

Wyoming's 2020 Integrated 305(b) and 303(d) Report

Public Review Draft



Wyoming Department of Environmental Quality – Water Quality Division

Document #19-xxxx, December 17, 2019

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Wyoming Department of Environmental Quality

Water Quality Division – Watershed Protection Program

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Executive Summary

Wyoming's 2020 Integrated 305(b) and 303(d) Report summarizes water quality conditions in the State of Wyoming. This report fulfills the requirements of Clean Water Act Sections 305(b), 303(d), and 314(a)(1) that compel all states to assess and report on the quality of waters within their state.

2020 Integrated Report Highlights

A total of 19 waterbody segments within 10 streams were addressed during the 2020 Integrated Report (IR) cycle.

Approved TMDLS

Total maximum daily loads (TMDLs) were developed and approved for four impaired segments:

- **Blacks Fork** (WYGR140401070106_01 and WYGR140401070403_01): Two segments of Blacks Fork do not support the *Recreation* designated use. WDEQ developed TMDLs to address the impairments. The TMDLs were approved on March 4, 2019.
- **Smiths Fork** (WYGR140401070208_00 and WYGR140401070208_01): Two segments of Smiths Fork do not support the *Recreation* designated use. WDEQ developed TMDLs to address the impairments. The TMDLs were approved on March 4, 2019.

De-listed Segments

Four previously impaired (Category 5) segments now meet water quality standards and were de-listed (moved to Category 2):

- **Willow Creek** (WYGR140401070205_01): WDEQ collected data in 2003, 2013, and 2014 that indicate that the *Aquatic life other than fish* designated use is now fully supported.
- **Middle Prong Wild Horse Creek** (WYPR100902020808_01): This segment was reclassified to secondary contact recreation, and available bacteria data indicate that the *Recreation* designated use is fully supported.
- **Laramie River** (WYNP101800100201_01): The Laramie River Conservation District collected bacteria data in 2016 and 2017, and the bacteria data indicate that the *Recreation* designated use is fully supported.
- **Middle Fork Popo Agie** (WYBH100800030207_04): The Popo Agie Conservation District collected bacteria data in 2016, 2017, and 2018, and the bacteria data indicate that the *Recreation* designated use is fully supported.

New Impairments

Three segments were assessed and do not meet water quality standards for the *Recreation* designated use due to *E. coli* (Category 5):

- **Flat Creek** (WYSR170401030205_01): Eight separate *E. coli* samples were collected from three sites on Flat Creek from May 9 to August 10, 2017. Four separate geometric means at each site were calculated from the sample results. A single geometric mean exceeded the primary contact

recreation criterion of 126 organisms per 100 milliliters (organisms/100 mL) at the downstream-most sample site in Flat Creek.

- **Fish Creek** (WYSR170401030101_01): Eight separate *E. coli* samples were collected from two sites on Fish Creek from May 9 to August 10, 2017. Four separate geometric means at each site were calculated from the sample results, and three of the four geometric means at each site exceeded the primary contact recreation criterion of 126 organisms/100 mL
- **Lander Creek** (WYNP101800060104_01): The geometric mean of five samples collected from a single sample site between June 24 and August 15, 2016 exceeded the applicable *E. coli* criteria.

Newly Assessed Segments Meeting Standards

Three segments were assessed and meet water quality standards (Category 2):

- **Flat Creek** (WYSR170401030205_02 and WYSR170401030205_03): Bacteria data collected from two segments in 2017 indicate that the *Recreation* designated use is fully supported in the upper reaches of Flat Creek.
- **Rawhide Creek** (WYBH100800090301_01): Data collected in 2010, 2012, and 2013 indicate that the *Agriculture*, *Aquatic life other than fish*, *Cold water game fish*, *Industry*, *Nongame fish*, and *Wildlife* designated uses are fully supported.

Indeterminant Results

One previously impaired segment (Category 5) was determined to have insufficient data to justify the impairment and was de-listed (Category 3):

- **Willow Creek**: (WYGR140401070205_02): Based on new information from a monitoring site that was established after the original 1998 303(d) listing, it was determined that insufficient data are available to reach a conclusion regarding the impairment status of the lower 3.8 miles of Willow Creek.

Four segments were assessed but insufficient data are available to determine if the segments meet water quality standards (Category 3):

- **Rawhide Creek** (WYBH100800090301_02 and WYBH100800090301_03): Macroinvertebrate data collected by WDEQ in 2010, 2012, and 2013 in the lower reaches of Rawhide Creek are not comparable to reference conditions. However, insufficient data are available to determine if this is a result of natural or anthropogenic causes.
- **Pacific Creek** (WYGR140401040303_01): Bacteria data collected in 2016 suggest that the *Recreation* designated use is fully supported, but insufficient data are available to reach a definitive conclusion.
- **Clarks Draw** (WYSR170401030305_01): Bacteria data collected in 2017 suggest that the *Recreation* designated use is fully supported, but insufficient data are available to reach a definitive conclusion.

What's new for the 2020 Integrated Report?

A number of changes have been made between the previous IR cycle (2016/2018) and the 2020 IR cycle to improve the look and readability of the document and improve access to the data and supporting information for both internal WDEQ use and for the public. The following highlights these changes.

ATTAINS

The U.S. Environmental Protection Agency's (EPA) Assessment, Total Maximum Daily Load (TMDL) Tracking and Implementation System (ATTAINS) now serves as the System of Record, which means that ATTAINS holds the official submittal of the Clean Water Act Section 303(d) list and the Section 305(b) assessed waters information. WDEQ has migrated all of its data supporting Sections 303(d) and 305(b) into ATTAINS and is now using it as the department's primary database and repository for all such data. Ultimately, upon EPA approval¹ of Wyoming's 2020 Integrated 305(b) and 303(d) Report, the public will be able to access this information at:

https://ofmpub.epa.gov/waters10/attains_state.control?p_state=WY

Improvements to the Basin Summaries

The basin summaries previously presented in Section 8 of Wyoming's 2016/2018 IR were streamlined for the 2020 IR. The basin summaries are now in **Section 6** of this document. In each subsection within **Section 6**, tabular summaries with live hyperlinks to both Fact Sheets (described below) and WDEQ's assessment records are provided for each basin.

An example table is shown in **Table ES-1**. The first five columns present information about the assessment units themselves, while the rest of the columns present information about the use support determination(s). Use support determinations were color-coded to make them more user-friendly. The following five abbreviations are used in the tables to describe the use support determinations:

Abbreviation	Use Support
NA	Not Assessed
Not	Not Supporting
Full	Fully Supporting
--	Use Not Applicable
II	Insufficient Information/Indeterminant

¹ Note that the publicly accessible version of ATTAINS will not be updated until after the 2020 IR has been reviewed and approved by EPA. Post approval, however, it should provide the public with a readily accessible, online source of information.

Table ES-1. Example assessment table

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Mill Creek Watershed	WYBR1601010106_01	Bear	2AB	32.9 Miles	2012	2	NA	Full	--	NA	NA	NA	NA	NA	Full	NA	NA
Bear River	WYBR160101010201_01	Bear	2AB	85.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pleasant Valley Creek	WYBR160101010301_01	Bear	3B	64.5 Miles	2012	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Bear River	WYBR160101010303_01	Bear	2AB	36.5 Miles	2001	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Bridger Creek	WYBR160101010801_01	Bear	3B	191.4 Miles	2003	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Hobble Creek	WYBR160101020201_01	Bear	2AB	126.9 Miles	1999	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Coantag Creek	WYBR160101020201_02	Bear	2AB	55.1 Miles	2002	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Smiths Fork	WYBR160101020204_01	Bear	2AB	280.7 Miles	1999	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Salt Creek	WYBR160101020303_01	Bear	2AB	105 Miles	2005	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Giraffe Creek	WYBR160101020304_00	Bear	2AB	40.9 Miles	2002	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA

Fact Sheets

Fact sheets were developed for each categorized waterbody segment (i.e., assessment unit) in Wyoming. Hyperlinks to the fact sheets are provided in the basin summary tables, which were described above. An example is shown in **Figure ES-1**.

Each fact sheet presents the following information about the assessment unit: information about the waterbody segment itself, beneficial use support information, impairment information (if the waterbody segment is or was impaired), listing history, and listing rationale. Hyperlinks to approved TMDLs and full assessment records (published online) are included in the listing history and listing rationale, respectively.

USE SUPPORT DECISION FACT SHEET

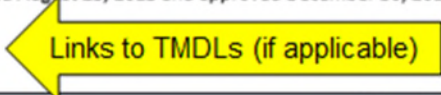
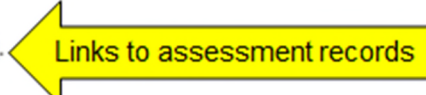
Waterbody Information						
AUID	WYBF101202010501_01			Water Type	STREAM	
Waterbody Name	Belle Fourche River			Use Class	2ABWW	
Size (Miles/Acres)	6.2 Miles			Basin	Belle Fourche	
Cycle Last Assessed	2007			IR Category	4A	
Location	From the confluence with Donkey Creek to a point 6.2 miles upstream					
Beneficial Use Support Information						
Use Name	Use applicable?	Fully Supporting	Not Fully Supporting	Threatened	Insufficient Information	Not Assessed
Agriculture	Y					X
Cold water game fish	N					
Warm water game fish	Y					X
Nongame Fish	Y					X
Industry	Y					X
Drinking water	Y					X
Recreation	Y		X			
Scenic Value	Y					X
Aquatic life other than fish	N					
Wildlife	Y					X
Fish consumption	Y					X
Impairment Information						
Parameter	Cycle First Listed	Associated Uses		TMDL Priority	TMDL Completed? (Date)	
FECAL COLIFORM	1996	Recreation			12/30/2013	
Listing History						
<p>A precursor segment was listed in 1996. A 5.4-mile segment was listed in 2008. The segment was modified to 6.2 miles in 2012. TMDL completed August 23, 2013 and approved December 30, 2013. Moved to Category 4A in 2014.</p> <p>Link to TMDL.  Links to TMDLs (if applicable)</p>						
Listing Rationale						
<p>DEQ sampling from September/October 1998 and July/August 1999. Fecal coliform counts exceeded 400 cfu/100mL. Data gathered between 2006 and 2008 from USGS gage #06426500 indicated high <i>E. coli</i> counts in the Belle Fourche River near Moorcroft.</p> <p>Link to full assessment record.  Links to assessment records</p>						
Date Updated: 8/28/2019				By: R. F. Steg		

Figure ES-1. Example fact sheet.

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Abbreviations and Acronyms

ATTAINS	Assessment, Total Maximum Daily Load Tracking, and Implementation System
AU	Assessment Unit
AUID	Assessment Unit Identifier
BMP	Best Management Practice
CBM	Coalbed Methane
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	U.S. Environmental Protection Agency
HCB	Harmful Cyanobacteria Bloom
HUC	Hydrologic Unit Code
IR	Integrated 305(b) and 303(d) Report
NHD	National Hydrography Dataset
PRBS	Probabilistic Rotating Basin Surveys
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
USBOR	U.S. Bureau of Reclamation (U.S. Department of the Interior)
USGS	U.S. Geological Survey (U.S. Department of the Interior)
WDEQ	Wyoming Department of Environmental Quality
WQD	Water Quality Division
WQS	Water Quality Standards
WYPDES	Wyoming Pollutant Discharge Elimination System

1 Introduction

The Wyoming Department of Environmental Quality (WDEQ) prepared the 2020 *Integrated 305(b) and 303(d) Report* (IR) to provide a summary of water quality conditions in the State of Wyoming. This report fulfills the Clean Water Act (CWA) requirements of Section 305(b), 303(d), and 314(a)(1).

In 1972, Congress enacted the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA). The purpose of the CWA is to promote the restoration and/or maintenance of the chemical, physical, and biological integrity of our nation's surface waters and to support (1) the protection and propagation of fish, shellfish, and wildlife and (2) recreation in and on the water. WDEQ's Water Quality Division (WQD) administers the CWA in Wyoming. The U.S. Environmental Protection Agency (EPA) administers the CWA in Indian Country, as defined at 18 U.S.C. Section 1151.

1.1 Section 305(b) Requirements

Section 305(b) of the CWA requires that each state prepare and submit a biennial report of the state's water quality to EPA by April 1 of even-numbered years. The Federal Code of Regulations (CFR) 40 CFR § 130.8 outlines the required content of the report. The report must contain a description of the water quality of all navigable waters of the state for the preceding year, including the extent to which current conditions allow for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water. Section 305(b) also requires each state to report the water quality and the elimination of pollutants necessary for designated use support. Specifically, each state is required to identify waters not meeting the above conditions;

recommend strategies to achieve these objectives; and estimate the environmental impacts, economic and social costs and benefits, and the predicted timeline for project completion. The sources and extent of nonpoint source pollution in each state must be estimated, including a description of the current program used to mitigate these pollutants and associated financial costs. Lastly, the report must include an assessment of the water quality of all publicly owned lakes, including the status and trends of such water quality as specified in section 314(a)(1) of the CWA.

1.2 Section 303(d) Requirements

Section 303(d) of the CWA requires that states identify and list waters for which the effluent limits outlined in Section 301 are not effective in attaining designated uses. 40 CFR § 130.7 outlines the requirements of section 303(d). Each state must submit a 303(d) List of impaired and threatened waters to EPA by April 1 of each even-numbered year. EPA must review and approve or disapprove the 303(d) List within 30 days of submittal. The 303(d) List must also include waters for which controls on thermal discharges under section 301 of the CWA are not stringent enough to assure the protection and propagation of a balanced population of shellfish, fish, and wildlife. Section 303(d) requires that states develop a separate total maximum daily load (TMDL) for each pollutant/segment combination on the 303(d) List. A TMDL is the amount of pollution a waterbody can receive and still meet its designated uses. Waters on the 303(d) List must be prioritized for TMDL development based on the severity of each pollutant/segment combination or listing and the specific designated uses adversely impacted by the pollutant (see **Section 4** for Wyoming's TMDL prioritization).

2 Determining Surface Water Quality Condition

In Wyoming, WDEQ assesses attainment with water quality standards and identifies waters that do not meet standards (i.e., impaired waters). This section presents Wyoming's data requirements and methodology for assessing attainment of water quality standards (WQS).

2.1 Data Requirements

Federal and state regulations incorporate specific requirements for the collection and use of data for the process of assessing compliance with WQS. Federal regulations require the use of all *existing and readily available water quality-related data*. Wyoming statutes and rules define *credible data*, the use of *historic data*, and a *weight-of-evidence* approach for use of the data.

2.1.1 Existing and Readily Available Data

As part of administering the CWA in Wyoming, 40 CFR § 130.7(b)(5) requires that WDEQ *shall assemble and evaluate all existing and readily available water quality-related data and information to develop the list required by §§130.7(b)(1) and 130.7(b)(2)*. At a minimum *all existing and readily available water quality-related data and information* includes but is not limited to all of the existing and readily available data and information about the following categories of waters:

- (i) Waters identified by the State in its most recent section 305(b) report as “partially meeting” or “not meeting” designated uses or as “threatened”;
- (ii) Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards;
- (iii) Waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, university

researchers, the United States Department of Agriculture, the National Oceanic and Atmospheric Administration, the United States Geological Survey, and the United States Fish and Wildlife Service are good sources of field data; and

- (iv) Waters identified by the State as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment.

WDEQ solicits data every two years using the department's automated electronic mailing list (listserv). Water quality data and other information must be received by WDEQ's Water Quality Assessment Program no later than April 15 during odd-numbered (e.g., 2021) years to be considered for inclusion in the subsequent IR (e.g., 2022 IR). Any supplemental data or other information deemed necessary by WDEQ must be provided promptly as requested. Incomplete data, or those submitted beyond the April 15 deadline, are typically considered toward the subsequent IR.

