (Sabine River above Toledo Bend Reservoir, AU_01), 0505D (Rabbit Creek, AU_01), 0506A (Harris Creek, AU_01), 0506C (Wiggins Creek, AU_01), and 0513 (Big Cow Creek, AU_01). Three additional AUs in the basin were listed on the 2006 303(d) list for toxicity in water, including: 0502A (Nichols Creek, AU_01), 0504C (Palo Gaucho Bayou, AU_01), and 0506G (Little White Oak Creek, AU_01). The Sabine River Authority of Texas (SRA) conducted ambient water toxicity tests, biological community assessments, and watershed characterizations to enhance their database between 1994 and 2004. Samples analyzed by SRA from the above 12 AUs demonstrated chronic toxicity suggesting a possible impairment of aquatic life uses in these waters.

Findings of chronic toxicity in water in many portions of the Sabine River Basin are considered unlikely by SRA. SRA believes that there are sufficient questions about whether impairments exist based on issues with the sample protocol used, fungal interferences in some tests, and the existence of biological data from the same waters which do not indicate an impairment of the designated use. Therefore, TCEQ proposed that additional chronic toxicity tests be performed on a number of waters throughout the basin to verify their status. EPA reviewed chronic toxicity test data provided by TCEQ and SRA and agreed that the collection and examination of additional information about these waters was warranted to confirm their status with respect to the 303(d) list.

To date, it is our understanding that no additional toxicity testing at any of the above sites has been completed since 2006.

As a part of its 2010 integrated report submission, TCEQ proposed to remove the 3 AUs found on the 2006 and 2008 303(d) lists for toxicity in water, including Nichols Creek, Palo Gaucho Bayou, and Little White Oak Creek. TCEQ provided historic data and information in support of this proposal. EPA has reviewed these data and information, as well as biological data provided for many of the other AUs listed above. EPA has determined that biological data support the removal from consideration for

listing, or further testing, of 5 AUs (0502B_01, 0502B_02, 0505D_01, 0506A_01, and 0513_01). Biological data indicated a level of support that met, or exceeded, the designated or presumed aquatic life use based on two or more sampling events during the same general timeframe in which toxicity tests were conducted. All other sites either lacked sufficient biological data or such data were collected several years prior to the timeframe in which toxicity testing was conducted.

For those 7 remaining AUs for which EPA has not received adequate data or information to verify their water quality status, and in deference to the agreement in 2006 between EPA and TCEQ that additional toxicity testing would occur in these waters, EPA requested that additional testing be conducted. TCEQ and SRA have since provided a study plan to resolve questions concerning ambient toxicity test results. We understand that implementation of this study plan is ongoing.

Additional data is presently being collected using a tiered approach to verify whether toxic conditions exist at these sites. The first tier includes ambient toxicity tests and biological sampling on selected sites. All ambient toxicity tests are being conducted utilizing 96-hour acute tests provided by EPA's Houston Lab. After one year of biological sampling and quarterly ambient toxicity tests the results will be reviewed. If the Tier 1 results indicate a lack of toxic conditions, then no further tests will be conducted and the 7 remaining AUs would not be listed as impaired for toxicity. If the results indicate toxic conditions at any of the sites, then a second tier of additional ambient toxicity tests will be conducted in all of the AUs. The Tier 2 tests will continue until sufficient data is collected to assess the AUs and classify them appropriately in the 2012 integrated report.

In the meantime, EPA supports the determination to exclude these waters from the 303(d) list. EPA supports maintaining these 7 AUs in category 3 of the integrated report for toxicity in water as appropriate, or as a "pending issue" in TCEQ's assessment database until this process is completed.

<u>Discussion of EPA's disapproval of the State's proposed human health criterion for mercury in fish tissue and implications on the State's 303(d) list</u>

As previously noted, one of the types of information considered by TCEQ in its development of the 2010 303(d) list was fish consumption advisories as issued by TDSHS. In TCEQ's *2010 Guidance for Assessing and Reporting Surface Water Quality in Texas*, the "issuance of an advisory or aquatic life order by the DSHS indicates a violation of Texas Surface Water Quality Standards (TSWQS), specifically the narrative criteria that surface waters should not be toxic to humans from the consumption of aquatic organisms." As such, TCEQ considers the narrative fish

consumption use to be not supported when TDSHS issues a restricted consumption advisory, a no-consumption advisory or an aquatic life closure. In cases where the TDSHS cites specific contaminants (e.g., heptachlor epoxide; DDE, mercury etc.) as a public health hazard in the risk characterization supporting the advisory decision, TCEQ will list these same specific contaminants on the 303(d) list. In cases where only general classes of pollutants, as opposed to specific contaminants, are identified as public health hazards in the advisory or risk characterization, TCEQ will independently assess health risk data in the TDSHS risk characterization. It should be noted that assessments of data in TDSHS risk characterizations by TCEQ have only been required when TDSHS has posted advisories for general classes of organic compounds. No such exercise has been required for those waters where mercury is considered a public health hazard. TDSHS has historically identified mercury as a specific hazard when it has posted advisories for waters with elevated levels of mercury in fish tissue.

