



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

July 19, 2017

Ms. Becky Keogh
Director
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Re: EPA Action on Arkansas's 2010, 2012, 2014, and 2016 § 303(d) Lists

Dear Ms. Keogh:

Thank you for your submission of the 2010, 2012, 2014, and 2016 State of Arkansas § 303(d)/§ 305(b) Integrated Reports, which contain Arkansas' Section 303(d) lists of water quality limited segments. The U.S. Environmental Protection Agency received the state's submissions on April 1, 2010, March 30, 2012, April 1, 2014, and April 1, 2016, respectively. I am pleased to inform you that the EPA has coordinated its review of Arkansas' submissions and is today taking action to approve all of the waterbodies identified by the State of Arkansas as impaired on all four lists.

In accordance with 40 C.F.R. § 130.7(b)(5), states are required to "assemble and evaluate all existing and readily available water quality-related data and information to develop the list" required by Section 303(d) of the CWA and 40 C.F.R. § 130.7(b)(1). The EPA has concluded that Arkansas has met the requirements of 40 C.F.R. § 130.7(b)(5) with regards to all the waters listed by the state, which are identified in Enclosure 1. Therefore, the EPA is approving the State's decision to list these waters.

While the EPA is approving all impairments identified by the State of Arkansas on these four lists, the EPA is deferring action on forty-five (45) potential water body pollutant pairs not listed by the State to allow continued review of all existing and readily available water quality related data and further discussion with the Arkansas Department of Environmental Quality. The EPA is therefore taking a partial approval/further review pending action on the Arkansas 2010, 2012, 2014, and 2016 lists. Further details of our action are provided in Enclosure 2.

Thank you for your efforts in developing Arkansas's 2010, 2012, 2014 and 2016 Integrated Reports. If you would like to discuss this action further, please contact me at (214) 665-7101, or your staff may contact Mr. Richard Wooster, Chief, Assessment, Listing and TMDL Section, at (214) 665-6473.

Sincerely,

A handwritten signature in black ink that reads "W K Honker".

William K. Honker, P.E.
Director
Water Division

Enclosures

cc: Sarah Clem, Water Quality Planning Branch, ADEQ

Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Able's Creek	08040205	911	Turbidity	Approved
Alum Fork Saline River	08040203	018	pH	Approved
Arkansas River	08020401	001	Dissolved Oxygen	Approved
Bayou Bartholomew	08040205	006	Lead	Approved
	08040205	013	Dissolved Oxygen	Approved
	08040205	002	pH	Deferred Action
	08040205	012	Dissolved Oxygen	Deferred Action
Bayou De L'outre	08040202	006	Dissolved Oxygen	Approved
	08040202	006	Zinc	Approved
	08040202	006	Sulfates	Approved
	08040202	006	Copper	Approved
	08040202	006	TDS	Approved
	08040202	007	Lead	Approved
	08040202	007	Sulfates	Approved
	08040202	007	Dissolved Oxygen	Approved
	08040202	007	Copper	Approved
	08040202	007	TDS	Approved
	08040202	008	Dissolved Oxygen	Approved
	08040202	008	Zinc	Approved
	08040202	008	TDS	Approved
	08040202	008	Sulfates	Approved
	08040202	008	Selenium	Approved
	08040202	008	Lead	Approved
Bayou Des Arc	08020301	006	Turbidity	Approved
	08020301	006	Dissolved Oxygen	Approved
	08020301	007	Dissolved Oxygen	Approved
	08020301	006	Temperature	Deferred Action
Bayou DeView	08020302	002	Dissolved Oxygen	Approved
	08020302	004	Sulfates	Approved
	08020302	004	Dissolved Oxygen	Approved
	08020302	005	Dissolved Oxygen	Approved
	08020302	005	Sulfates	Approved
	08020302	006	Dissolved Oxygen	Approved
	08020302	006	Sulfates	Approved
	08020302	007	Sulfates	Approved
	08020302	007	Dissolved Oxygen	Approved
	08020302	012	Dissolved Oxygen	Approved
	08020302	009	Chlorides	Deferred Action
08020302	009	Dissolved Oxygen	Deferred Action	

Note: Approved= Water quality limited segments for which EPA is in agreement with the State of Arkansas; Deferred action=EPA action deferred for further review; ERR= Temporary reach identifiers assigned by EPA; TDS=Total dissolved solids

Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Bayou Imbecau	08040205	910	Lead	Approved
	08040205	910	Pathogens	Approved
	08040205	910	Dissolved Oxygen	Approved
Bayou Macon	08050002	003	Chlorides	Approved
	08050002	006	Chlorides	Approved
Bayou Meto	08020402	001	Dissolved Oxygen	Approved
	08020402	003	Dissolved Oxygen	Approved
	08020402	007	TDS	Approved
	08020402	007	Sulfates	Approved
	08020402	007	Dissolved Oxygen	Approved
	08020402	007	Priority Organics	Approved
	08020402	907	Dissolved Oxygen	Approved
	08020402	907	Turbidity	Approved
Bayou Two Prairie	08040202	006	Dissolved Oxygen	Approved
	08040202	106	Dissolved Oxygen	Approved
	08040202	206	Dissolved Oxygen	Approved
	08040202	306	Dissolved Oxygen	Approved
Bear Creek	11010005	026	TDS	Approved
Bearhouse Creek	08040205	901	Dissolved Oxygen	Approved
Beaver-upper Lake	11101001	A	Pathogens	Approved
	11101001	A	Turbidity	Approved
Big Corney Creek	08040206	015	Turbidity	Approved
Big Creek	08020304	010	Chlorides	Approved
	08020304	010	TDS	Approved
Big Creek Ditch	08020302	910	Copper	Approved
Blue Mountain Lake	11110204	F	Turbidity	Approved
Boat Gunwale Slash	08020304	914	Dissolved Oxygen	Approved
Bois D'Arc Creek	11140201	008	Dissolved Oxygen	Approved
	11140201	009	Dissolved Oxygen	Approved
Buffalo Creek	08020302	014	Dissolved Oxygen	Approved
Bull Creek	08020301	009	Dissolved Oxygen	Approved
	08020301	009	Zinc	Approved

Note: Approved= Water quality limited segments for which EPA is in agreement with the State of Arkansas; Deferred action=EPA action deferred for further review; ERR= Temporary reach identifiers assigned by EPA; TDS=Total dissolved solids

Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Cache River	08020302	016	Copper	Approved
	08020302	016	Dissolved Oxygen	Approved
	08020302	020	Dissolved Oxygen	Deferred Action
	08020302	020	Sulfate	Deferred Action
Cadron Creek	11110205	014	Dissolved Oxygen	Approved
Caney Creek	08020205	901	Dissolved Oxygen	Approved
	08020302	903	Dissolved Oxygen	Approved
Chamberlain Creek	08040102	971	pH	Approved
	08040102	971	Zinc	Approved
	08040102	971	Toxicity	Approved
	08040102	971	Sulfates	Approved
	08040102	971	Beryllium	Approved
	08040102	971	TDS	Approved
	08040102	971	Aluminum	Approved
Chemin-A-Haut Creek	08040205	907	Dissolved Oxygen	Approved
Chickalah Creek	11110204	002	Dissolved Oxygen	Approved
Cossatot River	11140109	018	Dissolved Oxygen	Deferred Action
Cuve Creek	08040102	970	Toxicity	Approved
	08040102	976	Dissolved Oxygen	Approved
	08040102	976	pH	Approved
Cox Creek Lake	08040203	C	pH	Approved
Crooked Creek	11010003	049	TDS	Approved
	11010003	949	TDS	Approved
Cross Bayou	08040205	905	Dissolved Oxygen	Approved
Cypress Bayou	08020301	010	Dissolved Oxygen	Approved
Cypress Creek	11110205	917	pH	Deferred Action
Departee Creek	11010013	020	Chlorides	Approved
	11010013	020	Dissolved Oxygen	Approved
	11010013	020	Zinc	Approved
Dierks Lake	11140109	014	Ammonia	Deferred Action
East Fork Cadron Creek	11110205	002	Turbidity	Approved
	11110205	002	Dissolved Oxygen	Approved
	11110205	005	Dissolved Oxygen	Approved

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Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
East Fork Point Remove	11110203	014	Turbidity	Approved
East Two Bayou	08040201	905	Pathogens	Approved
	08040201	905	pH	Approved
Elec Tributary	08040201	606	pH	Approved
	08040201	606	Nitrate	Approved
	08040201	606	Copper	Approved
First Creek	08020205	007	Dissolved Oxygen	Approved
Fourche Creek	11110207	022	Dissolved Oxygen	Approved
	11110207	022	Temperature	Approved
	11110207	022	Turbidity	Approved
	11110207	024	Dissolved Oxygen	Approved
Fourche LaFave River	11110206	001	Dissolved Oxygen	Approved
	11110206	008	Temperature	Approved
	11110206	008	Dissolved Oxygen	Approved
	11110206	008	pH	Approved
Fourche River	11010009	008	Turbidity	Approved
Frierson Lake	08020302	C	Copper	Approved
Gilham Lake	11140109	018	Ammonia	Deferred Action
Glaise Creek	11010013	021	Zinc	Approved
	11010013	021	Dissolved Oxygen	Approved
Greenbrier Creek	11010004	017	Dissolved Oxygen	Approved
Harding Creek	08040205	902	Lead	Approved
Hicks Creek	11010004	015	Pathogens	Approved
Holly Creek	11140109	013	Dissolved Oxygen	Approved
Holman Creek	11010001	059	TDS	Approved
Huckleberry Creek	11110202	ERR27	pH	Deferred Action
Hurricane Creek	08040203	004	Dissolved Oxygen	Deferred Action
Illinois River	11110103	020	Sulfates	Approved
	11110103	020	Chlorides	Approved
	11110103	023	Pathogens	Approved
	11110103	024	Chlorides	Approved
	11110103	024	Pathogens	Approved
	11110103	024	Sulfates	Approved
Indian Springs Creek	08040101	902	Sulfates	Approved
	08040101	902	Dissolved Oxygen	Approved
	08040101	902	TDS	Approved