Much of the data and information used in making designated use support determinations are generated by WDEQ's Surface Water Quality Monitoring Program. WDEQ also routinely reviews water quality data from a variety of other sources, including Wyoming's 34 conservation districts, and federal, state and local government agencies.

All water quality data and other information are thoroughly evaluated by Surface Water Quality Monitoring Program or Water Quality Assessment Program personnel with Wyoming's surface water quality standards contained in Chapter 1 of *Wyoming's Water Quality Rules and Regulations* (WDEQ, 2018b).

2.1.2 Credible Data

The Wyoming Environmental Quality Act (WDEQ, 2018c), Wyoming Statute (W.S.) § 35-11-

103(c)(xix), and Section 2(a)(i) of Chapter 1 define credible data as

scientifically valid chemical, physical and biological monitoring data collected under an accepted sampling and analysis plan including quality control, quality assurance procedures and available historical data.

Hereafter, within this document, the use of the term *credible data* refers to this definition.

In Wyoming, credible data collected from each waterbody are considered for characterizing the integrity of the waterbody. Credible data are used (along with other applicable information) in a weight-of-evidence approach to designate beneficial uses and determine if those uses are attained (Wyoming WQS, Chapter 1, Section 35(b)).

Use support determinations are made using credible data. In some cases, less than complete datasets may be used to determine attainment, especially with ephemeral or intermittent waterbodies where sampling is not practical or feasible (Wyoming WQS, Chapter 1, Section 35(d)).

Credible data must be collected using accepted laboratory and field methods by appropriately trained personnel that must follow a monitoring plan and quality assurance plan. Such personnel must have specialized training in sampling protocol and field methods (Water Quality Standards, Chapter 1, Section 35(a)(i)). Additionally, such data must include documentation of data quality assurance during the planning, implementation, and assessment of environmental data collection and analysis (Wyoming WQS, Chapter 1, Section 35(a)(ii)).

A variety of scientifically defensible laboratory and field methods may be used to collect and analyze data for the purpose of making designated use support determinations (i.e., assessments). *Wyoming's Manual of Standard Operating Procedures for Sample Collection and Analysis* ([WDEQ, 2018a](#)) details Wyoming's methods.

2.1.3 Historic Data

Wyoming's WQS, Section 2(b)(xxii) of Chapter 1, define historic data as:

scientifically valid data that is more than five years old, or qualitative information that adds some factual information on the historic conditions of a waterbody. This historic qualitative information may include photographs, journals and factual testimony of persons who have lived near or relied upon the waterbody, and old records on water use and water conditions.

Following recommendations in EPA's *Consolidated Assessment and Listing Methodology* ([EPA, 2002](#)), WDEQ will only evaluate historic data for designated use support determinations if (1) the historic data are considered representative of current water quality conditions and (2) if the historic data are evaluated together with recent data that were collected within the previous five years.

2.1.4 Wyoming's Weight of Evidence Approach

Wyoming's WQS, Chapter 1 Section 35(b), require that a weight-of-evidence approach be used with credible data to make designated use support decisions. Within the weight-of-evidence approach, WDEQ incorporates all relevant data and other information. WDEQ may use statistical tests, analytical data, and include additional information to ensure the validity, representativeness, and objectiveness of data used in the weight-of-evidence approach. Wyoming's approach is presented in *Wyoming's Methods for Determining Surface Water Quality Condition* ([WDEQ, 2017](#)).

2.2 Assessing Attainment of Wyoming's Water Quality Standards

WQS are EPA-approved provisions of state, territorial, authorized tribal, or federal law that describe the desired condition of a waterbody and the means by which that condition will be protected or achieved. WQS form a legal basis for controlling pollutants entering the waters of the United States. WQS consist of three core components: (1) designated uses of a waterbody (e.g., drinking water, fisheries, aquatic life), (2) criteria to protect designated uses, and (3) antidegradation requirements to protect existing uses and high quality/high value waters. Wyoming's assessment approach focuses on determining if the designated uses are supported and, if not, determining the cause of the impairment.

2.2.1 Designated Uses and Classifications

According to Wyoming's WQS, Chapter 1 Section 2(b)(ix), designated uses are *those uses specified in water quality standards for each waterbody or segment whether or not they are being attained*.

Designated uses are equivalent to management goals or expectations for each of Wyoming's surface waters, and are assigned to each water using a tiered classification system described in Section 4 of Chapter 1. This approach places waters into Classes 1–4 (see **Table 1**) based on their designated uses, with Class 1 waters generally being managed for the highest and Class 4 the lowest water quality, respectively. Wyoming's current surface water classifications are contained within the *Wyoming Surface Water Classification List* ([WDEQ, 2013b](#)). Section 3 of Chapter 1 states that *the objectives of the Wyoming pollution control program are to provide, wherever attainable, the highest possible water quality commensurate with the following nine uses*:

Drinking water - *The drinking water use involves maintaining a level of water quality that is suitable for potable water*

or intended to be suitable after receiving conventional drinking water treatment.

Fisheries - *The fisheries use includes water quality, habitat conditions, spawning and nursery areas, and food sources necessary to sustain populations of cold water game fish, warm water game fish and nongame fish. This use does not include the protection of aquatic invasive species or other fish which may be considered "undesirable" by the Wyoming Game and Fish Department or the U.S. Fish and Wildlife Service within their appropriate jurisdictions.*

Aquatic life other than fish - *This use includes water quality and habitat necessary to sustain populations of organisms other than fish in proportions which make up diverse aquatic communities common to the waters of the state. This use does not include the protection of human pathogens, insect pests, aquatic invasive species or other organisms which may be considered "undesirable" by the Wyoming Game and Fish Department or the U.S. Fish and Wildlife Service within their appropriate jurisdictions.*

Fish consumption - *The fish consumption use involves maintaining a level of water quality that will prevent any unpalatable flavor and/or accumulation of harmful substances in fish tissue.*

Recreation - *Recreational use protection involves maintaining a level of water quality which is safe for human contact. It does not guarantee the availability of water for any recreational purpose. The recreational designated use includes primary contact recreation and secondary contact recreation subcategories.*

Wildlife - *The wildlife use includes protection of water quality to a level which is safe*

for contact and consumption by avian and terrestrial wildlife species.

Agriculture - For purposes of water pollution control, agricultural uses include irrigation and/or livestock watering.

Industry - The industrial use involves maintaining a level of water quality useful for industrial purposes.

Scenic value - Scenic value use involves the aesthetics of a waterbody (odor, color,

taste, settleable solids, floating solids, suspended solids and solid waste) and is not necessarily related to general landscape appearance.

Designated uses assigned to particular surface waters are revised on an ongoing basis. Each change to a designated use is based on a scientific evaluation, called a Use Attainability Analysis (UAA), considers public input, and is finalized through a formal determination by the WQD Administrator. The designated use changes are then submitted to EPA pursuant to the CWA.



Fisheries are but one of the designated uses that water quality standards are intended to protect.

Table 1. Wyoming's surface water classifications (first column) and designated uses (top row)

Class	Drinking water	Cold water game fish	Warm water game fish	Nongame fish	Fish consumption	Aquatic life other than fish	Recreation²	Wildlife	Agriculture	Industry	Scenic value
1	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Yes ¹	Yes	Yes	Yes	Yes	Yes	Yes
2AB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2A	Yes	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
2B	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2C	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2D	No	If present	If present	If present	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3A	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3B	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3C	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
3D	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
4A	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
4B	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes

Notes

For each surface water class. A "Yes" indicates that the use is designated; a "No" indicates that the use is not designated.

¹ Class 1 waters are not necessarily protected for all uses (indicated by an italicized "Yes") in all circumstances. For example, all surface waters in National Parks and Wilderness Areas are Class 1; however, all such waters are not necessarily managed for fisheries or aquatic life other than fish uses (e.g., hot springs, ephemeral waters and wet meadows).

² Wyoming's recreational designated use is subdivided into primary and secondary recreational uses, but WDEQ uses only a single recreational designated use in assigning surface water classifications.

2.2.2 Use Support Determinations

Wyoming's *Methods for Determining Surface Water Quality Condition* ([WDEQ, 2017](#)) outlines the methodology used by WDEQ for making designated use support determinations, or assessments, on surface waters. Designated use support determinations for Wyoming's surface waters are typically made on a biennial basis during preparation of the IR.

2.2.3 Assessment Units

Wyoming delineates linear assessment units for streams and rivers and polygonal (i.e., area-based) assessment units for lakes, reservoirs, and ponds. Typically an entire lake, reservoir, or pond is a single assessment unit. However, streams and rivers are typically composed of many assessment units.

WDEQ typically delineates stream segments in one of two ways, depending on the number of study sites used in the assessment ([WDEQ, 2017](#)). If two or more study sites exist, the segment will usually be delineated to include the distance between the sites. If only one study site exists, however, the segment is usually extended from this site to the nearest upstream and downstream tributary. WDEQ recommends that data submissions include the necessary number of study sites to allow for an accurate delineation of each assessment unit.

WDEQ assigns a unique 305(b) identifier code to each categorized water that serves as a permanent reference. Each identifier contains information about the state, river basin, and hydrologic unit (a 12-digit hydrologic unit code [HUC]) containing the water and a sequence number indicating the order in which waters have been categorized within the 12-digit HUC. For example, a 36.5-mile segment of the Bear River, from the confluence with Woodruff Narrows Reservoir upstream to the confluence with Sulphur Creek, was placed in Category 5 and added to the 303(d) List in 2002. The 305(b) identifier for this segment is WYBR160101010303_01, indicating that it is located in Wyoming (WY), in

the Bear River Basin (BR), in 12-digit HUC 160101010303, and that this was the first (01) categorization decision by WDEQ within this 12-digit HUC.

2.2.4 EPA Categorization

Once WDEQ makes designated use support determinations, EPA requires that all surface waters of the state be placed into one of five categories (EPA, 2005b). Surface water categorizations are used to standardize these various approaches for EPA's national reporting purposes because designated uses, water quality standards, and designated use support methodologies vary considerably across the states, tribes, and territories. In Wyoming, designated use support determinations translate directly into the five categories:

Category 1 - Available data and/or information indicate that all designated uses are supported and no use is threatened.

Category 2 - Available data and/or information indicate that at least one designated use is supported, while one or more other uses are either indeterminate or not assessed.

Category 3 - Available data and/or information are either insufficient or inconclusive and designated use support cannot be determined for any uses.

Category 4 - Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed. There are two subcategories of Category 4 that can potentially be used in Wyoming's Integrated Report:

4A. A state-developed TMDL has been approved by EPA or a TMDL has been established by EPA for any segment-pollutant combination.

4B. Designated use support is expected to be restored in a reasonable period of time

through other pollution control measures. For example, a stream that has been historically impaired by excess sedimentation from urban stormwater runoff may be moved to Category 4B after stormceptors are installed that are expected to effectively trap the excess sediment before it reaches the stream. EPA requires that states thoroughly demonstrate that an impaired water should be placed in Category 4B rather than in Category 5. All demonstrations must include the following: an identification of the waterbody and cause of impairment; a description of pollution control measures and how they are expected to result in standards attainment; an estimated timeline for standards attainment; a schedule for implementing and monitoring pollution controls; and a commitment to revise pollution controls as necessary.

Category 5 - Available data and/or information indicate that at least one designated use is not supported or is threatened because of a pollutant(s) and a TMDL is needed. Category 5 waters are placed on Wyoming's 303(d) List of impaired waters requiring TMDLs. Each pollutant/segment combination is considered a separate 303(d) listing. For example, if the aquatic life other than fish use on a stream segment is impaired due

to copper, sediment, and selenium, these three pollutants would be considered three separate 303(d) Listings.

All categorized waters are georeferenced by WDEQ using Geographic Information Systems and the U.S. Geological Survey (USGS) 1:24,000 National Hydrography Dataset (NHD) for Wyoming. Linear (streams) and polygon (lakes, reservoirs, ponds) shapefiles are updated every two years and submitted to EPA along with the IR. These shapefiles are available to the public for download on WDEQ's Watershed Protection Program website².

Study site locations from available data and/or information are used to delineate the extent of each categorized water. Lakes and reservoirs are typically placed into just one of the five categories, but can also be subdivided into several categories. In contrast, streams commonly have segments in more than one category.

Data and information for all of Wyoming's categorized surface waters are stored in an online database called the [Assessment and Total Maximum Daily Load Tracking and Implementation System](#) (ATTAINS). ATTAINS was created by EPA to assist states in reporting information about the conditions of the Nation's surface waters. ATTAINS also provides users with information on the status of waters at the national, state, and waterbody level. ATTAINS is updated every two years and is submitted to EPA along with the IR.

² <http://deq.wyoming.gov/wqd/watershed-protection/>. Note that this link may only open in Google Chrome.

3 Water pollution control programs

In Wyoming, the WDEQ/WQD is responsible for administering most of the provisions of the CWA that are delegated to the state. A summary of the CWA programs administered by the WQD is provided in **Figure 1**. A more detailed description of these programs is provided in the *Wyoming Nonpoint Source Management Plan 2013 Update* ([WDEQ, 2013a](#))

The primary objectives are to restore water quality where it is impaired and maintain high quality waters where they are not impaired. The various WQD programs work together in the sequence shown in **Figure 2** to accomplish these objectives.

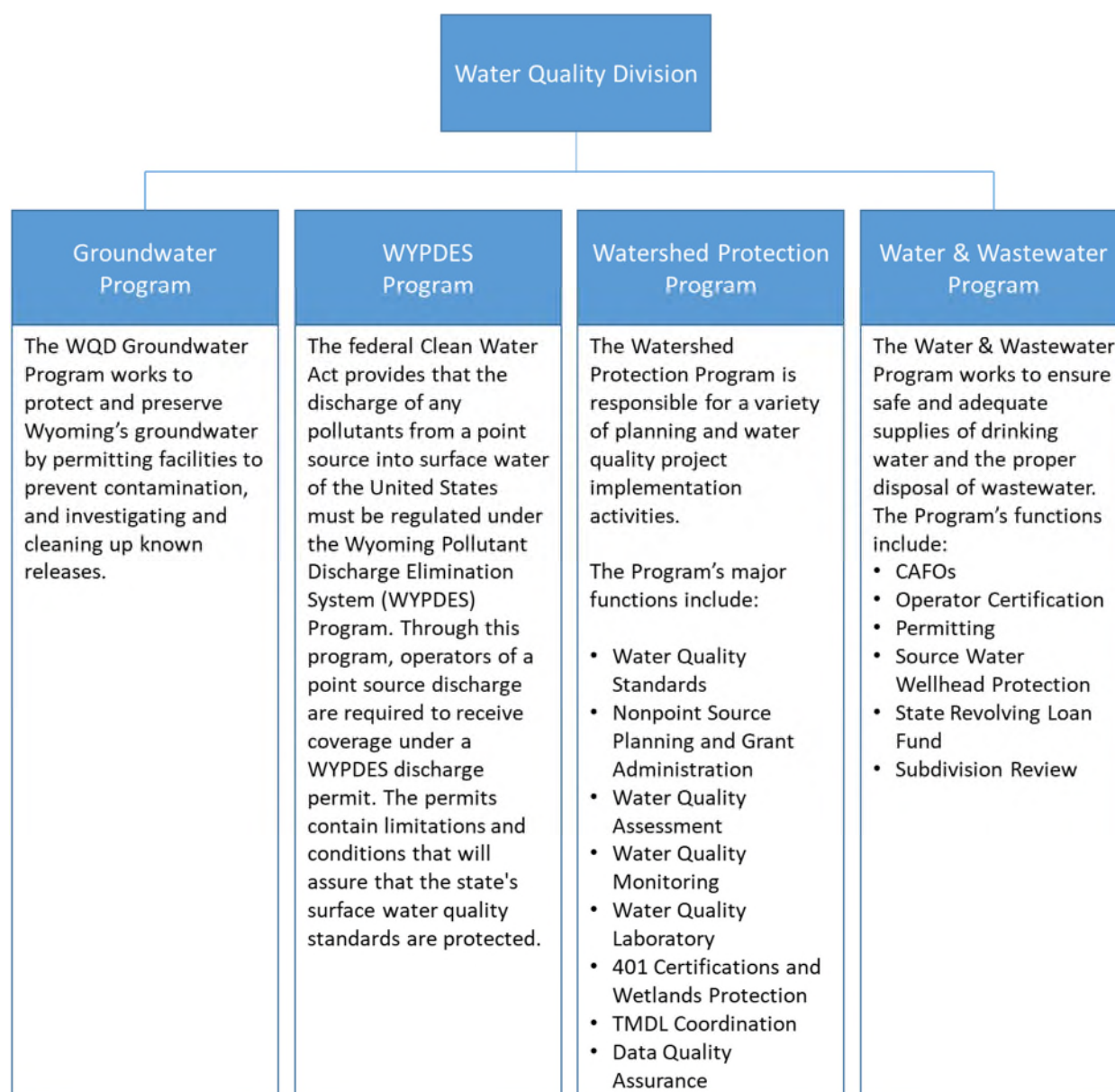


Figure 1. WDEQ WQD primary program areas.