In a letter dated June 29, 2011, from Miguel Flores, Director, Water Quality Protection Division, US EPA Region 6 to L'Oreal Stepney, Deputy Director, Office of Water, TCEQ, EPA disapproved TCEQ's proposed human health criterion for mercury in fish tissue (0.7 mg/kg). In its letter, EPA recommended that the State "may resolve this disapproval action by adopting a human health criterion equivalent to, or as protective as, EPA's CWA §304(a) mercury human health criterion recommendation of 0.3 mg/kg (measured in fish tissue)" within the next three years. In keeping with this timeline, EPA accepts the State's present use of narrative advisory information provided by TDSHS as a basis to list mercury-affected waters on the 303(d) list. Once TCEQ adopts a numeric water quality criterion of 0.3 mg/kg, or another value that is scientifically defensible and protective of the designated use, EPA would expect the State to apply this criterion to all fish tissue data collected across the State.

Waters to be removed from the 303(d) list and placed in category 4b of the Texas integrated report pursuant to 40 CFR 130.7(b)(1)(iii)

EPA regulations recognize that alternative pollution control requirements may obviate the need for a TMDL. Waters are not required to be included on the §303(d) list if technology based effluent limitations required by the Act, more stringent effluent limitations required by State, local, or Federal authority, or "[o]ther pollution control requirements (e.g., best management practices) required by local, State or Federal authority" are stringent enough to implement applicable water quality standards within a reasonable period of time. See 40 CFR 130.7(b)(1).

The State has demonstrated that there are other pollution control requirements implemented by State, local, or Federal authority that will result in attainment of water quality standards in segment 1810 (Plum

Creek). Waters removed from the 303(d) list on the basis that alternative pollution control requirements will result in water quality standards attainment are placed into category 4b of the State's integrated 303(d)/305(B) report. TCEQ provided to EPA its rationale for placing the above water body into category 4b of the State's integrated report consistent with the 6 elements provided in EPA's 2006 integrated report guidance and Attachment 2 of EPA's 2008 integrated reporting clarification memorandum. See Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act, EPA Office of Water, July 2005 and see also Memorandum from Diane Regas, Director, Office of Wetlands, Oceans, and Watersheds, Office of Water, EPA Headquarters, to Water Division Directors, Regions 1 – 10, "Information Concerning 2008 Clean Water Act Section 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions", October 12, 2006. EPA believes this rationale adequately demonstrates how other pollution control requirements will lead to water quality standards attainment in a reasonable period of time. This rationale is found in the administrative record for the 2010 §303(d) list approval action and is summarized in Table 1 below.

Table 1: Water body to be removed from the Texas §303(d) list pursuant to 40 CFR 130.7(b)(1)(iii) and summary of other pollution control requirements

SegID	Assessment Units	Segment Name	Pollutant	Other Pollution Control Requirement
1810	1810_01, 1810_02, 1810_03	Plum Creek	Bacteria	The Plum Creek Watershed Protection Plan describes both point and non-point source management measures to be implemented throughout the Plum Creek watershed for the reduction of bacteria.

EPA's 2008 Integrated Reporting Clarification Memorandum specifies six elements that should be included in a State's rationale for including waters in category 4b. These include (1) a statement of the problem causing the impairment, (2) a description of the proposed implementation strategy and supporting pollution controls necessary to achieve water quality standards, including the identification of point and nonpoint source loadings that when implemented assure the attainment of all applicable water quality standards, (3) an estimate or projection of the time when water quality standards will be met, (4) a reasonable schedule for implementing the necessary pollution controls, (5) a description of, and schedule for, monitoring milestones for tracking and reporting progress to EPA on the implementation of the pollution controls, and (6) a commitment to revise as necessary the implementation strategy and corresponding pollution

controls if progress towards meeting water quality standards is not being shown.

To support assignment of three impaired AUs in Plum Creek to category 4b of the State's integrated report, the State cited the ongoing efforts associated with the 2008 *Plum Creek Watershed Protection Plan.* See Plum Creek Watershed Protection Plan, February, 2008. The *Plum Creek Watershed Protection Plan* (WPP) reflects the voluntary planning efforts of the Plum Creek Watershed Partnership (Partnership), a group composed of local stakeholders, to address the bacteria and nutrient concerns in Plum Creek. This WPP was accepted by EPA Region 6 as satisfying the nine elements of an acceptable watershed-based plan as described in EPA's 2004 Nonpoint Source Program Guidelines. See 2004 Nonpoint Source Program and Grants Guidelines for States and Territories, 68 Fed. Reg. 60653-60674, 2003.