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Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Kings River	11010001	037	TDS	Approved
	11010001	037	Sulfates	Approved
L' Anguille River	08020205	001	Chlorides	Approved
	08020205	001	Dissolved Oxygen	Approved
	08020205	001	TDS	Approved
	08020205	002	Chlorides	Approved
	08020205	002	Dissolved Oxygen	Approved
	08020205	002	TDS	Approved
	08020205	003	Dissolved Oxygen	Approved
	08020205	003	Chlorides	Approved
	08020205	003	TDS	Approved
	08020205	004	Dissolved Oxygen	Approved
	08020205	004	Sulfates	Approved
	08020205	004	TDS	Approved
	08020205	004	Chlorides	Approved
	08020205	005	TDS	Approved
	08020205	005	Sulfates	Approved
	08020205	005	Dissolved Oxygen	Approved
08020205	005	Chlorides	Approved	
Lake Austelle	08020203	008	Ammonia	Deferred Action
Lake Catherine	08040101	001	Dissolved Oxygen	Deferred Action
Lake Cox Creek	08040203	C	Unknown	Deferred Action
Lake DeQueen	11140109	027	Ammonia	Deferred Action
Lake Greenlee	08020304	D	Unknown	Deferred Action
Lake Ouachita	08040101		Mercury in Fish	Deferred Action
Lake Pickthorne	08020402	D	Unknown	Approved
Lake Sweeco	11110103	B	Unknown	Approved
Little Bodcaw Creek	11140205	010	Dissolved Oxygen	Approved
Little River	11140109	001	Temperature	Approved
Little River, Left	08020204	001	Dissolved Oxygen	Approved
	08020204	002	Dissolved Oxygen	Approved
Lost Creek Ditch	08020302	909	Chlorides	Approved
	08020302	909	Dissolved Oxygen	Approved

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Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Loutre Creek	08040202	909	Chlorides	Approved
	08040202	909	Selenium	Approved
	08040202	909	Sulfates	Approved
	08040202	909	TDS	Approved
Lucinda Creek	08040102	975	pH	Approved
Main Street Ditch	08040205	909	Dissolved Oxygen	Approved
	08040205	909	Lead	Approved
Maumelle River	11110207	018	Dissolved Oxygen	Deferred Action
	11110207	018	pH	Deferred Action
Middle Fork Saline River	08040203	019	Dissolved Oxygen	Deferred Action
Mine Creek	11140109	033	Sulfates	Approved
Mine Creek, upper	11140109	934	TDS	Approved
Meares Creek	11110103	026	Sulfates	Approved
	11110103	026	Pathogens	Approved
Moro Creek	08040201	001	Lead	Approved
	08040201	901	Lead	Approved
	08040201	001	Dissolved Oxygen	Deferred Action
Mountain Fork	11140108	014	Temperature	Approved
	11140108	014	Turbidity	Approved
Muddy Creek	11110103	027	Pathogens	Approved
	11110103	027	Sulfates	Approved
Muddy Fork Illinois River	11110103	025	Pathogens	Approved
North Fork Cadron Creek	11110205	015	Dissolved Oxygen	Approved
North Fork Saline River	08040203	011	Dissolved Oxygen	Deferred Action
Ouachita River	08040101	033	Dissolved Oxygen	Deferred Action
	08040202	002	Toxicity	Deferred Action
Overflow Creek	08040205	908	Turbidity	Approved
	08040205	908	Chlorides	Approved
Petit Jean River	11110204	011	Turbidity	Approved
Poinsette Lake	08020203	C	Unknown	Deferred Action