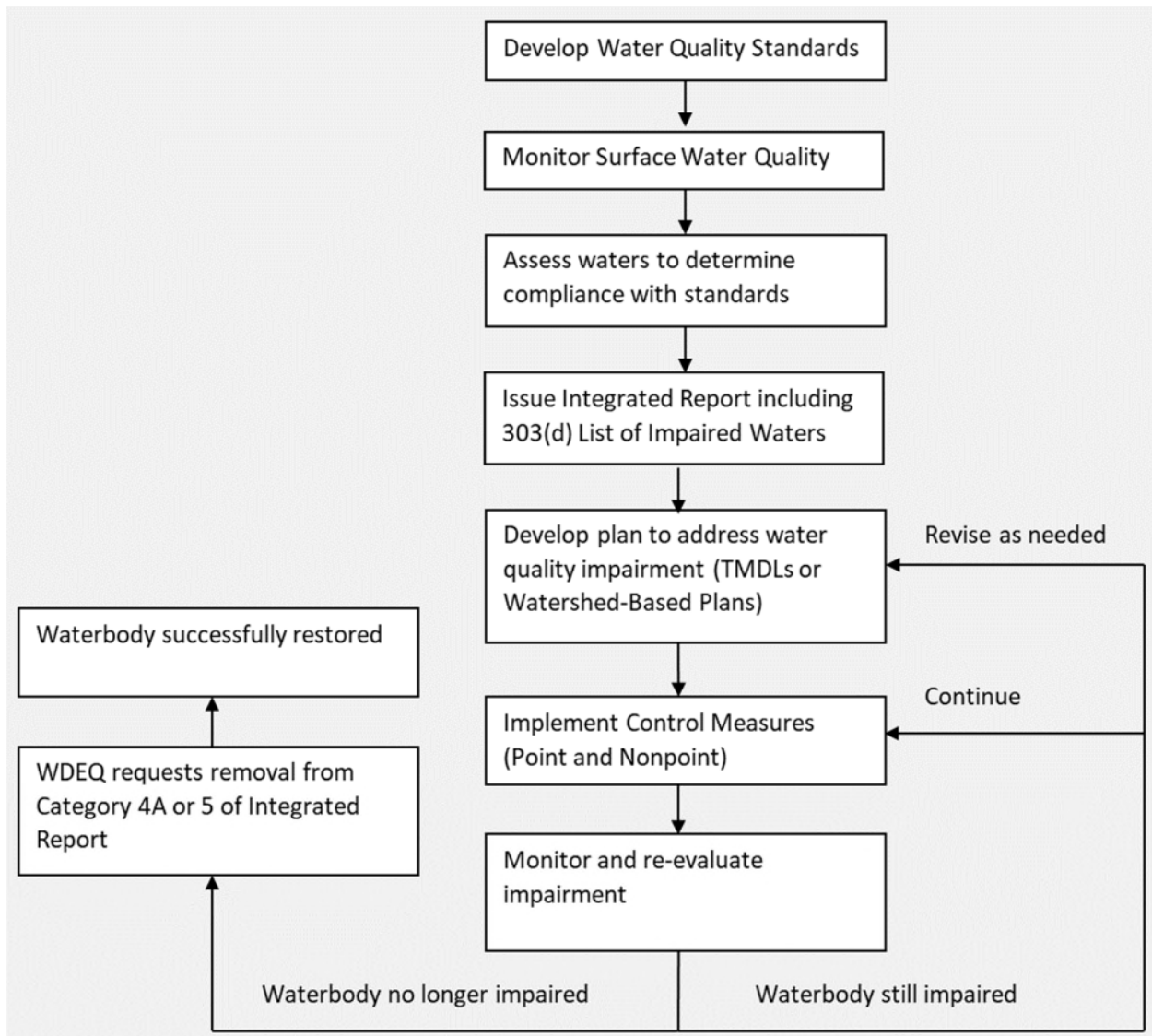


Figure 2. Generalized water quality restoration approach.

3.1 Wyoming's Surface Water Monitoring Program

Wyoming's 2010–2019 Surface Water Monitoring Strategy ([WDEQ, 2010](#)) focuses on a rotating river basin framework where probabilistic and targeted designated use-support monitoring are integrated. Using this approach, a probabilistic survey will be completed for each of five geographic divisions of the state, and the results of these surveys will identify high quality waters and waters where standards may not be attained as candidates for targeted designated use-support studies. Other efforts that are common when working in a basin include expanding WDEQ's reference datasets, evaluating nonpoint source project effectiveness, developing use attainability analyses, and developing or evaluating TMDLs. WDEQ re-evaluates its water quality monitoring strategy at least every ten years to adjust management goals and objectives as priorities change. Annual monitoring plans and project-specific sampling and analysis plans are placed on the Watershed Protection Program website³ to inform stakeholders about WDEQ monitoring projects.

3.1.1 Wyoming's Probabilistic Rotating Basin Surveys

Probabilistic Rotating Basin Surveys (PRBS) use a randomly selected subsample of a population (streams and rivers), similar to a census, in order to make inferences about characteristics of the population as a whole. Wyoming uses a customized generalized random tessellation-stratified (GRTS) survey design using the 1:100,000 scale National Hydrographic Dataset Plus (NHD+) as the base sample frame (<http://archive.epa.gov/nheerl/arm/web/html/presents.html>) from which 50 primary sites are randomly selected from a target population of perennial, non-headwater (>1st Strahler order) rivers and streams outside of national parks,

congressionally-designated wilderness areas, and the Wind River Reservation within each of five geographic divisions of the State. The geographic divisions are referred to as 'superbasins' due to their delineation using combinations of 6-digit (3rd level) HUC and geographical location.

The five superbasins and the associated HUC 6 basins they represent are:

- **Bighorn/Yellowstone** [Bighorn and Yellowstone Basins] - PRBS completed in 2010; [Report completed.](#)
- **Northeast** [Belle Fourche, Cheyenne, Little Missouri, Powder and Tongue Basins] - PRBS completed in 2011; [Report completed.](#)
- **Green** [Great Divide, Green and Little Snake Basins] - PRBS completed in 2015; Report expected in 2020.
- **Platte** [Niobrara, North Platte and South Platte Basins] - PRBS completed in 2016; Report expected in 2021
- **Bear/Snake** [Bear and Snake Basins] - PRBS scheduled for 2021

Site selection is further stratified into aggregations of several 8-digit (4th level) HUCs, or "HUC 8 clusters," within each superbasin. The additional stratification assures more equal spatial distribution of the 50 primary sites among all HUC 8 clusters and across a superbasin. Following the same design, a population of 100 oversample sites (also stratified by HUC 8 cluster) is generated for each superbasin to be used as replacements when a primary site cannot be sampled. Oversample sites are used as replacements for primary sites occurring within the same HUC 8 cluster to maintain representativeness and minimize logistical complexities of sampling. Data from the 50 sites sampled within each superbasin are used to make inferences about

³ <http://deq.wyoming.gov/wqd/watershed-protection/>.

Note that this link may only open in Google Chrome.

water quality conditions within each superbasin, including the proportion of the stream target population likely achieving water quality standards or statistically-derived expected conditions, and the occurrence, extent, and relative risk of various pollutants. Data from PRBS are not used to make determinations of designated use support or resultant categorization decisions in Wyoming's IR. PRBS data are used to identify waters of high quality and those that may not be fully supporting their designated uses, thus are candidates for future targeted monitoring for determinations of designated use support.

3.1.2 Targeted Monitoring Initiatives 2017 – 2020

Consistent with the 2010 Monitoring Strategy, WDEQ used results from the Green and Platte rotating basin probabilistic surveys to identify both high quality and potentially impaired waters in each basin for more intensive evaluations of existing water quality and attainment of water quality standards. In addition to the waters in the Green and Platte, WDEQ conducted evaluations of several other streams in the state

Green River Basin Projects: WDEQ evaluated all or portions of the Green River, Big Sandy River, Battle Creek, and Trout Creek. Data collection for the latter three has concluded, with reports drafted for Battle Creek and Trout Creek. Data evaluation for Big Sandy River and Green River will begin in 2020. More information on each study is found in annual monitoring workplans for [2017](#) and [2018](#).

Platte River Basin Projects: WDEQ currently is evaluating Horse Creek and the Sweetwater River. Data collection will occur through 2020, with data evaluation beginning in 2021. More information on each study is located in the annual monitoring workplan for [2019](#).

Other Projects: WDEQ conducted evaluations of recreation criteria attainment on Clarks Draw, Lander Creek, Pacific Creek, Fish Creek, Flat

Creek, and the Snake River. WDEQ conducted studies of the Shoshone River, Badwater Creek, and Fish Creek, in addition to continuing to build our reference stream datasets. More information on each study is found in annual monitoring workplans for [2017](#) and [2019](#).

3.1.3 Wyoming Statewide Probabilistic Surveys

Probabilistic surveys were first implemented in 2004, when the first state-scale survey was conducted to enable WDEQ, over time and at various scales, to better estimate statewide water quality condition and trends. Similar to the current rotating basin surveys, it used a simple randomized design that excluded National Parks, wilderness areas, the Wind River Reservation, and first order streams from the target population. From 2004 to 2007, 64 sites were sampled to represent water quality conditions across Wyoming. From 2008 to 2011, a second statewide survey was conducted using a similar number of sites. The results of both surveys are presented in a [2015 report](#). A summary is presented in Appendix A.

3.1.4 Harmful Cyanobacteria Blooms

WDEQ conducted screening of suspected Harmful Cyanobacteria Blooms (HCBs, also known as Harmful Algal Blooms, or HABs) to determine if they are comprised of harmful cyanobacteria. If harmful cyanobacteria were present, WQD's Monitoring Program collected samples using standard operating procedures to determine if cyanotoxins and/or cell densities are at unsafe levels. WQD's Watershed Protection Program notified the Wyoming Department of Health if toxins and/or the amount of cyanobacteria exceed unsafe levels so an advisory could be issued. Advisories are posted around the waterbody and include recommendations on how to keep people and animals safe. WDEQ coordinates with the Wyoming Department of Health (WDH) and the water management agency to monitor the bloom until the toxins

and/or the amount of cyanobacteria return to safe levels.

HCBs are an emerging surface water quality issue and thus are further discussed in Section 5.

For more information on Wyoming's Harmful Algal Bloom Action Plan and HCBs in Wyoming, visit WDEQ's website at WyoHCBs.org.

3.1.5 WDEQ-USGS Statewide Monitoring Network

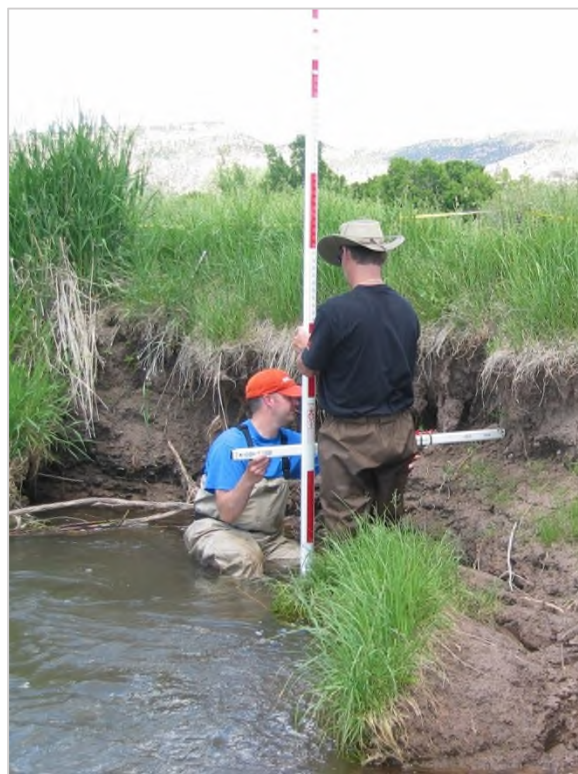
WDEQ cooperates with USGS to monitor 12 stream and river sites across the state. WDEQ supports two streamflow measurement gages, though non-WDEQ funded gages exist at many of the sites. The emphasis of this network is data collection to support nutrient criteria development. Sampling is conducted either quarterly or monthly, depending on objectives, amount of historic water quality records, and prioritization for criteria development. Specific sampled parameters also vary by site depending on objectives, but include field parameters, major ions, trace metals, nutrients, sediment, and/or bacteria.

3.2 Monitoring by Conservation Districts

Since 1998, many of Wyoming's conservation districts, with the guidance and leadership of local watershed steering committees, have worked to improve water quality in the state. All of Wyoming's 34 conservation districts are involved in water quality activities at some level. This includes monitoring waters within their districts, developing watershed plans to address known impairments and threats, and assisting citizens in implementing best management practices (BMPs) to improve water quality ([WACD, 2018](#)). Most watershed planning is intended to address waters on the 303(d) List of impaired waters requiring TMDLs and to provide an opportunity for voluntary and incentive-based implementation activities to improve water quality. Ultimately, the goal of watershed planning is to identify and implement BMPs that

will result in the removal of waters from the 303(d) List. Data and other information were requested from all 34 of Wyoming's conservation districts for this report. For additional information on the Wyoming Association of Conservation District's implementation and monitoring activities visit their website at:

<http://www.conservewy.com/index.html>



WDEQ WQD staff conducting a physical assessment.

4 TMDL Prioritization

To date, WDEQ has completed TMDLs for 66 waterbody segments (**Appendix B**). Section 303(d)(1) of the CWA requires states and tribes to “establish a priority ranking” for the segments identified as needing a TMDL (i.e., Category 5). This ranking must evaluate the severity of the pollutant and the specific designated uses adversely impacted by the pollutant. However, the most severe water quality problems or the most toxic pollutants need not always be given the highest priority for TMDL development if circumstances warrant a lower priority. Consistent with 40 CFR § 130.7(b)(4), each state must also submit a priority ranking every two years within the 303(d) List of the IR, including waters targeted for TMDL development in the next two years.

The prioritized list of TMDLs presented in **Table 2** reflects the long-term vision strategy and water quality prioritization framework highlighted in Wyoming's 2016/2018 IR and identifies those waterbody segments for which TMDLs or TMDL alternatives (see **text box**) are scheduled for completion by 2022. An updated long-term vision and prioritization schedule will be presented in future IRs.