EPA Region 6 carefully reviewed the WPP and the State's category 4b demonstration to evaluate the State's decision to exclude the three AUs at issue from category 5 (the §303(d) list) of the integrated report. EPA's review closely followed the EPA Region 6 process for determining the eligibility of a watershed-based plan to serve as an alternative to a TMDL. See May 23, 2007 enclosure to memorandum from Mr. Miguel Flores, Director, Water Quality Protection Division, EPA Region 6, to Region 6 State Water Quality Program Managers, "EPA Region 6 Process for Review of Watershed-based Plans in lieu of TMDL's". EPA's assessment of whether the category 4b demonstration and WPP sufficiently address each of the six required 4b elements is described below.

- **Element 1. Identification of segment and statement of the problem causing the impairment.**

  Segment description**:** The WPP and the State's category 4b demonstration describe the nature of the impairment of Plum Creek, classified by the Texas Commission on Environmental Quality (TCEQ) as segment 1810 and located in portions of Caldwell and Hays Counties within the Guadalupe River Basin in south central Texas. The stream originates in the City of Kyle and flows 52 miles through the Texas Blackland Prairie and East Central Texas Plains ecoregions, past the Cities of Lockhart and Luling, to its confluence with the San Marcos River. Segment 1810 is comprised of three assessment units including: 1810_01 (from the confluence with the San Marcos River near Luling to approximately 2.5 miles upstream of the confluence with Clear Fork Plum Creek), 1810_02 (from approximately 2.5 miles upstream of confluence with Clear Fork Plum Creek to approximately 0.5 mile upstream of State Highway 21), and

1810_03 (from approximately 0.5 mile upstream of State Highway 21 to the upper end of the segment in the City of Kyle).

Impairment and pollutant causing impairment: The category 4b demonstration clarifies that each of the three assessment units (AUs) comprising the segment have been identified as having primary contact recreation use impairments due to high levels of indicator bacteria (*E. coli*) in excess of the applicable water quality criterion (assessed as a rolling 7-year geometric mean of 126 cfu/100mL). The assessment period for the *2010 Texas Integrated Report – Texas 303(d) List (Category 5)* is December 2001 through November 2008. The 2010 integrated report identifies the geometric mean for AU 1810_01 as 199.2 cfu/100mL, AU 1810_02 as 141.0 cfu/100mL, and AU 1810_03 as 235.1 cfu/100mL.

Sources of pollutant causing impairment: The WPP and category 4b demonstration identify the primary contributors of bacteria as being nonpoint source (NPS) in nature, including urban runoff, septic system failures, livestock, pets, wildlife, and invasive species (feral hogs). However, the impairment is also attributed to point sources (wastewater treatment facilities (WWTFs)) that contribute to *E. coli* loads along certain portions of the segment. Estimates of the magnitude and locations of bacteria loadings by source were explicitly identified in the WPP. These estimates are presented in Chapter 6 and Appendix F of the WPP.

- **Element 2. Description of pollution controls and how they will achieve water quality standards**.

  Water quality target**:** The WPP and the State's 4b demonstration identify the applicable criterion for the primary contact use (geometric mean of 126cfu/100mL) as the target which the proposed management measures are designed to achieve.

  Point and non point source loading that when implemented will achieve water quality standards: The WPP identifies bacteria load reductions of 65%, 15%, and 41% at 3 monitoring stations within assessment units 1810_03, 1810_02, and 1810_01 respectively. Load duration curves (LDCs) were used to understand general pollutant loading and to estimate load reductions needed to achieve water quality standards. LDCs were developed utilizing historical water quality and flow data for each of the three AUs in order to examine the assimilative capacity of Plum Creek and the existing loading of *E. coli*. LDCs are presented and explained on pp. 36-39 and in Appendix E of the WPP. Tables 5.1 and 5.2 describe the

existing annual loading, the allowable annual loading, and the reduction in *E. coli* needed for the critical condition for each AU.

Controls that will achieve water quality standards: The WPP outlines a variety of controls that, if implemented, will improve and ultimately restore water quality in Plum Creek. Based on a spatial analysis of potential loading from different sources of *E. coli*, stakeholders identified specific subwatersheds of Plum Creek where specific management measures tailored to contributing sources/land uses would be implemented to reduce bacteria loading. Practices and programs implemented or planned for implementation in specific areas of the Plum Creek watershed fall into 5 general categories: urban non point source management, wastewater management, agricultural non point source management, wildlife and non-domestic animal management, and outreach and education. Specific measures within each of the above categories are outlined in the category 4b demonstration as well as in Chapter 7 of the WPP. These measures, the parties responsible for their implementation, implementation milestones, and the cost for each measure, are presented in Tables 10.1 and 10.2 of the WPP. Table 10.3 of the WPP describes the load reductions expected from full implementation of all management measures for each of the impaired AUs.

Based on what is known about needed load reductions at each monitoring station (based on LDCs) and specific bacteria source areas in the watershed (identified using spatial analysis tools), EPA believes that there is a reasonable expectation that the management measures proposed in the WPP are appropriately targeted and will result in the necessary bacteria load reductions to meet water quality standards.