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Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Poteau River	11110105	001	Dissolved Oxygen	Approved
	11110105	031	Turbidity	Approved
	11110105	031	Chlorides	Approved
	11110105	031	Sulfates	Approved
	11110105	031	TDS	Approved
Prairie Creek	11110105	731	Turbidity	Approved
	08020205	902	TDS	Approved
Prairie Cypress	08040101	048	Dissolved Oxygen	Approved
	08020304	014	Copper	Approved
Red River	08020304	014	Dissolved Oxygen	Approved
	11140106	001	Turbidity	Approved
Rodgers Lake	11140106	003	Turbidity	Approved
	11140106	005	Turbidity	Approved
	11140106	025	Turbidity	Approved
	11140201	011	Turbidity	Approved
	11140201	003	TDS	Deferred Action
	11140201	007	TDS	Deferred Action
	11140201	011	TDS	Deferred Action
Rolling Fork Creek	08020402	C	Dissolved Oxygen	Approved
S Fourche LaFave River	11140109	919	Sulfates	Approved
	11110206	014	Temperature	Approved
Sager Creek	11110206	014	Dissolved Oxygen	Approved
	11110103	932	Nitrate	Approved
Saline River	08040203	007	Turbidity	Approved
	08040203	009	Turbidity	Approved
	08040204	002	Temperature	Deferred Action
	11140109	014	Dissolved Oxygen	Deferred Action
Salt Creek	08040201	806	pH	Approved
Saracen Lake	11110207	D	PCB	Approved
Second Creek	08020205	008	Dissolved Oxygen	Approved
Smackover Creek	08040201	006	Lead	Approved
	08040201	006	Dissolved Oxygen	Approved
	08040201	007	Lead	Approved
South Fork Little Red River	11010014	040	pH	Deferred Action
South Fork Saline River	08040203	020	Dissolved Oxygen	Deferred Action

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Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
South Fork Spring River	11010010	012	Dissolved Oxygen	Deferred Action
Spring River	11010010	006	Temperature	Deferred Action
St Francis River	08020203	008	Chlorides	Approved
	08020203	008	Dissolved Oxygen	Approved
	08020203	009	Chlorides	Approved
	08020203	009	Dissolved Oxygen	Approved
Stone Dam Creek	11110203	904	Dissolved Oxygen	Approved
	11110203	904	TDS	Approved
Ten Mile Bayou	08020203	906	Dissolved Oxygen	Approved
Terre Noir Creek	08040103	002	pH	Approved
	08040103	003	pH	Approved
Terre Rouge Creek	08040103	031	Turbidity	Approved
Trib to Holman Creek	11010001	959	TDS	Approved
Tributary to Poteau	11110105	831	Chlorides	Approved
	11110105	831	Pathogens	Approved
Tyronza River	08020203	909	Turbidity	Approved
Unnamed Tributary A	11110202	ERR60	pH	Deferred Action
Unnamed Tributary B	11110202	ERR61	pH	Deferred Action
Unnamed Tributary C	11110202	ERR62	pH	Deferred Action
Village Creek	11010013	006	Dissolved Oxygen	Approved
	11010013	007	Dissolved Oxygen	Approved
	11010013	008	Dissolved Oxygen	Approved
	11010013	014	Temperature	Approved
Wabbaseka Bayou	08020401	003	Dissolved Oxygen	Approved
Wattensaw Bayou	08020301	015	Dissolved Oxygen	Approved
West Fork	11010001	024	Sulfates	Approved
	11010001	024	TDS	Approved
West Fork Point Remove	11110203	016	Turbidity	Approved
	11110203	017	Turbidity	Approved
West Fork Point Remove Creek	11110203	018	pH	Deferred Action
West Fork White River	11010001	024	Dissolved Oxygen	Deferred Action

Note. Approved= Water quality limited segments for which EPA is in agreement with the State of Arkansas; Deferred action=EPA action deferred for further review; ERR= Temporary reach identifiers assigned by EPA; TDS=Total dissolved solids

Enclosure 1: State of Arkansas' Approved 2016 § 303(d) List with Deferred Waterbody Pollutant Pairs

Waterbody Name	HUC	RR	WQParameter	Conclusion
Whig Creek	11110203	931	Ammonia	Approved
	11110203	931	Dissolved Oxygen	Approved
White Oak Bayou	11110207	912	Copper	Approved
	11110207	912	pH	Approved
	11110207	912	Lead	Approved
	11110207	912	Dissolved Oxygen	Approved
	11110207	012	pH	Deferred Action
	11110207	012	Dissolved Oxygen	Deferred Action
White River	08020303	005	Dissolved Oxygen	Approved
	11010001	023	Sulfates	Approved
	11010001	023	TDS	Approved
	11010003	002	Temperature	Deferred Action
Wilson Creek	08040101	901	Sulfates	Approved
Yount Creek	11110207	ERR70	pH	Deferred Action

Note: Approved= Water quality limited segments for which EPA is in agreement with the State of Arkansas; Deferred action=EPA action deferred for further review; ERR= Temporary reach identifiers assigned by EPA; TDS=Total dissolved solids

Enclosure 2

Review of Arkansas' 2010, 2012, 2014 and 2016 Section 303(d) Waterbody Lists

*Enclosure to letter from William K. Honker, P.E., Water Division
Director, US EPA, Region 6 to Becky Keogh, Arkansas
Department of Environmental Quality*

I. Introduction

The Environmental Protection Agency Region 6 (EPA) received the State of Arkansas' 2010, 2012, 2014 and 2016 Clean Water Act (CWA) Section 303(d) lists of impaired waters from the Arkansas Department of Environmental Quality (ADEQ) on April 1, 2010, March 30, 2012, April 1, 2014, and April 1, 2016 respectively. The EPA also received Arkansas' 2010, 2012, 2014, and 2016 Water Quality Integrated Reports with the same submittals. Based on our review of the State's CWA Section 303(d) water body lists ("Section 303(d) list") and available data, the EPA is partially approving Arkansas' 2010, 2012, 2014 and 2016 lists with further action pending. The purpose of this review document is to describe the rationale for the EPA's approval.