TMDL Alternatives

In accordance with EPA's [Information Concerning 2016 Clean Water Act Sections 303\(d\), 305\(b\), and 314 Integrated Reporting and Listing Decisions](#), alternatives to developing a TMDL may be pursued when:

1. There are unique local circumstances (e.g., the type of pollutant or source or the nature of the receiving waterbody; presence of watershed groups or other parties interested in implementing the alternative restoration approach; available funding opportunities for the alternative restoration approach).
2. Initial review of the pollutant or cause of impairment shows that particular point or nonpoint sources are responsible for the impairment with clear mechanisms to address all sources (both point and nonpoint), such as: CWA 319 nine element watershed-based plans or other restoration plans; source water protection plans; setting new limits when a permit is re-issued, which alone or in combination with other actions, is expected to achieve WQS in the listed water.
3. There is stakeholder and public support for the alternative restoration approach, which is important for achieving timely progress in implementing the alternative.

The objective of pursuing a TMDL alternative is to achieve water standards in cases where the alternative approach may result in doing so in a more timely or efficient manner. Unlike TMDLs where, upon EPA approval, the listed water is removed from the 303(d) list, TMDL alternatives are not approved by EPA and the water remains on the 303(d) list until water quality standards are achieved. If water quality standards are not met in a “reasonable period of time” after completion of a TMDL alternative, it may be necessary to revisit the impairment and prepare a TMDL or pursue other actions to achieve water quality standards.

Table 2. Priority TMDLs for 2022

Assessment Unit ID	Waterbody Name	Basin	Impaired Use	Cause of Impairment	Proposed Action
WYTR100901010101_01	North Tongue River	Tongue	Recreation	Fecal Coliform	TMDL
WYTR100901010106_01	Columbus Creek	Tongue	Recreation	Fecal Coliform	TMDL
WYTR100901010106_02	Smith Creek	Tongue	Recreation	Fecal Coliform	TMDL
WYTR100901010107_02	Little Tongue River	Tongue	Recreation	<i>Escherichia coli</i> (<i>E. coli</i>)	TMDL
WYTR100901010108_01	Fivemile Creek	Tongue	Recreation	Fecal Coliform	TMDL
WYTR100901010110_01	Wolf Creek	Tongue	Recreation	Fecal Coliform	TMDL
WYTR100901010111_01	Tongue River	Tongue	Recreation	<i>Escherichia coli</i> (<i>E. coli</i>)	TMDL
WYBH100800030207_01	Middle Popo Agie River	Bighorn	Recreation	Fecal Coliform	TMDL Alternative
WYNP101800110502_01	Wheatland Creek	North Platte	Recreation	Fecal Coliform	TMDL
WYNP101800110502_02	Rock Creek	North Platte	Recreation	Fecal Coliform	TMDL
WYPR100902080500_01	Little Powder River	Powder	Recreation	Fecal Coliform	TMDL Alternative
WYSR170401030205_01	Flat Creek	Snake	Aquatic Life Other than Fish	Physical Substrate Habitat Alterations	TMDL Alternative
WYNP101800100605_01	Little Laramie River	North Platte	Recreation	<i>Escherichia coli</i> (<i>E. coli</i>)	TMDL
WYNP101800100707_01	Laramie River	North Platte	Recreation	<i>Escherichia coli</i> (<i>E. coli</i>)	TMDL
WYSP101900090107_03	Crow Creek	South Platte	Aquatic Life Other than Fish, Nongame Fish	Sedimentation/Siltation	TMDL
WYSP101900090107_04	Crow Creek	South Platte	Aquatic Life Other than Fish, Cold Water Game Fish	Sedimentation/Siltation	TMDL

5 Emerging Surface Water Quality Issues

Harmful cyanobacterial blooms (HCBs) are dense concentrations of photosynthetic cyanobacteria that pose serious health risks to people, pets, and livestock. People and animals are exposed to HCBs through contact, ingestion, and inhalation of water containing cyanobacteria and the cyanotoxins and irritants they produce. Health effects include skin and mucous membrane irritation, as well as damage to the liver, kidney, and central nervous system. In extreme cases, cyanotoxin poisoning may lead to pet or livestock death within minutes of exposure. Other consequences of HCBs include drinking water treatment costs, loss of crop agriculture, tourism losses due to decreased recreational revenue, waterfront real-estate losses, and hypoxia events that lead to fish kills.



A harmful cyanobacterial bloom identified at Firehole Canyon swim beach, Flaming Gorge Reservoir, in September 2019. The bloom was dominated by *Aphanizomenon*, a type of toxin-producing cyanobacteria, at a cell density that exceeded Wyoming's recreational use threshold.

Many factors contribute to the formation of HCBs (e.g., sunlight, wind, flow); however, nutrient pollution and temperature seem to be the primary drivers. In Wyoming, HCBs generally occur in the late summer and early fall when lake and reservoir water levels stabilize, temperatures warm, nutrients are assimilated and primary production increases. Blooms may

occur in some lakes or reservoirs following turnover when cooler water is brought toward the surface and nutrients are released from bottom sediments.

To address the public health risks associated with HCBs, the WDEQ/WQD, in coordination with WDH and Wyoming Livestock Board (WLB), developed the HCB [Action Plan](#). The Action Plan provides state agencies, land and water management agencies, and other cooperators with procedural guidelines should an HCB be suspected in a publicly accessible lake or reservoir. WDEQ/WQD has since launched its HCB program that will investigate suspected blooms and report results to WDH if elevated levels of cyanobacteria and cyanotoxins are present and a recreational use advisory needs to be issued. WDEQ/WQD will also notify public water supply utilities and the EPA when HCBs occur within or in close proximity to source drinking water. The HCB program continues to develop as the WDEQ Water Quality Laboratory expands its analytical capabilities to test for a suite of common cyanotoxins. WDEQ/WQD is also using satellite imagery provided by the [Cyanobacteria Assessment Network](#) (CyAN) to identify and track blooms across the state.

WDEQ/WQD and stakeholders continue to make progress on addressing nutrient pollution in Wyoming's surface waters. For more information, visit the nutrient pollution website at <http://deq.wyoming.gov/wqd/nutrient-pollution/>. Additional information on HCBs can be found at WyoHCBs.org.

6 Wyoming's 305(b) and 303(d) Assessed Waters

As described in **Section 1**, Section 305(b) of the CWA requires that each state prepare and submit a biennial report of the state's water quality to EPA by April 1 of even-numbered years. Section 303(d) of the CWA requires that states identify and list all impaired and threatened waters by April 1 of each even-numbered year. A statewide summary of the current 305(b) and 303(d) lists is provided below followed by a basin-by-basin summary. Hard copies of the 305(b) and 303(d) lists are included in **Appendix C** and **Appendix D**, respectively. They are also available on WDEQ's website at: <http://deq.wyoming.gov/wqd/water-quality-assessment/>.

6.1 Statewide Summary

Excluding the Wind River Reservation, there are approximately 267,294 stream miles and 487,948 acres of lakes in the state of Wyoming⁴. To date, approximately 7 percent of streams and 4 percent of lakes have been assessed (**Figure 3**). This includes 283 assessment units⁵ totaling 17,857 stream miles and 13 assessment units totaling 18,922 lake acres.

As described in **Section 2.2.4**, each assessment unit has been placed into one of the categories described in **Section 2.2.4**. The majority of the assessed stream miles (90%) and lake acres (66%) support one or more of their designated uses and have been placed into Category 2 (**Figure 3**). Statewide, only 6 percent of assessed stream mile and 2 percent of the assessed and lake acres are currently listed as impaired (i.e., Category 5 - not meeting applicable water quality standards). *Aquatic life other than fish* is the most commonly impaired designated use, followed by *recreation, cold water fishery, non-game fish, drinking water, and warm water fishery* (**Figure 4**).

Selenium is the most common cause of impairment followed by pathogens and sediment/siltation (**Figure 5**). To date, TMDLs have been completed and approved for 809 stream miles (64 assessment units) and 6,091 lake acres (2 assessment units)⁶. Pathogens are by far the most common pollutant for which TMDLs have been prepared, followed by sediment (**Figure 6**).

⁴ USGS (U.S. Geological Survey). 2018. NHD H Wyoming State. August 16, 2018. https://prd-tm.s3.amazonaws.com/StagedProducts/Hydrography/NHD/State/HighResolution/Shape/NHD_H_Wyoming_State_Shape.zip. Accessed October 2, 2018.

"Streams" are defined as the stream/river NHD-high flowline feature type (Ftype = "460") or (2) artificial paths (Ftype = "558") beneath NHD-high areas associated with stream/river feature types. "Lakes" are defined as the lakes/pond NHD-high waterbody feature type (Ftype = "390") or the reservoir NHD-high waterbody feature type (Ftype = "436").

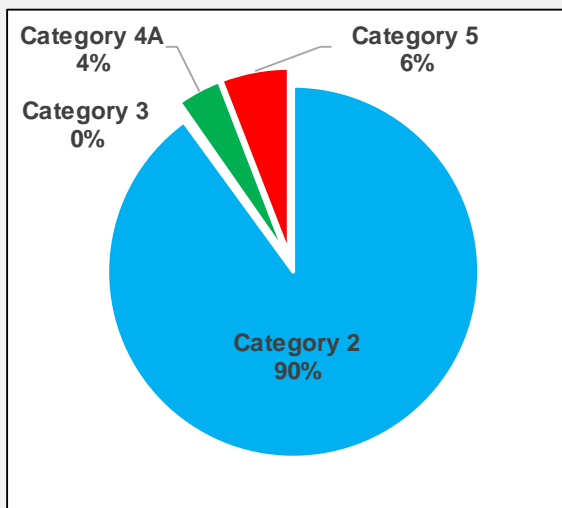
⁵ Assessment units are unique stream segments or lakes identified by a unique 305(b) identifier assigned to each categorized water by WDEQ. Wyoming's assessment unit framework is further discussed in *Wyoming's Methods for Determining Surface Water Quality Condition* ([WDEQ, 2017](#)).

⁶ Of the 64 stream assessment units for which TMDLs have been completed and approved, 8 are still listed in IR Category 5 due to other impairments that have not yet been addressed. Note that it is EPA's convention to assign the highest IR category to the assessment unit when more than one applies to an individual assessment unit. For example, TMDLs have been completed for *E. coli* and selenium (Category 4A) in Crow Creek (WYSP101900090107_02), but, not for sediment (Category 5). The default IR Category for Crow Creek is Category 5.

Rivers and Streams

Total Stream Miles	267,294
Total Stream Miles Assessed	17,860
Percent Assessed	7%

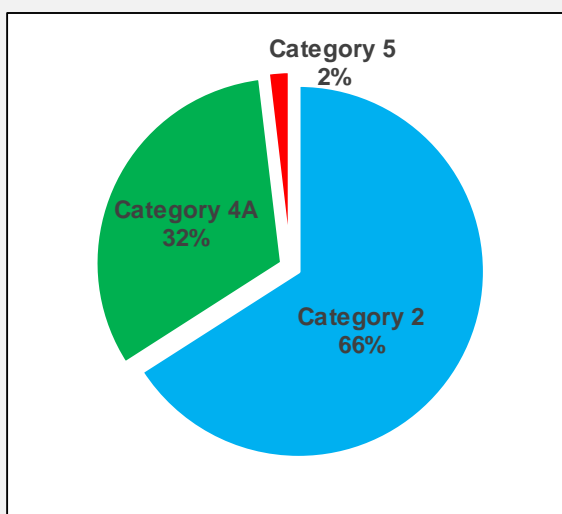
IR Category	Miles	No. AUs
Category 1	--	--
Category 2	16,068	153
Category 3	58	7
Category 4A	685	56
Category 5	1,050	67



Lakes and Reservoirs

Total Lake Acres	487,948
Total Lake Acres Assessed	18,922
Percent Assessed	4%

IR Category	Acres	No. AUs
Category 1	--	--
Category 2	12,475	6
Category 3	--	--
Category 4A	6,091	2
Category 5	356	5



The total and assessed stream miles presented herein include perennial, intermittent, and ephemeral streams. Only 14% of the stream miles are perennial.

Figure 3. Wyoming Statewide Summary Statistics

Note: The results presented in **Figure 3** (and similar figures within **Section 6.3**) are presented at the EPA IR default category IR scale (i.e., assessment unit scale). It is EPA's convention to assign the highest IR category to the assessment unit when more than one applies to an individual assessment unit. For example, TMDLs have been completed for *E. coli* and selenium (Category 4A) in Crow Creek (WYSP101900090107_02) but not for sediment (Category 5). The default IR Category for Crow Creek is Category 5.

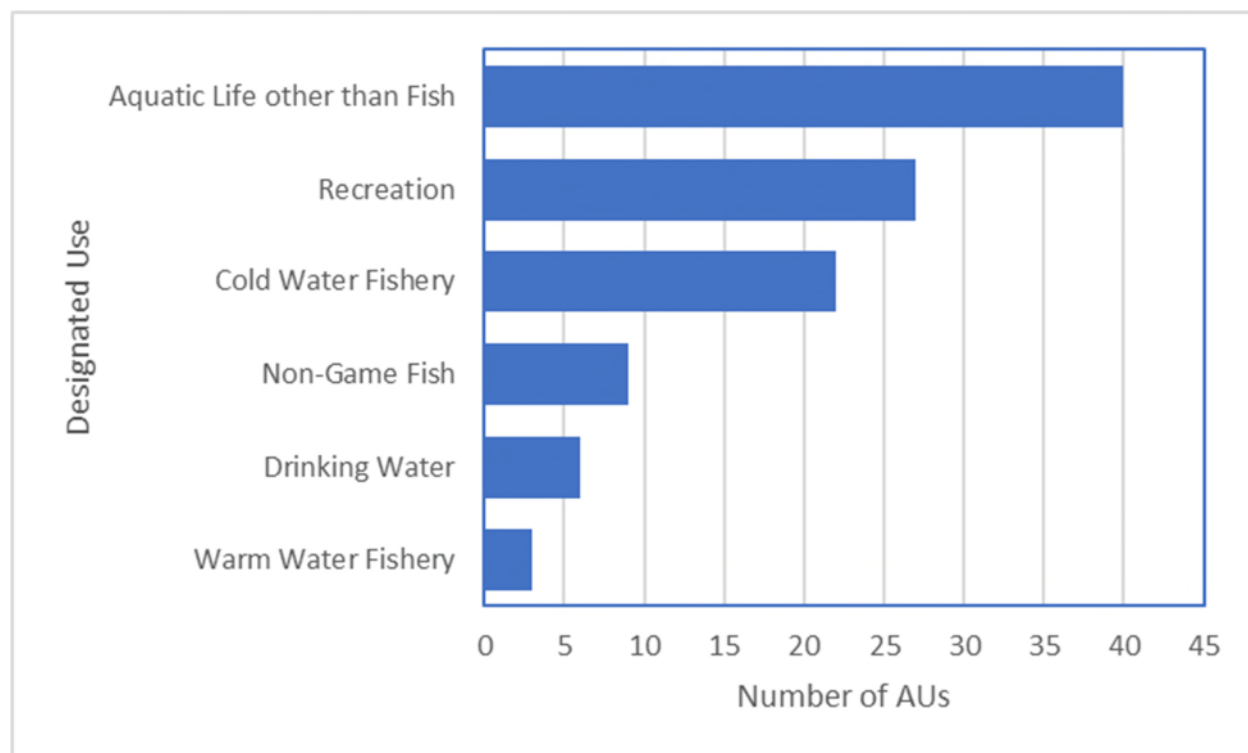


Figure 4. Impaired designated uses (i.e., number of impaired AUIDs/designated use).