Description of requirements under which pollution controls will be implemented: As discussed in EPA's 2006 Integrated Report Guidance, EPA considers a number of factors in evaluating whether a particular set of pollution controls are in fact "requirements" as specified in EPA´s regulations, including: (1) authority (local, State, Federal) under which the controls are required and will be implemented with respect to sources contributing to the water quality impairment (examples may include: self-executing State or local regulations, permits, and contracts and grant/funding agreements that require implementation of necessary controls); (2) existing commitments made by the sources to implement the controls (including an analysis of the amount of actual implementation that has already occurred); (3) availability of dedicated funding for the

implementation of the controls; and (4) other relevant factors as determined by EPA depending on case-specific circumstances.

Authority: In EPA's review of the category 4b demonstration and the WPP, it first evaluated the authorities under which the controls are required and assessed their potential impact on sources contributing to the impairment. Point source discharges will be controlled through the State's existing permitting process. However, changes to some of the requirements in permits are expected to improve water quality. Historically, TCEQ included chlorine exposure time and residual chlorine concentration requirements as the bacteria control mechanism in Texas Pollutant Discharge Elimination System (TPDES) domestic discharge permits. As of December 31, 2009, TCEQ now requires bacteria limitations and effluent monitoring in all such wastewater permits. These new requirements will be a part of permit language for all TPDES domestic wastewater draft permits for which a Notice of Application and Preliminary Decision is published on or after January 1, 2010. Each new permit will now include a monthly bacteria limitation equal to the applicable geometric mean for *E. coli* (126cfu/100ml) and a daily maximum concentration equal to the single sample criterion found in the State's water quality standards (399cfu/100ml). The State likewise maintains authority to impose more stringent requirements in permits than those specified for bacteria "on a case-by-case basis, where appropriate to maintain desired water quality levels or protect human health." See Texas Administrative Code, Title 30, Part 1, Chapter 309, Rule §309.3(i). In the Plum Creek watershed, there are 11 permitted domestic wastewater dischargers, of which 5 are presently implementing these new requirements. Permits for the other 6 dischargers are scheduled to expire between 2013 and 2015 and will be updated to include the new language upon renewal. EPA believes these new effluent limitations serve as a more direct link to the State's water quality standards and will serve as a more effective mechanism to identify effluent limit violations and, presumably, trigger enforcement actions if necessary.

It should be noted that any unpermitted or unauthorized discharges into or adjacent to State waters are expressly prohibited by the Texas Water Code. This includes unauthorized discharges from point sources such as sanitary sewer overflows that could contribute to elevated bacteria loads. Responsible parties may be subject to enforcement actions for failure to report such discharges or to take adequate corrective actions to eliminate a discharge.

Other self executing requirements being implemented in the watershed include city pet waste ordinances requiring proper

disposal of pet wastes in public and private areas, stormwater ordinances implementing requirements of the statewide TPDES general permit for construction activities, MS4 permit requirements for the city of Buda (which includes components which will mitigate stormwater impacts to Plum Creek), land annexation plans which will connect large, newly annexed areas in 2 cities to city sewer services, and septic system permitting and inspection programs as required by city or county ordinances.

Given that nonpoint sources are considered the major source of bacteria loading in Plum Creek, EPA's review placed particular emphasis on nonpoint source management measures and the existing commitments and funding available to implement these measures. Much of the implementation of the WPP is currently being funded through §319(h) grants from EPA through either TCEQ or the Texas State Soil and Water Control Board (TSSWCB) to collaborating entities. These §319(h) grant funded projects place grant obligations and requirements on TCEQ/TSSWCB upon receipt of these grants, in addition to contractual obligations between TCEQ/TSSWCB and collaborating entities.

The State of Texas also controls nonpoint sources of pollution through its Water Quality Management Plan Program as described in the State's Nonpoint Source Management Program plan. See Texas Nonpoint Source Management Program, TCEQ and TSSWCB, December 2005. The development of livestock and cropland water quality management plans (WQMPs) is a significant component of the Plum Creek WPP.

The Texas Agriculture Code makes the TSSWCB responsible for planning, implementing, and managing programs and practices for abating agricultural and silvicultural nonpoint source pollution. This is primarily accomplished through the TSSWCB Water Quality Management Plan Program, which was established by the State Legislature in 1993. The State Legislature authorized the TSSWCB to assist agricultural and silvicultural producers in meeting the state's water quality goals and standards through this voluntary, incentive-based program.

Through this program, agricultural and silvicultural producers develop and implement site specific WQMPs in cooperation with local Soil and Water Conservation Districts (SWCDs) in areas the TSSWCB identifies as having agricultural or silvicultural nonpoint source water quality problems. The WQMPs include appropriate land treatment practices, production practices, management

measures, technologies or combinations thereof, and an implementation schedule.