In March 2011, the EPA issued guidance for integrating the development and submission of 2012 Section 305(b) water quality reports and Section 303(d) lists of impaired waters. In September 2013, the EPA issued guidance for integrating the development and submission of 2014 Section 305(b) water quality reports and Section 303(d) lists of impaired waters. These guidance documents, and previous EPA guidance, recommend that states develop an Integrated Report of the quality of waters by placing all waters into one of five assessment categories. By following this guidance, Category 5 of the Integrated Report is the State's Section 303(d) list. The EPA's action in review and approval of the State's Integrated Reports is limited to waterbodies included in Category 5 that comprises the State's Section 303(d) lists.

The EPA reviewed the assessment methodology used by the State in developing the Section 303(d) list and the State's description of the data and information considered. The EPA's review of Arkansas' 2010, 2012, 2014 and 2016 Section 303(d) lists is based on the EPA's analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed.

As it is the State's most recently compiled list of impaired waters in the State, the 2016 Arkansas Section 303(d) list incorporates and updates the 2010, 2012, and 2014 lists of impaired waters. The 2016 Section 303(d) list the EPA is partially approving today is comprised of 148 assessment units (238 waterbody / pollutant combinations). For all CWA purposes, the most recent EPA-approved listings constitute the applicable list of impaired waters in the State of Arkansas. States may add and take waters off their Section 303(d) lists based on several factors.

II. Statutory and Regulatory Background

A. Identification of Water Quality Limited Segments (WQLSs) for Inclusion on Section 303(d) list

Section 303(d)(1) of the CWA directs states to identify those waters within its jurisdiction for which effluent limitations required by Section 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 Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to the EPA's long-standing interpretation of Section 303(d).

The EPA regulations implementing Section 303(d) require states to identify water quality limited segments (WQLSs) that need TMDLs (See 40 C.F.R. § 130.7(b)). Water quality limited segments are defined in regulation as segments "where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act" (See 40 C.F.R. § 130.2(j)). Thus, 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 40 C.F.R. § 130.7(b)(1).

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

In developing Section 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 not meeting designated uses, or as threatened, in the State's most recent CWA Section 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 Section 319 nonpoint assessment submitted to the 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.

The 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, April 1991.) While states are required to evaluate all existing and readily available water quality-related data and information, states may decide to rely on or not rely on particular data or information in determining whether to list particular waters.

Enclosure 2

In addition to requiring states to assemble and evaluate all existing and readily available water quality-related data and information, the EPA regulations at 40 C.F.R. §130.7(b)(6) require States to include, as part of their submissions to the EPA, documentation to support decisions excluding 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 any decision not to use any existing and readily available data and information 40 C.F.R. § 130.7(b)(5), and (4) any other reasonable information requested by the Region.

C. Priority Ranking

The EPA regulations also codify and interpret the requirement in Section 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 the Section 303(d) lists for TMDL development, and also to identify those 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. CWA Section 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 such as waste load allocations for permits, 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 Fed. Reg. 33040, 33045 (July 24, 1992), and the EPA's 1991 Guidance).

D. Applicable Water Quality Standards

For purposes of identifying waters for the Section 303(d) list, the terms “water quality standard applicable to such waters” and “applicable water quality standards” refer to those water quality standards established under Section 303 of the Act. On April 27, 2000, the EPA promulgated a rule under which the “applicable standard” for Clean Water Act purposes depends on when the relevant States or authorized Tribes promulgated that standard. Standards that States or authorized Tribes have promulgated before May 30, 2000 are effective upon promulgation by the States or authorized Tribes. Standards that States or authorized Tribes promulgated on or after May 30, 2000 become effective only upon EPA approval (See 40 C.F.R § 131.21(c)). The EPA interprets CWA Section 303(d) to require the EPA establishment or approval of section 303(d) lists only for impairments of waters with Federally-approved water quality standards.