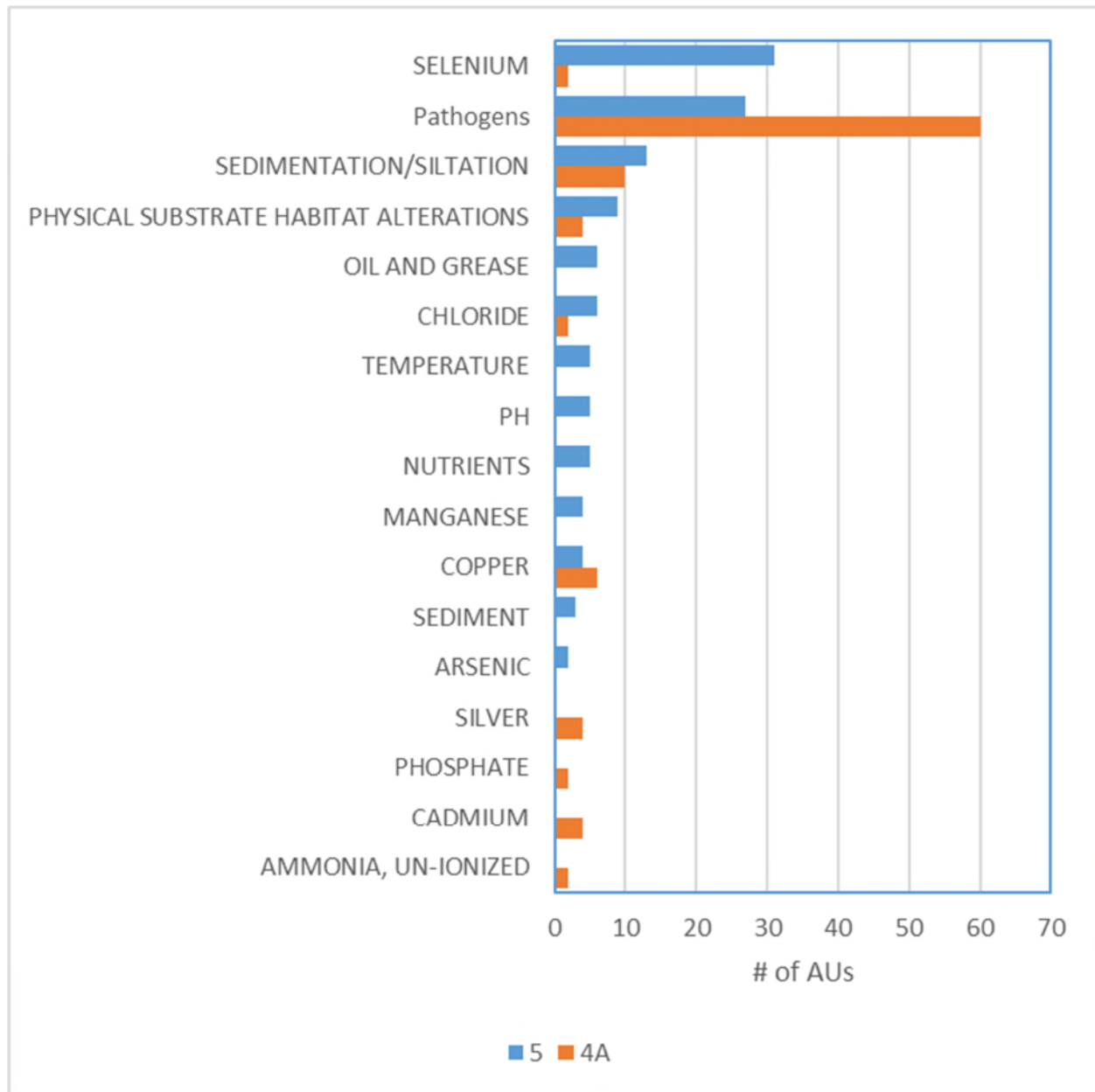


Figure 5. Listed causes of impairment (Cat 5 - in blue) and causes of impairment for which TMDLs have been completed (Cat 4A – in orange).

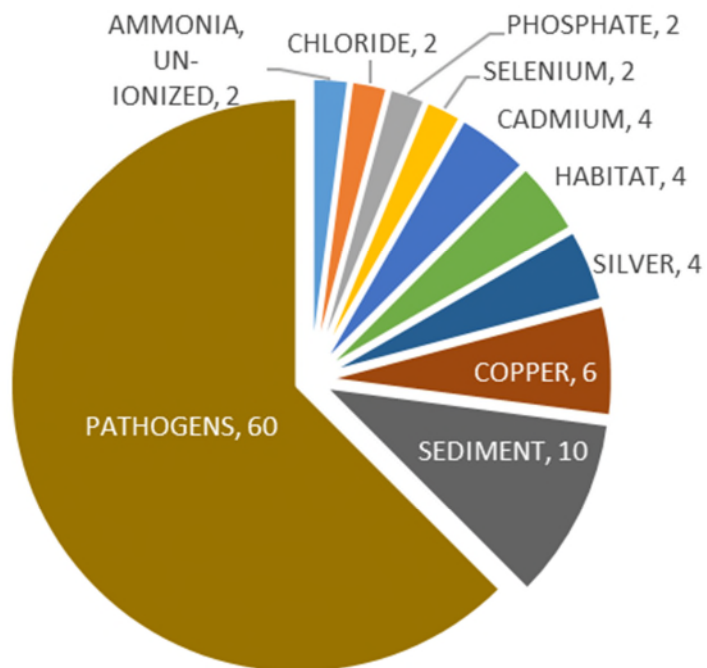


Figure 6. Number of completed TMDLs by pollutant (i.e., number of segment – pollutant combinations)

6.2 Summary of 2020 Surface Water Assessments

A total of 10 streams (19 segments) were assessed during the 2020 IR cycle, resulting in the following actions:

- 4 waterbody segments were moved from the 303(d) list (Category 5) to Category 2 (de-listings)
- 3 new waterbody segments were added to Category 2
- 1 waterbody segment was moved from the 303(d) list (Category 5) to Category 3 (de-listing)
- 4 new waterbody segments were added to Category 3
- 4 waterbody segments were moved from the 303(d) list to Category 4A (approved TMDLs)
- 3 new waterbody segments were added to Category 5 (impairment listing).

These segments are discussed in more detail within the following subsections. Additionally, minor errors, omissions, and inconsistencies that were addressed are summarized in **Section 6.2.7**.



Assessments of new waterbody segments: Pacific Creek (left) and Fish Creek (right).

6.2.1 Waterbody Segments Moved from the 303(d) List (Category 5) to Category 2 (De-listings)

During the 2020 IR cycle, four waterbody segments have been reassessed and moved from Category 5 (i.e., the 303(d) list) to Category 2. These segments are now supporting at least one designated use and are summarized in **Table 3**.

Table 3. Waters Moved from the 303(d) List to Category 2 (De-listings)

Waterbody	Basin	Location	Assessment Unit ID	Segment Length (miles)	Assessed Use	De-listing Rationale
Willow Creek	Green	State line downstream to the County Road 279 crossing	WYGR140401070205_01	14.5	Agriculture, Aquatic life other than fish, Cold water game fish, Nongame fish, Industry, Wildlife	New data collected by DEQ in 2003, 2013, and 2014 indicate that the <i>aquatic life other than fish</i> use is fully supported. As outlined in Section 4.3 of the Assessment Methods, <i>aquatic life other than fish</i> is used as a surrogate for the fisheries, agriculture, industry, and wildlife designated uses. As a result, these uses are considered fully supporting. See the Assessment Record for supporting documentation.
Middle Prong Wild Horse Creek	Powder	From the confluence with Wild Horse Creek to a point 4.7 miles upstream	WYPR100902020808_01	4.7	Recreation	This segment was reclassified from Primary Recreation to Secondary Recreation. The resulting <i>E. coli</i> criteria changed from 126 to 630 organisms per 100 milliliters. Data collected by the Campbell County Conservation District were well below the new Secondary Recreation criterion. See the Assessment Record for supporting documentation.
Laramie River	North Platte	From State Highway 10 (near Woods Landing) to a point 0.3 miles upstream	WYNP101800100201_01	0.3	Recreation	Based on <i>E. coli</i> data collected by the Laramie Rivers Conservation District in 2016 and 2017, no exceedances of the applicable water quality criteria were observed for two consecutive years. See the Assessment Record for supporting documentation.
Middle Fork Popo Agie River	Big Horn	From the confluence with Hornecker Creek to a point 0.7 miles downstream	WYBH100800030207_05	0.7	Recreation	Using data collected by the Popo Agie Conservation District, WDEQ calculated rolling geometric means for samples collected on roughly a weekly basis during the primary recreation seasons in 2016, 2017, and 2018. No exceedances of the applicable criteria were observed for two consecutive years. See the Assessment Record for supporting documentation.

6.2.2 New Waterbody Segments added to Category 2

The three waterbody segments listed in **Table 4** were added to Category 2 during the 2020 IR cycle. These segments were determined to support at least one designated use. Documentation for these new listings is provided in the hyperlinked assessment records as shown in **Table 4**.

Table 4. New waters added to Category 2

Waterbody	Basin	Location	Assessment Unit ID	Segment Length (miles)	Assessed Use
Flat Creek	Snake	High School Road to the confluence with Cache Creek	WYSR170401030205_02	3.4	Recreation
Flat Creek	Snake	Cache Creek to headwaters	WYSR170401030205_03	21.4	Recreation
Rawhide Creek	Big Horn	Headwaters downstream to unnamed outlet from Thomas Reservoir	WYBH100800090301_01	6.7	Agriculture, Aquatic life other than fish, Cold water game fish, Industry, nongame fish, wildlife

6.2.3 Waterbody Segments moved from the 303(d) list (Category 5) to Category 3 (De-listing)

Willow Creek is classified as Class 2AB and was placed in Category 5 of Wyoming's 1998 303(d) list for not supporting its *cold water game fish* and *aquatic life other than fish* designated uses from habitat alteration (cause) due to grazing (source). The impaired segment was described as the entire watershed upstream of the confluence with the Smiths Fork and included 73 stream miles. An updated assessment of Willow Creek has been completed by WDEQ indicating that the upper reach of the main stem of Willow Creek is now supporting all of its assessed designated uses (see **Table 3**), and use support is indeterminate in the lower reach (WYGR140401070205_02) listed in **Table 5**.

Table 5. Waterbody segments moved from the 303(d) list to Category 3 (De-listing)

Waterbody	Basin	Location	Assessment Unit ID	Segment Length (miles)	Assessed Use
Willow Creek	Green	County Road 279 crossing downstream to the mouth	WYGR140401070205_02	3.8	Agriculture, Aquatic life other than fish, Cold water game fish, Industry, nongame fish, wildlife

6.2.4 New Waterbody Segments Added to Category 3

WDEQ completed an assessment of the waters listed in **Table 6** and concluded that insufficient information was available to make use support determinations. These waterbody segments have therefore been placed into Category 3. Documentation for these new listings is provided in the assessment records that are hyperlinked in **Table 6**.

Table 6. New waterbody segments added to Category 3

Waterbody	Basin	Location	Assessment Unit ID	Segment Length (miles)	Assessed Use
Rawhide Creek	Big Horn	confluence with the unnamed outlet from Thomas Reservoir downstream 8.4 miles to the downstream end of the Class 2B reach	WYBH100800090301_02	8.4	Agriculture, Aquatic life other than fish, Cold water game fish, Industry, nongame fish, wildlife
Rawhide Creek	Big Horn	from the upstream end of the Class 2C reach downstream to the confluence with the Greybull River	WYBH100800090301_03	14	Agriculture, Aquatic Life Other Than Fish, Industry, Nongame Fish, Recreation, and Wildlife
Pacific Creek	Green	Confluence with Jack Morrow Creek upstream to unnamed tributary	WYGR140401040303_01	13.8	Recreation
Clarks Draw	Snake	From headwaters downstream 3.2 miles	WYSR170401030305_01	3.2	Recreation

6.2.5 Waters moved from the 303(d) List to Category 4A (Approved TMDLs)

TMDLs were completed by WDEQ, and approved by EPA on March 4, 2019, for four segments of the Blacks Fork/Smiths Fork watershed (**Table 7**). These TMDLs can be viewed on WDEQ's website at:

<http://deq.wyoming.gov/wqd/tmdl/resources/completed-projects/>

Table 7. Waterbody segments moved from the 303(d) list to Category 4A (Approved TMDLs).

Waterbody	305(b) Identifier	Class	Location	Miles	Impaired use	Addressed Cause
Blacks Fork	WYGR140401070106_01	2AB	From the confluence with the Smiths Fork upstream to Millburne	25.4	Recreation	Fecal coliform
Blacks Fork	WYGR140401070403_01	2AB	From the confluence with the Hams Fork upstream to the confluence with the Smiths Fork	45.0	Recreation	Fecal coliform
Smiths Fork	WYGR140401070208_01	2AB	From the confluence with the Blacks Fork upstream to the confluence with Cottonwood Creek	4.0	Recreation	<i>E. coli</i>
Smiths Fork	WYGR140401070208_00	2AB	From the confluence with Cottonwood Creek upstream to the confluence with East and West Forks Smiths Fork	34.5	Recreation	Fecal coliform

6.2.6 New Waterbody Segments added to Category 5 (Impaired)

Three waterbody segments were added to the list of impaired waters (i.e., Category 5, “the 303(d) list”) during the 2020 IR cycle (**Table 8**). Documentation for these new listings is provided in the assessment records that are hyperlinked in **Table 8**.

Table 8. New waterbody segments added to Category 5 (Impaired)

Waterbody	Basin	Location	AUID	Segment Length (miles)	Assessed Use
Flat Creek	Snake River	High School Road downstream to the confluence with the Snake River	WYSR170401030205_01	8	Recreation
Fish Creek	Snake River	Entirety of Fish Creek	WYSR170401030101_01	18.6	Recreation
Lander Creek	North Platte	From the confluence with Ord Creek upstream to headwaters	WYNP101800060104_01	6.4	Recreation

6.2.7 Changes Made in the Course of Data Management/Quality Assurance (QA) Activities

A number of minor errors, omissions, and inconsistencies were identified in the 2016/2018 version of ATTAINS as the 2020 IR was prepared:

- 11 waterbody segments were erroneously listed as threatened. Entries in the *Threatened* field were changed from “Yes” to “No” and entries in the *Use Support* field were changed to “Not Supporting” in ATTAINS.
- In 171 cases, the entries in the *Use Attainment Code* field in ATTAINS erroneously indicated that insufficient information was available to make a use support determinations when, in fact, the uses were not assessed. Entries in the *Use Attainment Code* were changed from “insufficient information” to “not assessed”.
- Use classes (e.g., *aquatic life other than fish, drinking water*) were missing from 17 assessment units. The appropriate uses classes were added in ATTAINS.
- The source of impairment was not identified for seven assessment unit/use combinations. “Source Unknown” was added to these records in ATTAINS.

Documentation regarding these changes is available from WDEQ upon request.

6.3 Basin Descriptions and Surface Water Quality Summaries

For the purposes of organizing this IR, the state has been divided into 16 basins based on USGS six-digit HUCs (**Figure 7**, next page):

- Missouri Headwaters (100200)
- Snake (170402 and 170401)
- Bear (160101)
- Yellowstone (100700)
- Green (140401)
- Big Horn (100800)
- Great Divide (140402)
- Little Snake (140500)
- Tongue (100901)
- Powder (100902)
- North Platte (101800)
- South Platte (101900)
- Niobrara (101500)
- Cheyenne (101201)
- Belle Fourche (101202)
- Little Missouri (101102)

The following subsections provide descriptions of each of the basins, including tabular and graphical summaries of the results of the water quality assessments that have been completed to date. Links to one-page summaries and the detailed assessment documentation for each of the assessed waters are provided in the tables.