After being approved by the local SWCD, the developed plan requires TSSWCB certification. Certified water quality management plans ensure farming or ranching operations are carried out in a manner consistent with state water quality goals.

Complaints about violations of certified water quality management plans or other rules related to nonpoint source pollution are referred to the TSSWCB. The TSSWCB, with the assistance of the conservation district, investigates such complaints and, if necessary, develops a corrective action plan. The TSSWCB requests the person responsible for the violation to implement the corrective action plan. If the violator fails to do so, the TSSWCB refers the complaint to TCEQ for enforcement action under provisions of the Texas Water Code.

Existing commitments: Tables 10.1 and 10.2 of the WPP outline in detail the various management measures proposed under the WPP for meeting the water quality target. Many of these measures have been implemented, or are in the process of being implemented, as detailed in the category 4b demonstration.

EPA notes that only the city of Buda must satisfy MS4 requirements by virtue of its proximity to the city of Austin. EPA has verified that if other cities in the Plum Creek watershed earn MS4 status by virtue of the 2010 census, they are aware that they will be obligated by permit to implement BMPs defined in their Stormwater Management Plan (SWMP) and that these activities would not be eligible for 319 funding. However, as noted in the WPP, there is consensus among the cities that "early implementation of appropriate MS4 programs and practices should be undertaken to the greatest extent possible." Most of the urban strategies in Tables 10.1 and Table 10.2 are presently proposed to be funded under §319(h).

Dedicated Funding: The total cost estimate for each management measure has been provided in the far right columns of Tables 10.1 and 10.2 of the WPP. Total costs for all proposed management measures amounts to approximately $47.8 million. The majority of these proposed costs are for wastewater management measures including wastewater plant upgrades ($6.6 million), sanitary sewer pipe replacement by the cities of Kyle, Lockhart, and Luling ($23.2 million), and septic system repair/replacement ($10 million). With respect to the proposed city costs for sanitary sewer pipe replacement, EPA's review of these proposed costs, relative

to costs supported by municipal bond sales in similar sized cities in Texas to upgrade or repair wastewater infrastructure, demonstrates these costs are not uncommon and should be attainable at some point over the 10 year implementation period. Cities generally have a number of options available for supporting these costs, including bond sales and State Revolving Loan Funds.

Based on information provided to date, funding has been secured for a number of the proposed projects amounting to approximately $4.3 million. Of this amount, $2.1 million was secured by the cities of Kyle, Buda, Lockhart, and Luling for sanitary sewer line replacement and/or extension of new sewer service lines. The balance was funded using Clean Water Act §319 funds, §106 funds, state general revenue funds, or other city funds.

EPA believes the level of funds secured to date represent a reasonable "downpayment" on the Partnership's commitments as outlined Tables 10.1 and 10.2 of the plan. EPA will continue to evaluate the Partnership's ability to secure funding as a part of its biennial review of implementation progress under the WPP.

Other relevant factors: The Plum Creek WPP is a unique document in that it is the first WPP in the State of Texas to be accepted by EPA Region 6 as satisfying the nine elements of an acceptable watershed-based plan as described in EPA's 2004 Nonpoint Source Program Guidelines. The stated goal of the Partnership is "to improve and protect water quality in Plum Creek so that the stream is restored and preserved for current and future generations." The comprehensive nature of the WPP, and the diversity of parties committed to its implementation, reflects a significant level of interest and initiative among Partnership members to meet this stated goal. It is EPA's understanding that the Partnership believes that implementation of the WPP should obviate the need for the development of a TMDL in Plum Creek, which the action to move this water to category 4b of the integrated report is designed to achieve. EPA believes this sentiment should serve as an incentive to the Partnership to continue its momentum toward full implementation of the WPP. EPA believes that this incentive is a highly relevant factor in reasonably assuring that the proposed pollutant reduction measures will be implemented as planned.

- **Element 3. An estimate or projection of the time when WQS will be met.**

The WPP consists of a 10-year implementation schedule, beginning in 2008 and continuing through 2018. As stated in the

WPP, "[p]ollutant concentration targets were developed based on complete implementation of the Watershed Protection Plan and assume full accomplishment of pollutant load reductions by the end of the 10-year project period." Therefore, EPA understands that water quality standards will be met at the 3 monitoring stations (station 17406 near Uhland, station 12647 just east of Lockhart, and station 12640 near Luling), as used to assess water quality in assessment units 1810_03, 1810_02, and 1810_01 respectively, by 2018. Given the magnitude of the bacteria impairment throughout segment 1810, and the comprehensive nature of the WPP to address these impairments, EPA believes this timeline to be reasonable.