III. Analysis of Arkansas' Submission

A. Background

In reviewing Arkansas' submittals, the EPA first reviewed the methodology used by the State to develop its 2010, 2012, 2014 and 2016 Section 303(d) lists in light of Arkansas'

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approved water quality standards, and then reviewed the actual lists of waters. The State utilized the 2016 assessment methodology, with some revisions from the 2010, 2012, and 2014 water quality assessments. EPA reviewed the State's 2016 assessment methodologies transmitted to EPA by the Arkansas Department of Environmental Quality (ADEQ) in April 2015, which later was included with the State's Integrated Report submission, and has concluded that the waters the State included in the Section 303(d) lists were placed on the lists in compliance with Section 303(d) of the CWA and 40 C.F.R. § 130.7. Because EPA had not taken final action on Arkansas' 2010, 2012, and 2014 submissions before Arkansas made its 2016 submission, EPA has coordinated its review of Arkansas' four § 303(d) lists. EPA is taking concurrent actions on the 2010, 2012, 2014 and 2016 Section 303(d) submissions, however, only the most recently approved listings will be the current list. Review of the submitted draft list yielded fifty-two (52) water body pollutant pairs which require further investigation. Through conversations with Arkansas, it was determined that seven (7) of these waters require no further action as EPA and Arkansas now agree on the attainment status of these waters. The EPA is deferring action on forty-five (45) potential water body pollutant pairs to allow continued review of all existing and readily available water quality related data and to coordinate with Arkansas. See section C for further details on why seven (7) waters do not require further action.

The EPA's review is based on an analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed. Arkansas considered data and information pertaining to the categories under 40 C.F.R. § 130.7(b)(5), and the 148 water quality limited segments (WQLSs) proposed by Arkansas are correctly listed per 40 C.F.R. § 130.7(b)(1).

In previous guidance, the EPA recommended that states develop an Integrated Report of the quality of waters by placing all waters into one of five assessment categories (See the EPA's Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act, July 21, 2005). By following this guidance, Category 5 of the Integrated Report is the State's Section 303(d) list. The EPA's action in review and approval of this document is only on Category 5 that comprises the Section 303(d) list within the Integrated Report.

The State's 2010, 2012, 2014, and 2016 Integrated Reports were made available to the EPA Region 6 electronically on April 1, 2010, March 30, 2012, April 1, 2014, and April 1, 2016, respectively, and provided by ADEQ on a CD with the hardcopy submittal letter. The Integrated Report from Arkansas included the following portions that are necessary for the Section 303(d) waterbody list:

- **Waterbodies and corresponding pollutants that make up the State's Section 303(d) list**
- **Prioritization of waterbodies for TMDL development**
- **Identification of waters targeted for TMDL development over the next biennium**

The EPA's approval of Arkansas' year 2010, 2012, 2014, and 2016 Section 303(d) lists extends only to the items listed in Enclosure 1.

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The EPA is deferring action on 45 potential water body pollutant pairs with the expectation that the deferral will be reconsidered expeditiously. The EPA is working closely with ADEQ to assemble available data for these water bodies to determine whether an assessment is possible or if we agree that there is insufficient data for an assessment.

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

The EPA has reviewed Arkansas' description of the data and information considered for identifying waters on the Section 303(d) list. The 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) and properly identified and listed WQLSs as required by 40 C.F.R. § 130.7(b)(1). In particular, the State relied on information from the 2010, 2012, 2014, and 2016 Section 305(b) water quality assessments; assessments performed under the CWA Section 319 non-point source program; and data and information obtained through an extensive process to solicit information from state, federal and citizen sources. The State's evaluation of data and information in each of these categories is described below.

- *Waters identified by the state in its most recent section 305(b) report as "partially meeting" or "not meeting" designated uses or as "threatened" (40 C.F.R. § 130.7(b)(5)(i)):* Arkansas produced the 2010, 2012, 2014 and 2016 Integrated Reports consistent with the EPA's guidance regarding combined CWA 305(b) reports and 303(d) lists. For those waters that EPA is approving, EPA concludes that Arkansas made listing decisions using all existing and readily available data and information, in development of the 2010, 2012, 2014 and 2016 Section 303(d) waterbody lists.
- *Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions (40 C.F.R. § 130.7(b)(5)(iii)):* The State solicited data and information in preparation for its 2010, 2012, 2014, and 2016 Section 303(d) lists. For those waters that EPA is approving, EPA concludes that all data and information obtained as a result of this effort were evaluated and considered. The State's submittal identified several entities that contributed data or information and responded to public comments related to assessments for individual waterbodies.
- *Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to the EPA under Section 319 of the CWA or in any updates of the assessment (40 C.F.R. § 130.7(b)(5)(iv)):* The State's 2010, 2012, 2014, and 2016 Section 303(d) lists include all waters that have data to support nonpoint source pollution impairment. Arkansas' listing approach and methodologies direct CWA Section 319 activities and resources to the highest priorities. Watershed assessments are often conducted for waterbodies that are already listed in order to collect current data to support TMDL development.

Based upon this review, and with the exception of the 45 waterbody pollutant pairs noted above, the EPA concludes that the State's process for developing the 2010, 2012, 2014,

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and 2016 Section 303(d) lists meets the requirements of 40 C.F.R. § 130.7(b)(1-6) regarding the consideration of all existing and readily available water quality-related data and information, as well as the requirements of 40 C.F.R. § 130.7(b)(1).