Key to Interpreting Tabular Summaries

Each of the following subsections contains a tabular summary of all the assessments that have been completed to date in each basin. The first five columns present information about the assessment units themselves, while the rest of the columns present information about the use support determination(s). Use support determinations were color-coded to make them more user-friendly. The following five abbreviations are used in the tables to describe the use support determinations:

Abbreviation	Use Support
NA	Not Assessed
Not	Not Supporting
Full	Fully Supporting
--	Use Not Applicable
II	Insufficient Information/Indeterminant

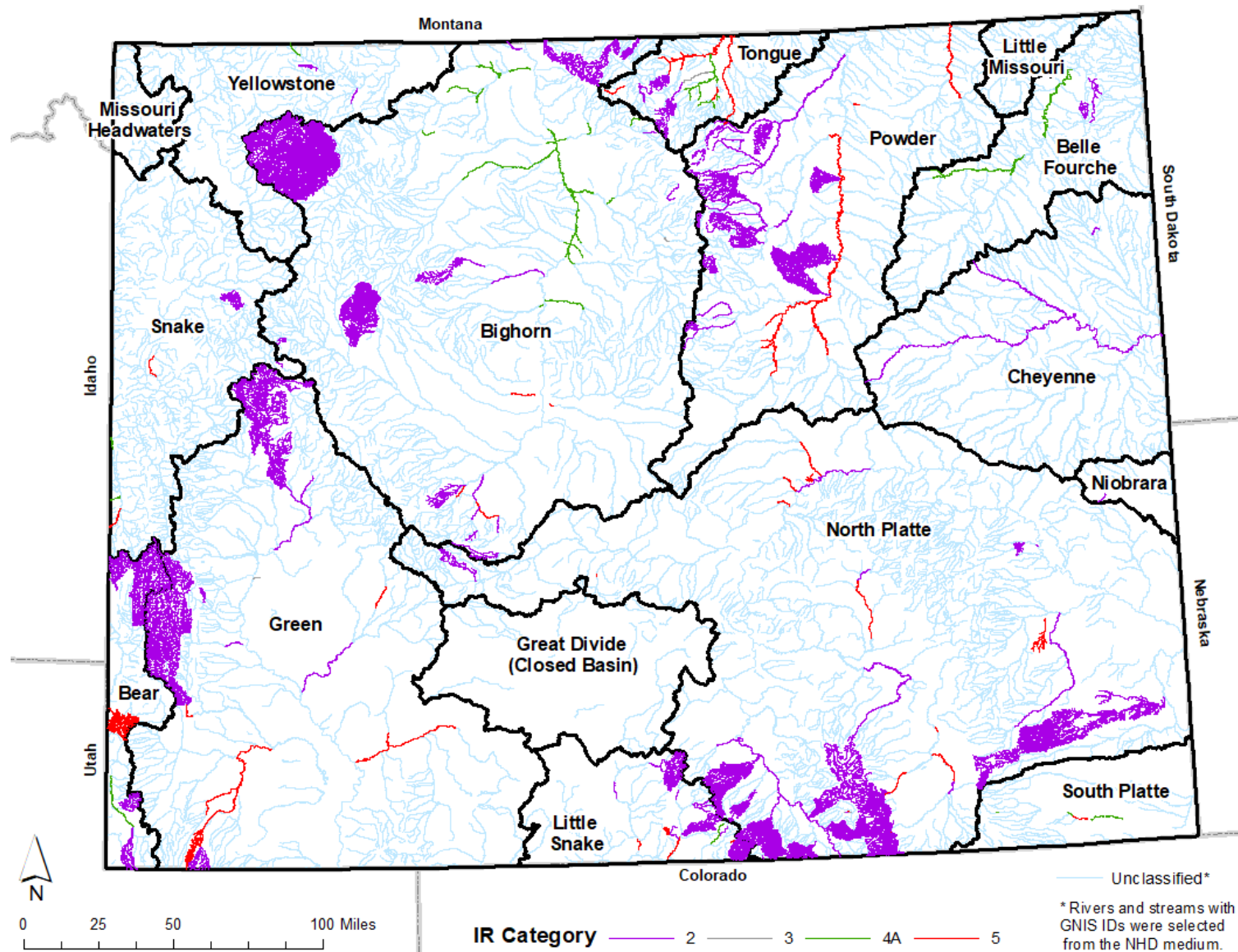


Figure 7. Wyoming basins and assessed lakes and streams.

6.3.1 Bear River Basin

The Bear River Basin drains approximately 2,844 square miles in Wyoming and portions of Utah and Idaho. The river flows north from its headwaters in the Uinta Mountains of Utah into Wyoming near Hilliard, continues through Evanston, and re-enters Utah below Woodruff Narrows Reservoir. The river then flows back into Wyoming at the Cokeville Meadows National Wildlife Refuge before crossing into Idaho near the community of Border (Figure 8). The [Bear River Compact of 1958](#) (amended in 1980) was developed to apportion water from the Bear River among Idaho, Utah, and Wyoming as it courses between these three states. The [Bear River Commission](#), which is composed of nine governor-appointed commissioners (3 from each state) and one federal commissioner, is tasked with administering the provisions of the compact. The [Bear River Watershed Information System](#) provides additional water quality information for the basin. Wyoming (sediment), Idaho (bacteria, phosphorus and sediment) and Utah (dissolved oxygen and phosphorus) have completed TMDLs for portions of the Bear River Basin.

The Bear River Basin in Wyoming consists of sub-irrigated high valleys, foothills, low mountains and some mid-elevation mountains of the Uinta Mountains ([Chapman et al., 2003](#)). Water from the Bear River is extensively diverted within high valleys and used to irrigate alfalfa, grains, and pastures. Streams in the basin are mostly perennial at higher elevations, but may be intermittent or ephemeral at lower elevations, which may be due in part to irrigation diversions, channel down cutting, loss of riparian vegetation, and damming (Ecosystem Research Institute, 1992; Natural Resources Conservation Service, 2001). The geology of the foothills and low mountains consists of easily erodible fine-grained sedimentary formations, which contribute high natural loads of fine sediment, salts, carbonates, sulfates, and/or phosphate. Due to the presence of these highly erodible soils, streams in much of the basin are highly dependent on vegetation for physical stabilization and are typically very sensitive to disturbance. Land uses in the basin include livestock grazing, irrigated agriculture, oil and gas production, historic phosphate and coal mining, wildlife habitat, and recreation on Bridger-Teton National Forest and Bureau of Land Management lands.

Historically, Bonneville (Bear River) cutthroat trout were found throughout the Bear River Basin, but competition from nonnative species, loss of aquatic habitat, and water quality changes have caused populations of these fish to decline. In 1998, a petition was filed with the U.S. Fish and Wildlife Service to list the Bonneville cutthroat trout as threatened under the Endangered Species Act. In 2008, the Fish and Wildlife Service determined that listing was not warranted because a range wide status review indicated that self-sustaining Bonneville cutthroat trout populations are well distributed throughout their historic range and are being restored or protected in all currently occupied watersheds. The Wyoming Game and Fish Department has been working with Idaho, Nevada, and Utah as part of a Bonneville Cutthroat Interagency team to develop conservation strategies to improve and sustain Bonneville cutthroat trout populations.

For more information about water quality activities being led by local conservation districts in the Bear River Basin, please see the “Bear River Basin” tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

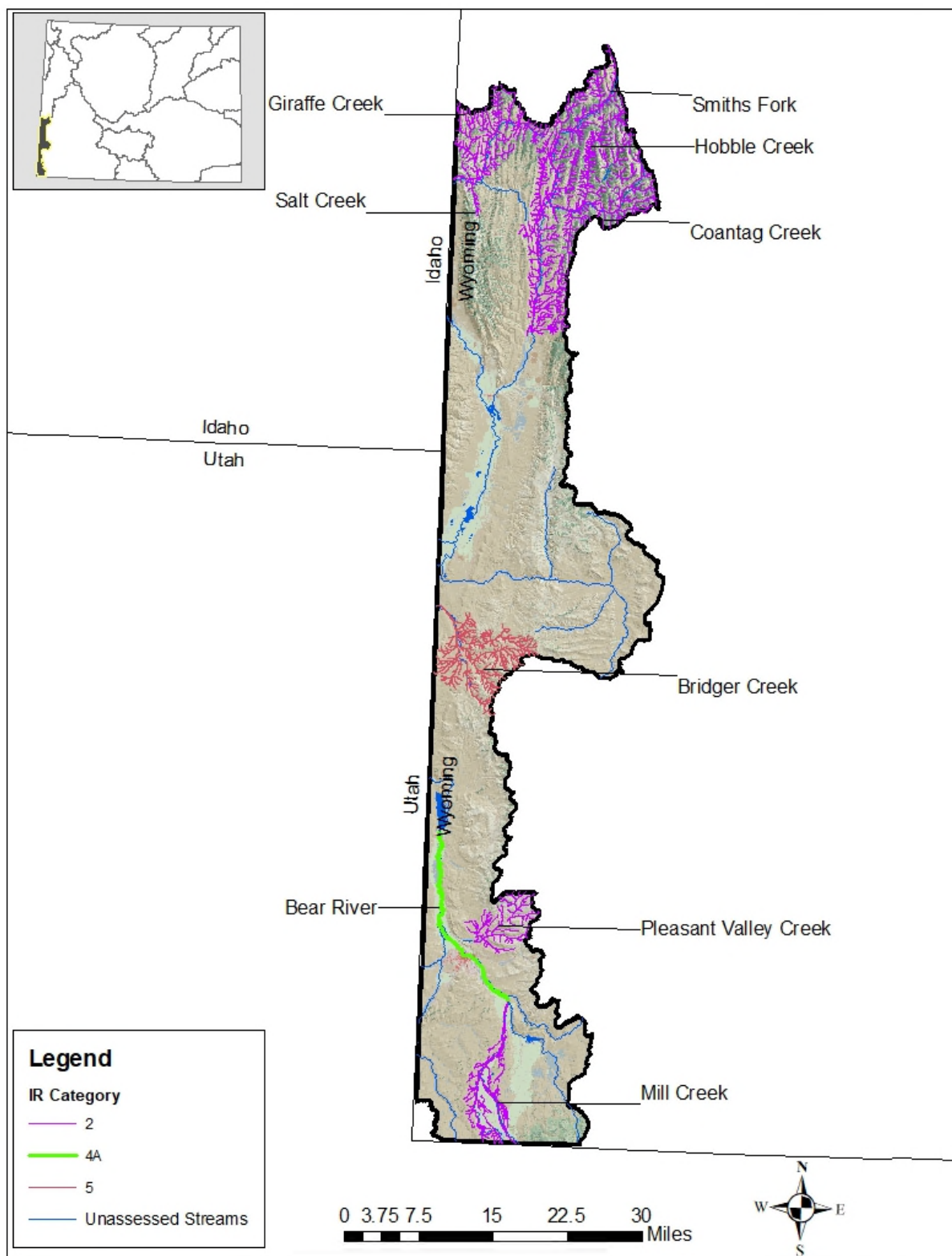


Figure 8. Bear River Basin – location of assessed water bodies.

Assessed Lakes and Streams in the Bear River Basin

Of the total 3,788 miles of perennial, intermittent, and ephemeral streams and 4,100 acres of lakes/ponds and reservoirs in the Bear River Basin, assessments resulting in use support determinations have been completed on 27 percent of the streams (**Figure 9**). No lakes have been assessed in the Bear River Basin.

The majority (78 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 19 percent in IR Category 5) or have been addressed by TMDLs (i.e., 3 percent in IR Category 4A).

Summaries are provided in **Figure 9** and **Table 9**.

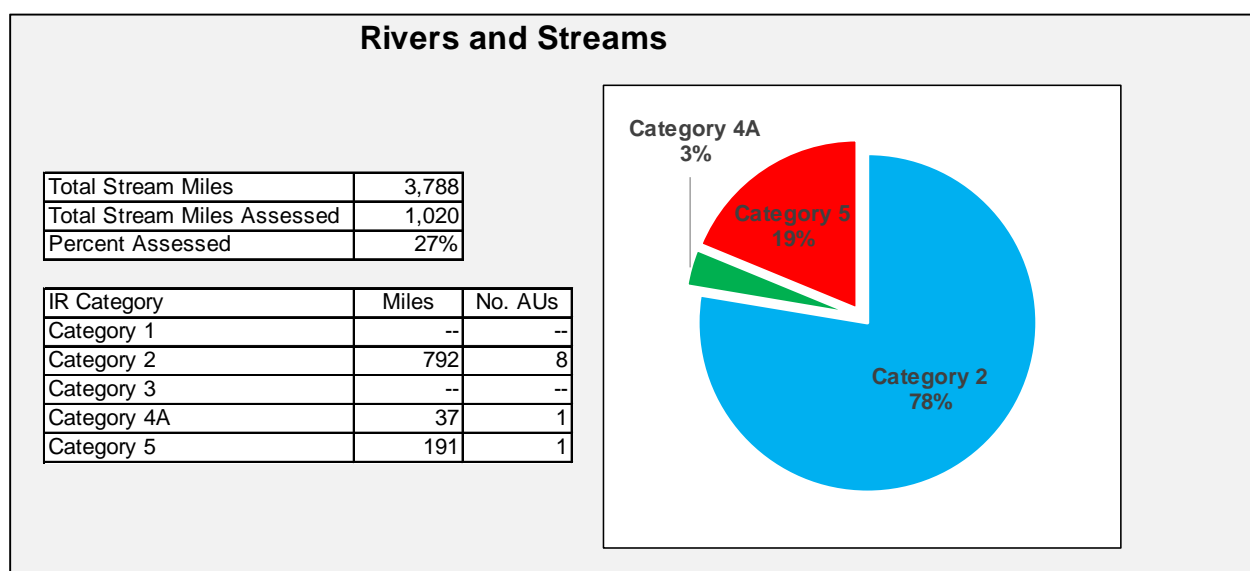


Figure 9. Bear River Basin – summary statistics.

Table 9. Assessed Lakes and Streams in the Bear River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Mill Creek Watershed	WYBR1601010106_01	Bear	2AB	32.9 Miles	2012	2	NA	Full	--	NA	NA	NA	NA	NA	Full	NA	NA
Bear River	WYBR160101010201_01	Bear	2AB	85.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pleasant Valley Creek	WYBR160101010301_01	Bear	3B	64.5 Miles	2012	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Bear River	WYBR160101010303_01	Bear	2AB	36.5 Miles	2001	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Bridger Creek	WYBR160101010801_01	Bear	3B	191.4 Miles	2003	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Hobble Creek	WYBR160101020201_01	Bear	2AB	126.9 Miles	1999	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Coantag Creek	WYBR160101020201_02	Bear	2AB	55.1 Miles	2002	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Smiths Fork	WYBR160101020204_01	Bear	2AB	280.7 Miles	1999	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Salt Creek	WYBR160101020303_01	Bear	2AB	105 Miles	2005	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Giraffe Creek	WYBR160101020304_00	Bear	2AB	40.9 Miles	2002	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA

6.3.2 Belle Fourche Basin

The Belle Fourche River Basin in Wyoming drains approximately 5,512 square miles. The basin's headwaters originate in the rolling prairie and Pine Scoria Hills of southern Campbell County. The river then flows northeast through the semiarid Pierre Shale Plains and through the Black Hills Foothills before entering South Dakota. Most streams originating in the plains are naturally intermittent; however, discharges from coal mines, CBM production, and those from the City of Gillette provide perennial flows in Donkey Creek, portions of the Belle Fourche River, and several other plains streams. Land uses in the basin consist mostly of oil and gas production, coal and bentonite mining, livestock grazing, dryland farming, and wildlife habitat ([Chapman et al., 2003](#)).

Keyhole Reservoir (193,753 acre-feet) is located on the Belle Fourche River about 17 miles northeast of Moorcroft and is operated by the U.S. Bureau of Reclamation (USBOR). The reservoir was built in the 1950s for flood control and to provide recreational opportunities as well as a supplemental water supply to the Belle Fourche Reservoir in South Dakota. Water stored in the reservoir is allocated between Wyoming (10 percent) and South Dakota (90 percent) users through provisions in the Belle Fourche River Compact of 1943. The Belle Fourche River below Keyhole Reservoir has perennial flow due to reservoir releases and perennial tributaries originating in the Black Hills.