Table 9.1 of the WPP provides a timeline to assess interim progress in achieving long-term load reduction goals between 2008 and 2018. While it is not expected that the interim target concentrations for *E. coli* will be precisely met in any given year, Table 9.1 does provide a good blueprint for gauging water quality progress as a result of implementation of the WPP. EPA agrees with the statement found in the category 4b demonstration that the 2014 integrated assessment provides a "key juncture" at which to assess this progress. Given that the 2014 assessment will include *E. coli* data collected within Plum Creek over a 7-year assessment period (2005 – 2012), this assessment will include data collected 4 years into implementation of the WPP. This assessment should at least begin to show a gradual decline in *E. coli* concentrations at each of the monitoring stations. As a part of its review of the 2014 Texas integrated report, EPA will assess the geometric mean *E. coli* concentration at each monitoring station relative to the applicable water quality standard as well as the interim targets in Table 9.1 to assess water quality progress. As stated in Chapter 9 of the WPP, the Partnership will also assess *E. coli* data more regularly by compiling all such data and calculating a running 5-year geometric mean every 6 months to examine trends in Plum Creek. EPA may also request these assessment data as appropriate. Decreasing trends in *E. coli* concentrations at each station would justify the continued placement of Plum Creek in category 4b.

- **Element 4. Schedule for implementing pollution controls.**

  The WPP outlines a well-conceived schedule for adoption of BMPs by diverse audiences and various responsible parties throughout the watershed. These outcomes will be achieved through the leadership and commitment of the Plum Creek Watershed Partnership Steering Committee and by engagement and cooperation of other local stakeholders. A schedule for

implementation of management measures is presented in Tables 10.1 and 10.2 of the WPP. The WPP was published in February 2008 with implementation scheduled through the end of calendar year 2018.

EPA will determine whether adequate progress is being made in meeting those interim implementation milestones outlined in Tables 10.1 and 10.2 of the WPP for years 1-6 during its review of the 2014 integrated report. For instance, have 14 pet waste collection stations been installed in the city of Kyle? Have the cities been successful in replacing sanitary sewer lines as projected in Table 10.1? How many livestock water quality management plans have been completed and implemented (135 by 2014?)? EPA will use this evaluation in conjunction with its evaluation of water quality trends to determine whether adequate progress is being made in implementing the WPP to justify the continued placement of Plum Creek in category 4b.

- **Element 5. Monitoring plan to track effectiveness of pollution controls.**

  The category 4b demonstration and WPP provide a satisfactory summary of routine monitoring activities conducted by the Guadalupe-Blanco River Authority (GBRA) as supported by TCEQ through the Clean Rivers Program. GBRA will continue to monitor water quality monthly at the three monitoring stations described above (17406, 12647, and 12640) where the status and trends in water quality conditions of Plum Creek will be assessed. Also summarized is the intensive targeted monitoring plan that has been followed to date throughout the Plum Creek watershed. This monitoring plan will continue to be followed through at least 2013 using §319 funds, and is planned to be carried out throughout the remaining years of the 10-year implementation schedule. This monitoring regime expands the number of routine sites to eight, and adds a number of wastewater effluent, spring flow, and seasonal instream tributary sites. As noted in the WPP, this intensive monitoring effort will refine the focus of management efforts as well as track the performance of ongoing implementation activities during the study. As noted under Element 3 above, the Partnership will also assess *E. coli* data collected as a part of these efforts by compiling all such data and calculating a running 5-year geometric mean every 6 months to examine trends in Plum Creek. The category 4b demonstration indicates that the data will be reported regularly to the Partnership Steering Committee, to the public through various websites and reports, and to TCEQ for use in the biennial integrated assessment.

The category 4b demonstration also summarizes water quality monitoring plans to determine the effectiveness of individual urban and agricultural nonpoint source management practices and projects as well as feral hog control. Results of such monitoring will be used in project planning and adaptive management, as well as in gauging interim progress in achieving water quality standards.

- **Element 6. Commitment to revise pollution controls, as necessary.**

  The category 4b demonstration provides a commitment to revise the pollution controls, as necessary, if progress towards meeting water quality standards is not being shown. The Partnership provides adequate commitment to adaptive management, which it describes as "a type of natural resource management in which decisions are made as part of an ongoing science-based process." As stated in the category 4b demonstration: "The essence of successful watershed planning and management is a commitment to adaptive management. The Plum Creek Watershed Partnership is committed to adaptive management of the *Plum Creek WPP*. Over the course of project implementation, instream monitoring data provided by GBRA will be compared with interim milestones and water quality criteria to determine progress in achieving WQS. If water quality improvement is not being demonstrated within the proposed timeframes, efforts will be made to increase adoption of BMPs and/or adjust strategies or focus areas if and when necessary."

  The category 4b demonstration also adequately outlines the Partnership's commitment to identify how changes to any pollution controls, or other elements of the demonstration, will be provided to the public and EPA. A biennial update to the WPP will be developed and will "document project outputs and outcomes throughout the implementation process, an analysis of collected data to ascertain interim progress in achieving water quality restoration, and modifications to components of the WPP, such as the implementation schedule and interim milestones." All updates to the WPP will be made publicly available via the Partnership's website.