C. Waters requiring no further action

1) Saline River for total dissolved solids

One segment of the Saline River (08040204-002) is designated by Arkansas as Category 1. The EPA's preliminary review relied upon incorrect criteria (90 mg/L instead of 120 mg/L) for assessment of total dissolved solids (TDS). Evaluation of all available data using the 120 mg/L criteria show that the TDS water quality standard is attained therefore no more action is required.

2) Bayou Two Prairie for dissolved oxygen

One segment of Bayou Two Prairie (08020402-006) is listed as impaired due to insufficient dissolved oxygen. In 2008, there was a typo in the HUC designation for Bayou Two Prairie. Due to the process of tracking impaired waters from one cycle to the next, the EPA initially identified Bayou Two Prairie as missing from subsequent 303(d) lists; however, the state has corrected the HUC. Because the EPA and ADEQ agree that the water body remains impaired, no further action is required.

3) Big Creek for Escherichia coli

Based upon communications with Arkansas, insufficient Escherichia coli data exist to assess one segment of Big Creek (11010005-022). Accordingly, Arkansas has designated the segment as Category 3.

4) Muddy Fork, two segments of Osage Creek, and Spring Creek for total phosphorus

When EPA last took final action on an Arkansas § 303(d) list (the State's 2008 list), EPA added Spring Creek, 11110103-931, Muddy Fork of the Illinois, 1110103-027, and two segments of Osage Creek (11110103-030 and 11110103-930) as Category 5 waters due to total phosphorus. Since that time, Arkansas and Oklahoma have engaged in several cooperative efforts to achieve additional nutrient reductions in the Illinois River Watershed. Rather than add these waters to Category 5, EPA sees it appropriate for Arkansas to designate them as Category 4b, because other pollution controls are in place to bring the water into attainment with the water quality standards. EPA regulations recognize that alternative pollution control requirements may obviate the need for a TMDL. Specifically, segments are not required to be included on the Section 303(d) list if "other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority" are stringent enough to implement applicable water quality standards (WQS) (see 40 CFR 130.7(b)(1)) within a reasonable period of time. These alternatives to TMDLs are commonly referred to as Category 4b waters. The rationale for including a water in Category 4b will include a description the strategy to put in place, an estimated timeline to meet water quality standards, a schedule to achieve milestones, a description of tracking progress, and a commitment to revise the strategy as necessary. For Osage Creek, Spring Creek, and Muddy Fork, several pollution controls are in place to bring the waters into attainment with the water quality standards. These

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requirements include: (1) the Arkansas Natural Resources Commission regulations concerning nutrient application rates in accordance with nutrient management plans; (2) effluent limitations in permits will control the amount of phosphorus and nitrogen entering streams from municipal and industrial dischargers; and (3) completion of a watershed model (jointly being developed by Arkansas, Oklahoma and the EPA) to allow for further evaluation of nutrient load contributions to the stream.

D. Waters Removed from the Section 303(d) list

When a state includes a waterbody pollutant combination on its Section 303(d) list, it may conclude in a subsequent listing cycle that the water no longer belongs on the Section 303(d) list. A waterbody pollutant combination need not be included on a state's subsequent Section 303(d) list when a TMDL is no longer required. The EPA has identified four reasons that justify the removal of a water from a state's 303(d) list from one cycle to the next. These are:

1. The state has prepared and the EPA has approved a TMDL for the listed water.
2. Change in assessment methodology resulted in the water quality standard being met
3. The state has adopted and the EPA has approved a site-specific water quality standard for the water, and the new water quality standard is being met.
4. New data or information indicates that the applicable water quality standard for the water is being met and the designated uses are fully supported.

An accounting of waters removed from each list cycle is provided in the electronic data that ADEQ submitted to EPA. The State's removal decisions and stated justifications are summarized below:

Number of Waterbody-Pollutant Combinations Removed from List	
Reason	2010
TMDL completed and approved by the EPA	31
Change in assessment methodology resulted in WQS being met	29
Change in WQS	32
New data or information indicate applicable WQS is being met	79
Total	171

Number of Waterbody-Pollutant Combinations Removed from List	
Reason	2012
TMDL completed and approved by the EPA	0
Change in assessment methodology resulted in WQS being met	1
Change in WQS	0
New data or information indicate applicable WQS is being met	66
Total	67

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Number of Waterbody-Pollutant Combinations Removed from List	
Reason	2014
TMDL completed and approved by the EPA	79
Change in assessment methodology resulted in WQS being met	0
Change in WQS	0
New data or information indicate applicable WQS is being met	55
Total	134

Number of Waterbody-Pollutant Combinations Removed from List	
Reason	2016
TMDL completed and approved by the EPA	54
Change in assessment methodology resulted in WQS being met	4
Change in WQS	0
New data or information indicate applicable WQS is being met	101
Total	159

In reviewing the State's 2010, 2012, 2014, and 2016 Section 303(d) waterbody lists, the EPA carefully considered Arkansas' decision to remove certain waterbody-pollutant combinations from the State's 2008 303(d) list, the justification for those removals, and the methodology used in making those decisions. With regard to the removal decisions that EPA is approving today, EPA concludes that the removal decisions identified in the Integrated Report are based on all existing and readily available water quality-related data and information.