Coal bed methane (CBM) production in the Belle Fourche River Basin peaked in July, 2009, and has steadily declined since. According to the Wyoming Pollutant Discharge Elimination System (WYPDES), approximately 229 CBM permits, including 1,413 outfalls, were present in the Belle Fourche River Basin during 2009, whereas approximately 38 permits and 214 outfalls were present as of May, 2018.

For more information about water quality activities being led by local conservation districts in the Belle Fourche River Basin, please see the "Belle Fourche River Basin" tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

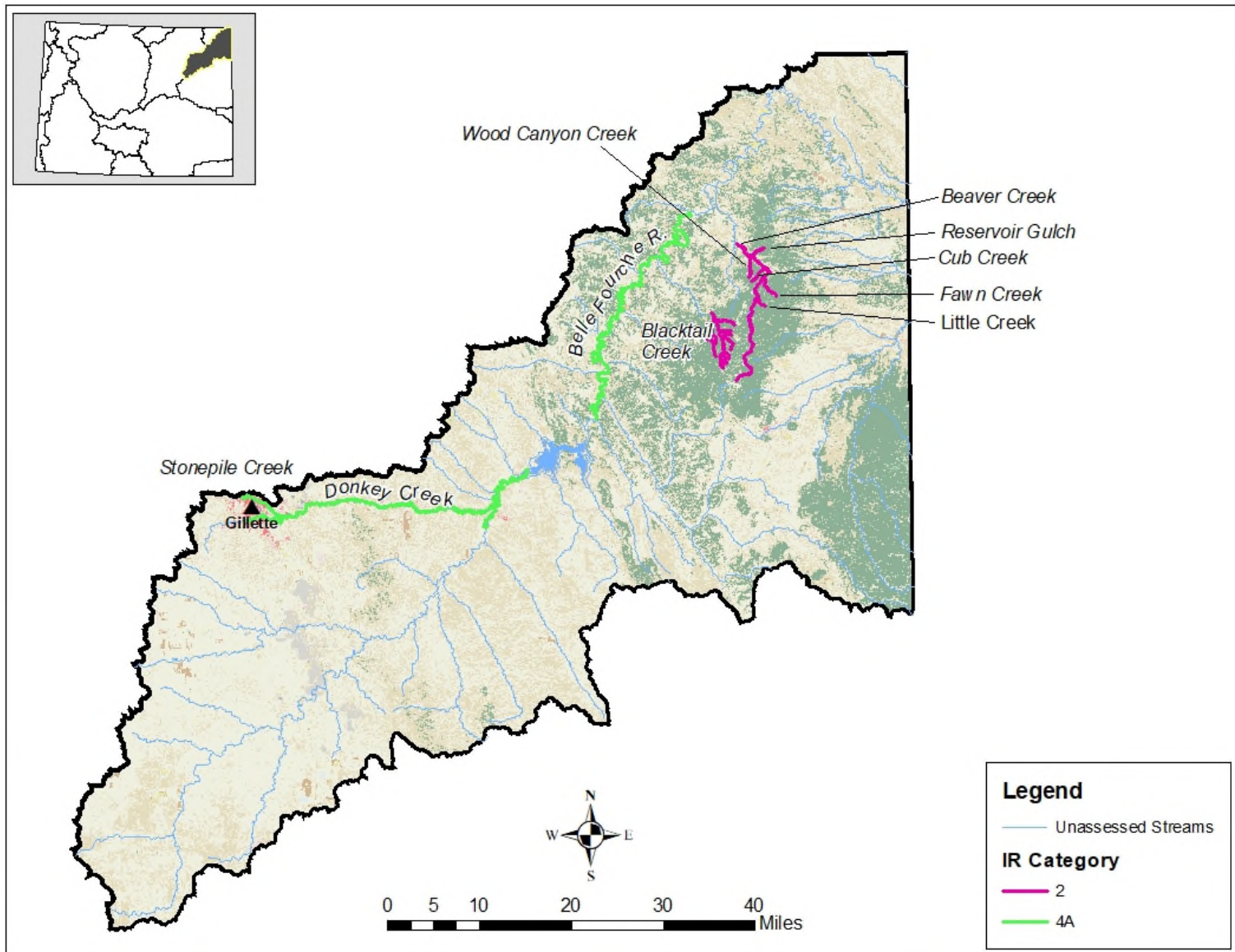


Figure 10. Belle Fourche River Basin – Location of Assessed Lakes and Streams.

Assessed Lakes and Streams in the Belle Fourche Basin

Of the total 11,282 miles of perennial, intermittent, and ephemeral streams and 14,795 acres of lakes/ponds and reservoirs in the Belle Fourche River Basin, assessments resulting in use support determinations have been completed on 2 percent of the streams and less than 1 percent of lakes (**Figure 11**). A third of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles have been addressed by TMDLs (i.e., 67 percent in IR Category 4A). One lake has been assessed in the Belle Fourche River Basin.

Summaries are provided in **Figure 11** and **Table 10**.

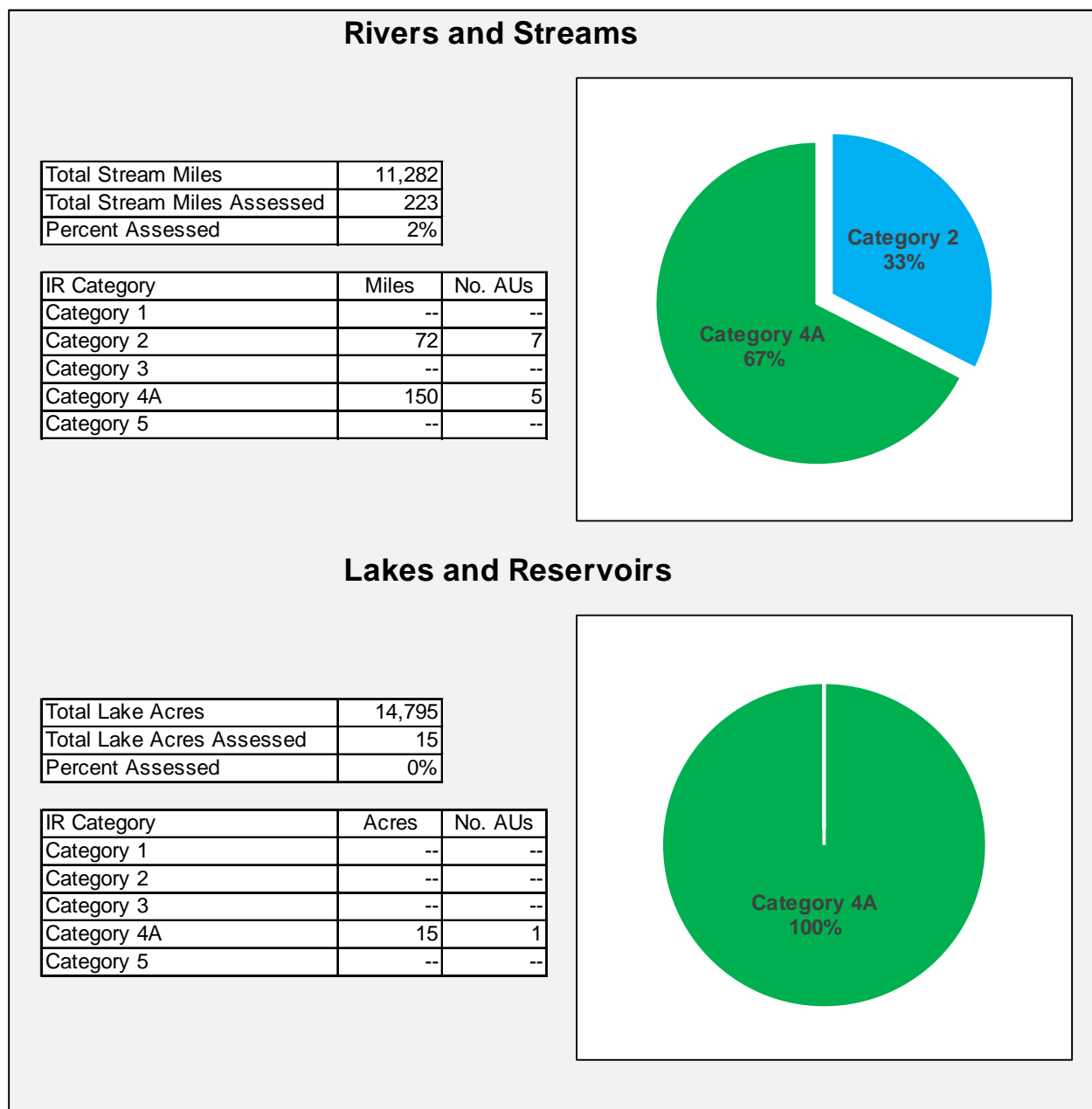


Figure 11. Belle Fourche Basin – Summary Statistics

Table 10. Assessed Lakes and Streams in the Belle Fourche Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Belle Fourche River	WYBF101202010501_01	Belle Fourche	2ABW W	6.2 Miles	2007	4A	NA	--	NA	NA	NA	NA	Not	NA	--	NA	NA
Belle Fourche River	WYBF101202010504_00	Belle Fourche	2ABW W	14.2 Miles	2007	4A	NA	--	Not	NA	NA	NA	Not	NA	Not	NA	NA
Donkey Creek	WYBF101202010600_01	Belle Fourche	3B	61.4 Miles	2012	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Gillette Fishing Lake	WYBF101202010601_01	Belle Fourche	2AB	15.4 Acres	1998	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Stonepile Creek	WYBF101202010602_01	Belle Fourche	3B	7.6 Miles	2012	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Blacktail Creek	WYBF101202010903_01	Belle Fourche	2AB	28.9 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Belle Fourche River	WYBF101202010904_00	Belle Fourche	2ABW W	60.7 Miles	2004	4A	NA	--	Full	NA	NA	NA	Not	NA	Full	NA	NA
Beaver Creek	WYBF101202010906_00	Belle Fourche	2AB	32.1 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Wood Canyon Creek	WYBF101202010906_02	Belle Fourche	3B	2.7 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Reservoir Gulch	WYBF101202010906_03	Belle Fourche	3B	2.1 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--

Table 10. Assessed Lakes and Streams in the Belle Fourche Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Cub Creek	WYBF101202010906_04	Belle Fourche	2AB	2.22 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Creek	WYBF101202010906_05	Belle Fourche	3B	1.3 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Fawn Creek	WYBF101202010906_06	Belle Fourche	3B	3.1 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--

6.3.3 Big Horn Basin

The Big Horn River Basin in Wyoming drains approximately 20,949 mi² and is bordered by the Absaroka and Wind River Mountain Ranges to the west, Beaver Rim to the south and the Bighorn Mountains to the east. The Absaroka Mountains are a volcanic mountain range originating 40–50 million years ago from a group of approximately 25 large volcanoes ([Chapman et al., 2003](#)). Ecoregions within this mountain range include alpine, sub-alpine, and foothills. Soils in these mountains are nutrient rich and consist of highly erosional ash, tuff, basalt and pumice, which can naturally elevate stream turbidity during precipitation events. The Wind River Mountains consist of alpine and sub-alpine granitic mountains flanked by dry sedimentary foothills and low mountains. Soils in the latter two ecoregions are coarse, acidic, and low in nutrients; lower elevation sedimentary soils consist of sandstone, shales, siltstone, and limestone. The Beaver Rim is composed of rolling sagebrush steppe, which includes rolling plains, mesas, and terraces. The Bighorn Mountains are geologically diverse, containing alpine, granitic and sedimentary sub-alpine, mid-elevation sedimentary mountains, and foothills. The mid-elevation Bighorn Mountains are characterized by rounded shale hills, limestone bluffs, sandstone flatirons, and multiple steep canyons ([Chapman et al., 2003](#)). The Bighorn Basin lies between these mountain ranges and is divided between Bighorn Basin and Bighorn Salt Desert Shrub Basin ecoregions. The basin is an arid depression characterized by alkaline soils consisting of shale, siltstone, and sandstone. Land uses in the mountains of the basin include livestock grazing, wildlife habitat, and recreation. Livestock grazing, irrigated cropland, oil and gas production, bentonite mining, and wildlife habitat are the primary land uses in the lower basin. Substantial portions of the Upper Wind River and Little Wind River Sub-basins are located within the Wind River Indian Reservation; EPA or authorized tribes administer the CWA in Indian Country, as defined at 18 U.S.C. Section 1151.

Water quality is generally good within the mountains of the basin, but gradually declines as streams flow across the lower basin to the Bighorn River because of natural erosional processes that increase sediment and total dissolved solids (TDS) loads. Most of the lower Big Horn Basin has thin soils derived from highly erodible, saline, alkaline, and/or phosphate-rich geologic materials. Much of the precipitation in the lower elevation portions of this arid basin comes from thunderstorms, and these events can cause flash flooding and severe erosion of the sparsely vegetated soils. Accelerated erosion, irrigated agricultural runoff, discharge from oil and gas development, and other human activities may also degrade water quality (Colby et al., 1956; Zelt et al., 1999). Other anthropogenic impacts, thought to date to the 1880s, have affected sediment transport in some of the lower elevation portions of the basin. For example, historic livestock grazing practices (long-term/high-density grazing) removed native grasses and began a cycle of intense runoff and gullyng that exacerbated naturally unstable conditions (Marston and Anderson, 1991). Wohl et. al. (2007) reported that many streams within the Bighorn National Forest have been substantially impacted by cattle grazing, irrigated crop production, flow regulation and diversion, and timber harvest. The prevalence of dams and other hydrologic modifications have altered the natural flow regime of the basin (Colby et al., 1956; Bray, 1996).

For more information about water quality activities being led by local conservation districts in the Big Horn Basin, please see the “Big Horn Basin” tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

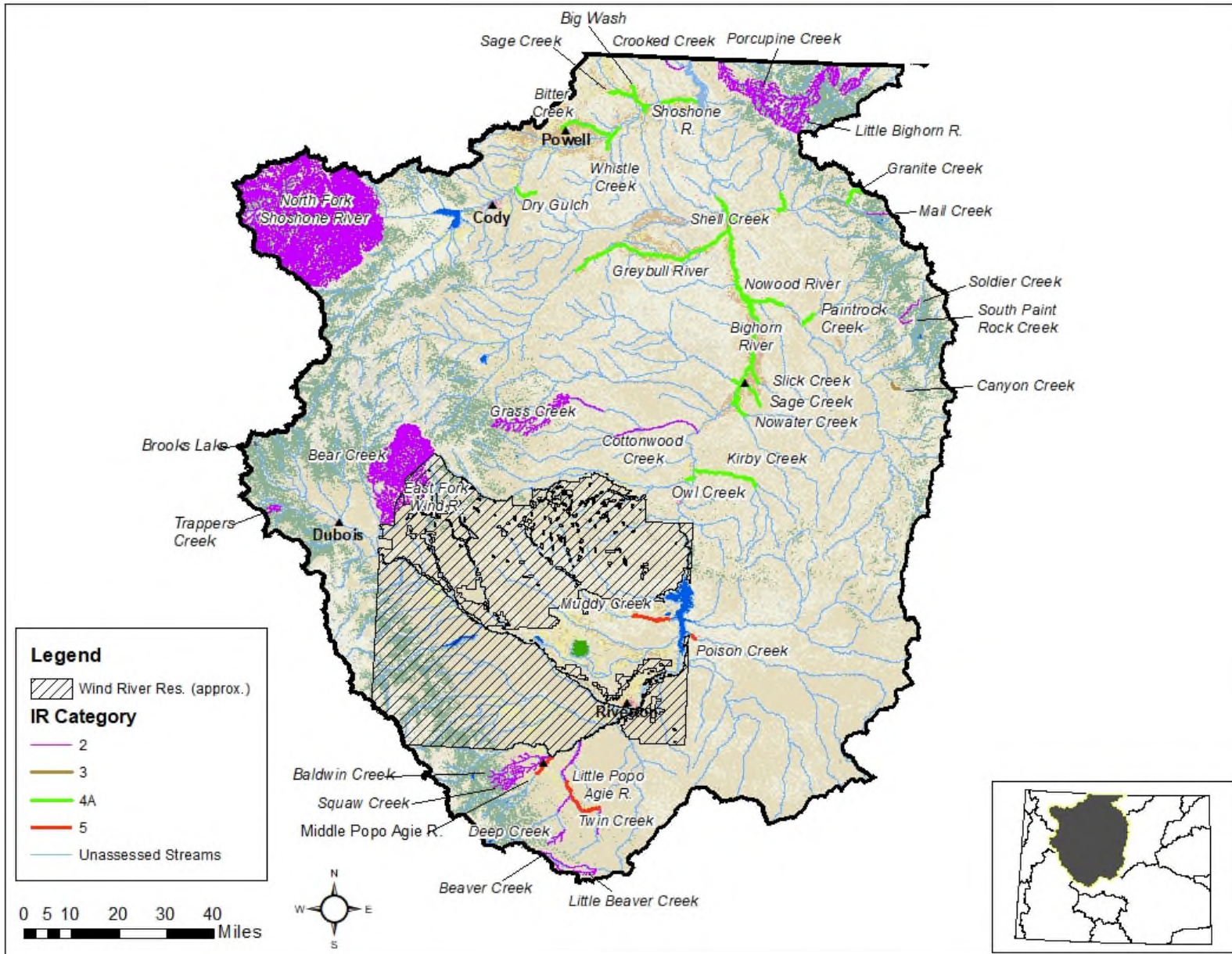


Figure 12. Big Horn River Basin – Location of Assessed Waterbodies.