In summary, at this time, EPA believes the category 4b demonstration, and all referenced elements within the WPP, adequately demonstrate how other pollution control requirements will lead to the attainment of water quality standards in Plum Creek (segment 1810) in a reasonable period of time. EPA will continue to assess the Partnership's progress in implementing the WPP on a biennial basis upon its review of each Texas

integrated report. This will begin with the State's submittal of the 2012 integrated report. EPA will continue to assess progress until which time the impaired assessment units within Plum Creek achieve water quality standards, or, until it is determined that implementation and/or water quality milestones in the WPP are not being met. At which time water quality standards are achieved at any or all assessment units within Plum Creek, EPA will allow any or all of these waters to be removed from impaired status (category 4b or 5 of the integrated report). If a determination is made that inadequate progress is being made in meeting milestones in the WPP, EPA will take appropriate action to add any or all of the 3 assessment units of Plum Creek to the 303(d) list, requiring the development of a TMDL.

Nonpoint Sources

The State properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with EPA guidance. Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of the impairment is a point and/or nonpoint source. EPA's long-standing interpretation is that §303(d) lists apply to waters impacted by point and/or nonpoint sources. This interpretation has been described in EPA guidance, and most recently in a 1997 memorandum clarifying certain requirements for 1998 §303(d) lists. See EPA's 1991 Guidance, and Memorandum from Mr. Robert H. Wayland III, Director, Office Wetlands, Oceans, and Watersheds, Office of Water, EPA Headquarters, to Water Division Directors, Regions I - X, and Directors, Great Water Body Programs, and Water Quality Branch Chiefs, Regions I - X, "National Clarifying Guidance For 1998 State and Territory section 303(d) Listing Decisions", Aug. 17, 1997. In addition, this interpretation of §303(d) lists is described in detail in a May 23, 1997, memorandum from Mr. Geoffrey Grubbs, Director of the Assessment and Watershed Protection Division, EPA Office of Water, to the FACA Workgroup on section 303(d) Listing Criteria. See Memorandum from Geoffrey H. Grubbs, Director, Assessment and Watershed Protection Division, to FACA Workgroup on section 303(d) Listing Criteria, "Nonpoint Sources and section 303(d) Listing Requirements", May 23, 1997. See also Memorandum from Mr. Robert Perciasepe, Assistant Administrator, Office of Water, to Regional Administrators and Regional Water Division Directors, "New Policies for Establishing and Implementing TMDLs", August 8, 1997.

B. Priority Ranking and Targeting

EPA also reviewed TCEQ's priority ranking of listed waters for TMDL development, and concludes that the State properly took into account the severity of pollution and the uses to be made of such waters. As described in the State's assessment guidance, waters listed in category 5 of the

integrated report, which constitute the State's 303(d) list, are subdivided into 3 subcategories: 5a, 5b, and 5c. These subcategories represent TCEQ's method for assigning priorities for the development of TMDLs. Subcategory 5a is the group with the highest priority for TMDL development, followed by 5c with medium priority and 5b with the lowest priority. Subcategory 5a is reserved for waters in which a TMDL is underway, scheduled, or will be scheduled. Subcategory 5b is reserved for waters in which a review of the water quality standard will be conducted prior to the development of a TMDL. Subcategory 5c is reserved for waters in which additional data or information will be collected prior to the development of a TMDL. The State has identified the ranking criteria used to assign priorities for those waters scheduled for TMDL development. The six most important factors in ranking water bodies are as follows:

- Whether the impaired use is a threat to human health, aquatic life, or both.
- The availability of data, information, and tools (such as models).
- The degree of local and regional support for implementing a TMDL.
- The relationship of a listed impairment to others.
- Proximity to other impaired waters.
- What year the impaired water was originally placed on the 303(d) list.

In addition, EPA reviewed the State's identification of WQLSs targeted for TMDL development in the next two years, and concludes that the targeted waters are appropriate for TMDL development in this time frame. As of August 25, 2010, TMDLs for 37 water body segments (54 AUs) were targeted for completion in calendar year 2011.

C. Consideration of waters within Indian Country

EPA's approval of Texas's §303(d) list extends to all water bodies on the list with the exception of those waters that are within Indian Country, as defined in 18 U.S.C. §1151. EPA is taking no action to approve or disapprove the State's list with respect to those waters at this time. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under §303(d) for those waters.

IV. Administrative Record Supporting This Action

In support of this decision to approve the State's listing decisions, EPA carefully reviewed the materials submitted by the State with its §303(d) listing decision. The administrative record supporting EPA's decision is comprised of the materials submitted by the State, copies of §303(d), associated federal regulations, and EPA guidance concerning preparation of §303(d) lists, and this decision letter and supporting reports. EPA determined that the materials provided by the State

with its submittal and subsequently requested information included sufficient documentation to support our analysis and findings that the State listing decisions meet the requirements of the Clean Water Act and associated federal regulations. According to EPA's 1991 Guidance: "Documentation for listing should…provide a description of the methodologies used to develop the list, a description of the data and information used to identify water quality-limited waters, and a rationale for any decision to not use any one of the categories listed in Appendix C. It is not expected that each and every waterbody listed by a State be accompanied by the detailed documentation as described." The State has met these requirements for the 2010 list.