E. Priority Ranking and Schedule for Development of TMDLS for Listed Waters and Pollutants

Pursuant to the listing methodologies set out in the State's submittals, Arkansas prioritized WQLSs for TMDL development into two Priority Areas: Priority 1 (Imminent human health problems; Waters where TMDL development is expected during the next two years; Waters listed for four or more causes; or Waters with documented widespread local support for water quality improvement) and Priority 2 (Waters listed for three or less causes; Waters where local support for TMDL development is expected but not documented; Waters with no evident local support for water quality improvements; or Waters where impairments are believed to be due largely to natural causes). Arkansas' TMDL prioritization strategy is fully described in Arkansas' Integrated Reports.

The EPA notes the State's priority ranking of listed waters for TMDL development took into account the severity of pollution and the uses to be made of such waters, as required by 40 C.F.R. § 130.7(b)(4), as well as other relevant factors such as

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imminent human health problems or local support for water quality improvement. In addition, the EPA concluded that the State listed WQLS targeted for TMDL development in the next two years, as required by 40 C.F.R. § 130.7(d).

IV. Final Recommendation on Arkansas' 2010, 2012, 2014 and 2016 Section 303(d) List Submittals

After careful review of Arkansas' final Section 303(d) list submittal packages, the EPA has determined that Arkansas' 2010, 2012, 2014 and 2016 Section 303(d) lists meet the requirements of Section 303(d) of the Clean Water Act (CWA) and the EPA's implementing regulations with the exception of the 45 waterbody pollutant combinations on which EPA is taking no action at this time. As a result, the EPA partially approves Arkansas' 2010, 2012, 2014 and 2016 Section 303(d) lists with further action pending¹.

V. References

The following list includes documents that were used directly or indirectly as a basis for the EPA's review and approval of the State's Section 303(d) waterbody list. This list is not meant to be an exhaustive list of all records, but to provide the primary documents the Region relied upon in making decisions to approve the State's list.

- 40 C.F.R. Part 130 Water Quality Planning and Management
- 40 C.F.R. Part 131 Water Quality Standards
- July 29, 2005, Memorandum from Diane Regas, Director, Office of Wetlands, Oceans, and Watersheds, US EPA to Water Division Directors transmitting EPA's "Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act"
- October 12, 2006, Memorandum from Diane Regas, Director, Office of Oceans, Wetlands, and Watersheds entitled *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*.
- May 5, 2009, Memorandum from Suzanne Schwartz, Acting Director, Office of Wetlands, Oceans, and Watersheds, entitled *Information Concerning 2010 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*.
- March 21, 2011, Memorandum from Denise Keehner, Director, Office of Wetlands, Oceans, and Watersheds, entitled *Information Concerning 2012 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*.

¹ Additionally, EPA discussed Arkansas' Regulation 2.511(B) pertaining to mineral Ecoregional Reference Values its recent WQS action, effective October 31, 2016. Considering that discussion and the possibility that ADEQ may take further action with respect to those values, EPA is taking no action at this time with respect to Arkansas waterbodies subject to mineral Ecoregional Reference values.

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- September 3, 2013, Memorandum from Denise Keehner, Director, Office of Wetlands, Oceans, and Watersheds, entitled *Information Concerning 2014 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*.
- August 13, 2015, Memorandum from Denise Keehner, Director, Office of Wetlands, Oceans, and Watersheds, entitled *Information Concerning 2016 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*.
- April 1991, "Guidance for Water Quality-Based Decisions: The TMDL Process," EPA 440/4-91-001.
- July 24, 1992, Federal Register Notice, *40 C.F.R. Parts 122, 123, 130, Revision of Regulation*, 57 FR 33040.
- August 8, 1997, Memorandum from Robert Perciasepe, Assistant Administrator for Water, US EPA, regarding "New Policies for Establishing and Implementing TMDLs."
- September, 1997, Guidance from Office of Water, Headquarters, US EPA regarding "Guidelines for Preparation of the Comprehensive State Water Quality Assessments (305(b) Reports) and Electronic Updates" Supplement, EPA-841-B-97-002B.
- August 23, 1999, Federal Register Notice. *Proposed Revisions to the Water Quality Management and Planning Regulations*. 64 FR 46012.
- April 27, 2000, Federal Register Notice, *EPA Review and Approval of State and Tribal Water Quality Standards*, 65 FR 24641