V. References

EPA 2007, May 23, 2007, enclosure to memorandum from Mr. Miguel Flores, Director, Water Quality Protection Division, Region 6, to Region 6 State Water Quality Program Managers, "EPA Region 6 Process for Review of Watershed-based Plans in lieu of TMDL's".

EPA 2006, October 12, 2006 memorandum from Diane Regas, Director, Office of Wetlands, Oceans, and Watersheds, Office of Water, EPA Headquarters, to Water Division Directors, Regions 1 – 10, "Information Concerning 2008 Clean Water Act Section 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions".

EPA 2005, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act, EPA Office of Water, July 2005.

EPA 2003, 2004 Nonpoint Source Program and Grants Guidelines for States and Territories, EPA Office of Wetlands, Oceans, and Watersheds, 68 Fed. Reg. 60653-60674, October 23, 2003.

EPA 1997a, May 23, 1997, memorandum from Mr. Geoffrey H. Grubbs, Director, Assessment and Watershed Protection Division, to FACA Workgroup on Section 303(d) Listing Criteria, "Nonpoint Sources and Section 303(d) Listing Requirements".

EPA 1997b, August 8, 1997, memorandum from Mr. Robert Perciasepe, Assistant Administrator, Office of Water, to Regional Administrators and Regional Water Division Directors, "New Policies for Establishing and Implementing TMDLs".

EPA 1997c August 17, 1997, memorandum from Mr. Robert H. Wayland III, Director, Office Wetlands, Oceans, and Watersheds, Office of Water, EPA Headquarters, to Water Division Directors, Regions I - X, and Directors, Great Water Body Programs, and Water Quality Branch Chiefs, Regions I - X, regarding "National Clarifying Guidance For 1998 State and Territory Section 303(d) Listing Decisions."

EPA 1997d September, 1997, guidance from Office of Water, Headquarters, U.S. EPA regarding *Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates: Supplement*, EPA-841-B-97-002B

EPA 1993 November 26, 1993, memorandum from Mr.Geoffrey Grubbs, Director, Assessment and Watershed Protection Division, Office of Water, EPA Headquarters, to Water Quality Branch Chiefs, Regions I - X, and TMDL Coordinators, Regions I - X, regarding "Guidance for 1994 Section 303(d) Lists."

EPA 1992a July 24, 1992, Federal Register Notice, *40 C.F.R. Parts 122, 123, 130*, revision of regulation, 57 Fed. Reg. 33040

EPA 1992b August 13, 1992, memorandum from Mr. Geoffrey Grubbs, Director, Assessment and Watershed Protection Division, Office of Water, EPA Headquarters, to EPA Water Quality Branch Chiefs, Regions I - X and TMDL Coordinators, Regions I - X, regarding "Supplemental Guidance on Section 303(d) Implementation."

EPA 1992c October 30, 1992, memorandum from Mr. Geoffrey Grubbs, Director, Assessment and Watershed Protection Division, Office of Water, EPA Headquarters, to Water Quality Branch Chiefs, Regions I - X, regarding "Approval of 303(d) Lists, Promulgation Schedules/Procedures, Public Participation."

EPA 1991 Guidance for Water Quality Based Decisions: The TMDL Process. EPA 440/4-91-001 U.S. Environmental Protection Agency, Office of Water, Washington, DC.

EPA 1985 January 11, 1985, Federal Register Notice, 40 C.F.R. Parts 35 and 130, Water Quality Planning and Management: Final Rule, 50 Fed. Reg. 1774.
EPA 1978 December 28, 1978, Federal Register Notice, Total Maximum Daily Loads Under Clean Water Act, finalizing EPA's identification of pollutants suitable for TMDL calculations, 43 Fed. Reg. 60662.

Plum Creek Watershed Partnership 2008, Plum Creek Watershed Protection Plan, (http://pcwp.tamu.edu), February, 2008.

Texas Nonpoint Source Management Program, TCEQ and TSSWCB, December 2005.

Texas Administrative Code, Title 30, Part 1, Chapter 307, Rule §307.7 “Site-Specific Uses and Criteria”. Texas Commission on Environmental Quality 2006, Preserving & Improving Water Quality, GI-351.

Texas Adminstrative Code, Title 30, Part 1, Chapter 309, Rule §309.3 “Application of Effluent Sets”. Amended to be effective November 26, 2009.

(Note: The above list of documents was used directly or indirectly as a basis for EPA's review of the State's §303(d) water body list. This list is not meant to be an exhaustive list of all records reviewed and does not constitute the official administrative record for this decision. Its purpose is to provide the primary documents the Region relied upon in making its decision to approve the State's list.)