Assessed Lakes and Streams in the Big Horn River Basin

Of the total 49,451 miles of perennial, intermittent, and ephemeral streams and 67,958 acres of lakes/ponds and reservoirs in the Big Horn River Basin, assessments resulting in use support determinations have been completed on 10 percent of the streams and 9 percent of lakes (**Figure 13**); these statistics exclude waterbodies in the Wind River Reservation. The majority (93 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 1 percent in IR Category 5) or have been addressed by TMDLs (i.e., 5 percent in IR Category 4A). Two lakes have been assessed in the Big Horn River Basin.

Summaries are provided in **Figure 13** and **Table 11**.

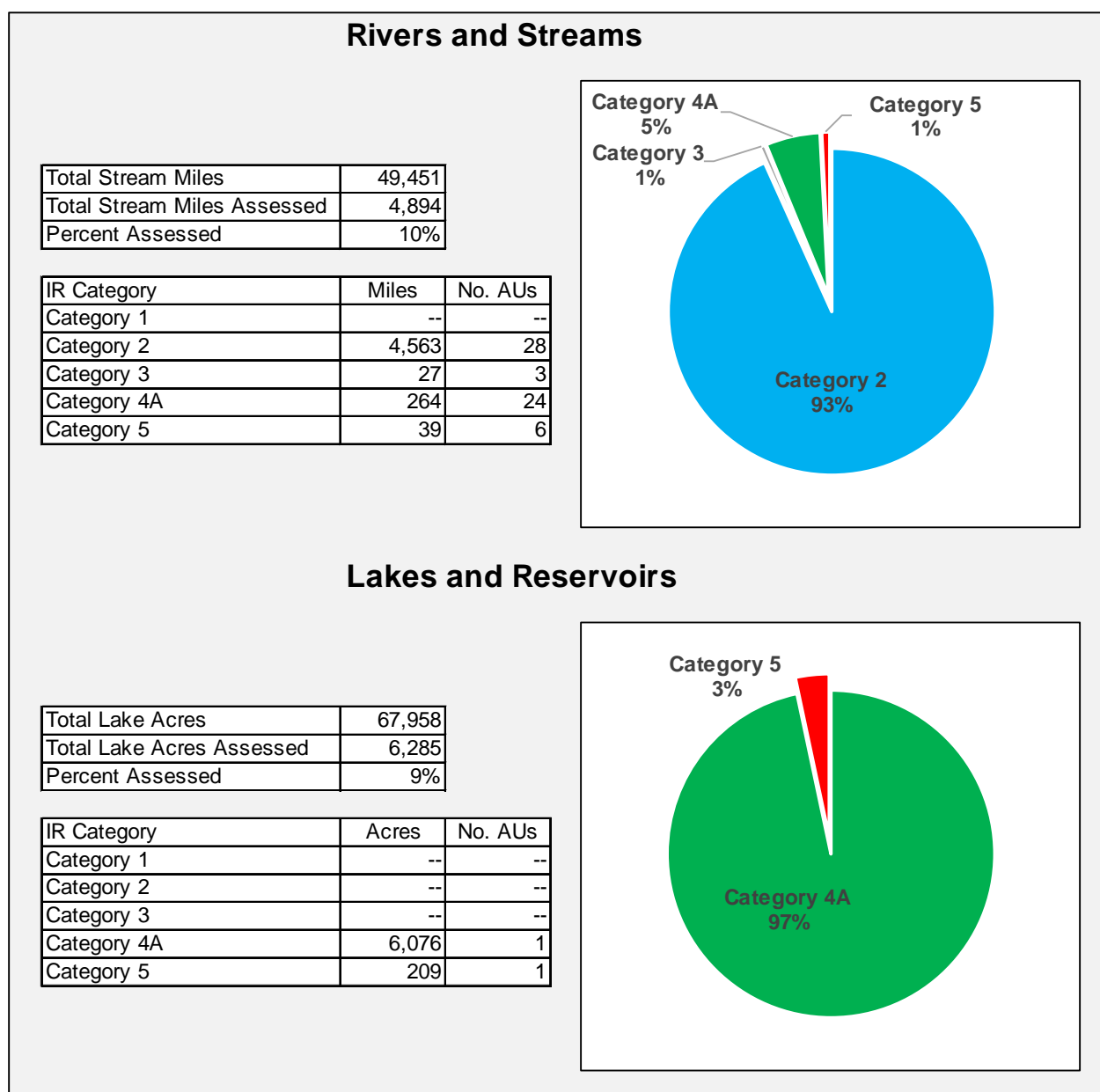


Figure 13. Big Horn River Basin – Summary Statistics.

Table 11. Assessed Lakes and Streams in the Big Horn Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Brooks Lake	WYBH100800010104_01	Big Horn	2AB	209 Acres	2018	5	NA	Not	--	Not	NA	NA	NA	NA	Not	NA	NA
Trappers Creek	WYBH100800010110_01	Big Horn	2AB	13.5 Miles	2007	2	Full	Full	--	Full	Full	NA	NA	NA	Full	Full	NA
Bear Creek	WYBH100800010408_00	Big Horn	2AB	79.94 Miles	2012	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Wind River, East Fork	WYBH100800010409_00	Big Horn	2AB	465.2 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Beaver Creek	WYBH100800020301_01	Big Horn	2AB	24.1 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beaver Creek	WYBH100800020301_02	Big Horn	2AB	19.7 Miles	2005	2	Full	Full	--	--	Full	Full	NA	NA	Full	Full	Full
Deep Creek	WYBH100800030103_01	Big Horn	2AB	10.5 Miles	2012	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Popo Agie River	WYBH100800030104_01	Big Horn	2AB	8.7 Miles	2013	2	Full	Full	NA	NA	Full	Full	NA	NA	Full	Full	Full
Twin Creek	WYBH100800030106_01	Big Horn	2AB	6.1 Miles	2014	2	NA	NA	NA	--	NA	Full	NA	NA	NA	NA	Full
Twin Creek	WYBH100800030106_02	Big Horn	2AB	3.3 Miles	2014	2	NA	NA	NA	NA	NA	Full	NA	NA	NA	NA	Full
Twin Creek	WYBH100800030106_03	Big Horn	2AB	15.6 Miles	2014	5	NA	Not	NA	--	NA	Full	NA	NA	Not	NA	Full

Table 11. Assessed Lakes and Streams in the Big Horn Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Little Popo Agie River	WYBH100800030108_01	Big Horn	2AB	12.4 Miles	2013	2	Full	Full	NA	--	Full	Full	NA	NA	Full	Full	Full
Little Popo Agie River	WYBH100800030108_02	Big Horn	2AB	11.1 Miles	2014	2	NA	NA	NA	NA	NA	Full	NA	NA	NA	NA	Full
Little Popo Agie River	WYBH100800030108_03	Big Horn	2AB	4.5 Miles	2013	5	NA	Not	NA	NA	NA	Full	NA	NA	Not	NA	Full
Middle Fork Popo Agie River	WYBH100800030207_01	Big Horn	2AB	4 Miles	2001	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Baldwin Creek	WYBH100800030207_02	Big Horn	2AB	39.3 Miles	2001	2	NA	Full	--	NA	NA	NA	NA	NA	Full	NA	NA
Hornecker Creek	WYBH100800030207_03	Big Horn	2AB	1.5 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Middle Fork Popo Agie River	WYBH100800030207_04	Big Horn	2AB	0.02 Miles	2020	2	NA	NA	--	--	NA	NA	Full	NA	NA	NA	NA
Middle Fork Popo Agie River	WYBH100800030207_05	Big Horn	2AB	0.7 Miles	2018	2	NA	NA	--	NA	NA	NA	Full	NA	NA	NA	NA
Squaw Creek	WYBH100800030210_00	Big Horn	2AB	44.5 Miles	2001	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Ocean Lake	WYBH100800050202_01	Big Horn	2ABW W	6075.8 Acres	2005	4A	NA	--	Not	NA	NA	NA	NA	NA	Not	NA	NA

Table 11. Assessed Lakes and Streams in the Big Horn Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Poison Creek	WYBH100800050404_01	Big Horn	2AB	2 Miles	2006	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Muddy Creek	WYBH100800050607_01	Big Horn	2AB	11.8 Miles	2006	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Owl Creek	WYBH100800070305_01	Big Horn	2AB	3.8 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Kirby Creek	WYBH100800070500_01	Big Horn	2C	21.8 Miles	2005	4A	NA	--	--	NA	NA	--	Not	NA	NA	NA	NA
Grass Creek	WYBH100800070607_01	Big Horn	2AB	124.2 Miles	2003	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Grass Creek	WYBH100800070608_01	Big Horn	2AB	14.1 Miles	2003	2	NA	NA	--	NA	NA	Full	NA	NA	NA	NA	Full
Cottonwood Creek	WYBH100800070609_01	Big Horn	2AB	29.5 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Nowater Creek	WYBH100800070809_01	Big Horn	3B	6.61 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Fifteenmile Creek	WYBH100800070909_01	Big Horn	3B	2.19 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Bighorn River	WYBH100800071000_01	Big Horn	2AB	36.1 Miles	2002	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Bighorn River	WYBH100800071000_02	Big Horn	2AB	22.1 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Sage Creek	WYBH100800071001_01	Big Horn	3B	7.4 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--

Table 11. Assessed Lakes and Streams in the Big Horn Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Slick Creek	WYBH100800071001_02	Big Horn	3B	5.8 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Canyon Creek	WYBH100800080406_01	Big Horn	2AB	4.3 Miles	2009	3	II	II	--	--	II	II	II	NA	II	II	NA
Paint Rock Creek	WYBH100800080603_01	Big Horn	2AB	5.2 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
South Paintrock Creek	WYBH100800080603_02	Big Horn	2AB	3.6 Miles	2010	2	NA	NA	--	--	NA	Full	NA	NA	NA	NA	Full
Soldier Creek	WYBH100800080607_01	Big Horn	2AB	7.4 Miles	2007	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Nowood River	WYBH100800080705_01	Big Horn	2AB	13.4 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Rawhide Creek	WYBH100800090301_01	Big Horn	2B	6.7 Miles	2020	2	Full	Full	--	Full	Full	--	NA	NA	Full	Full	NA
Rawhide Creek	WYBH100800090301_02	Big Horn	2B	8.4 Miles	2020	3	II	II	--	II	II	--	NA	NA	II	II	NA
Rawhide Creek	WYBH100800090301_03	Big Horn	2C	14 Miles	2020	3	II	--	--	II	II	--	NA	NA	II	II	NA
Greybull River	WYBH100800090405_01	Big Horn	2AB	44.7 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Mail Creek	WYBH100800100101_01	Big Horn	2AB	5.6 Miles	2004	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA

Table 11. Assessed Lakes and Streams in the Big Horn Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Granite Creek	WYBH100800100102_01	Big Horn	2AB	5.8 Miles	2001	4A	NA	Full	--	--	NA	NA	Not	NA	Full	NA	NA
Beaver Creek	WYBH100800100204_01	Big Horn	2AB	7.9 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Shell Creek	WYBH100800100206_01	Big Horn	2AB	5.3 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Bighorn River	WYBH100800100301_01	Big Horn	2AB	10.53 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crooked Creek	WYBH100800100500_01	Big Horn	2AB	7.9 Miles	2005	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Crooked Creek	WYBH100800100502_01	Big Horn	2AB	3 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Porcupine Creek	WYBH100800100600_01	Big Horn	2AB	178.1 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Dry Creek	WYBH100800110204_01	Big Horn	2ABW W	4.7 Miles	2001	4A	NA	--	NA	NA	NA	NA	Not	NA	NA	NA	NA
North Fork Shoshone River Drainage	WYBH100800120000_00	Big Horn	2AB	3235.1 Miles	2004	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Dry Gulch	WYBH100800140107_01	Big Horn	3B	7 Miles	2005	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Bitter Creek	WYBH100800140206_01	Big Horn	2AB	13.91 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA

Table 11. Assessed Lakes and Streams in the Big Horn Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Whistle Creek	WYBH100800140303_01	Big Horn	3B	8.7 Miles	2001	4A	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Foster Gulch	WYBH100800140307_01	Big Horn	2C	2 Miles	2001	4A	NA	NA	--	NA	NA	--	Not	NA	NA	NA	--
Polecat Creek	WYBH100800140407_01	Big Horn	2AB	2.5 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Sage Creek	WYBH100800140408_01	Big Horn	2AB	14 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Big Wash	WYBH100800140408_02	Big Horn	3B	3.2 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Shoshone River	WYBH100800140504_00	Big Horn	2AB	9.73 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Little Bighorn River	WYBH100800160100_01	Big Horn	2AB	165.1 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
West Pass Creek	WYBH100800160107_01	Big Horn	2AB	43.7 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

6.3.4 Cheyenne River Basin

The Cheyenne River Basin drains approximately 8,296 mi² in east-central Wyoming. The basin drains mostly the Powder River Geologic Basin, Semiarid Pierre Shale Plains, and Black Hills Foothills ecoregions, with isolated areas of Pine Scoria Hills ([Chapman et al., 2003](#)). Most of the basin consists of rolling mixed short grass prairie and rocky ponderosa pine forested outcrops of sedimentary shales and sandstones. The Thunder Basin National Grasslands occupy a large portion of the central part of this basin. The Black Hills Foothills to the north contain mixed vegetation, but mostly consist of ponderosa pine with an understory of mixed grasses. The basin receives little precipitation, and many of the streams are intermittent or ephemeral; most perennial streams originate in the Black Hills or Pine Ridge escarpment. Sedimentary rocks in the lower portions of the basin contribute to elevated levels of iron and manganese; thus, the numeric human health criteria for iron and manganese do not apply to (1) Little Thunder Creek and Class 2 tributaries of Little Thunder Creek below the confluence with North Prong and (2) Class 2 tributaries of Antelope Creek. Primary land uses in the basin are livestock grazing, wildlife habitat, coal mining, oil and gas production, and some farming.

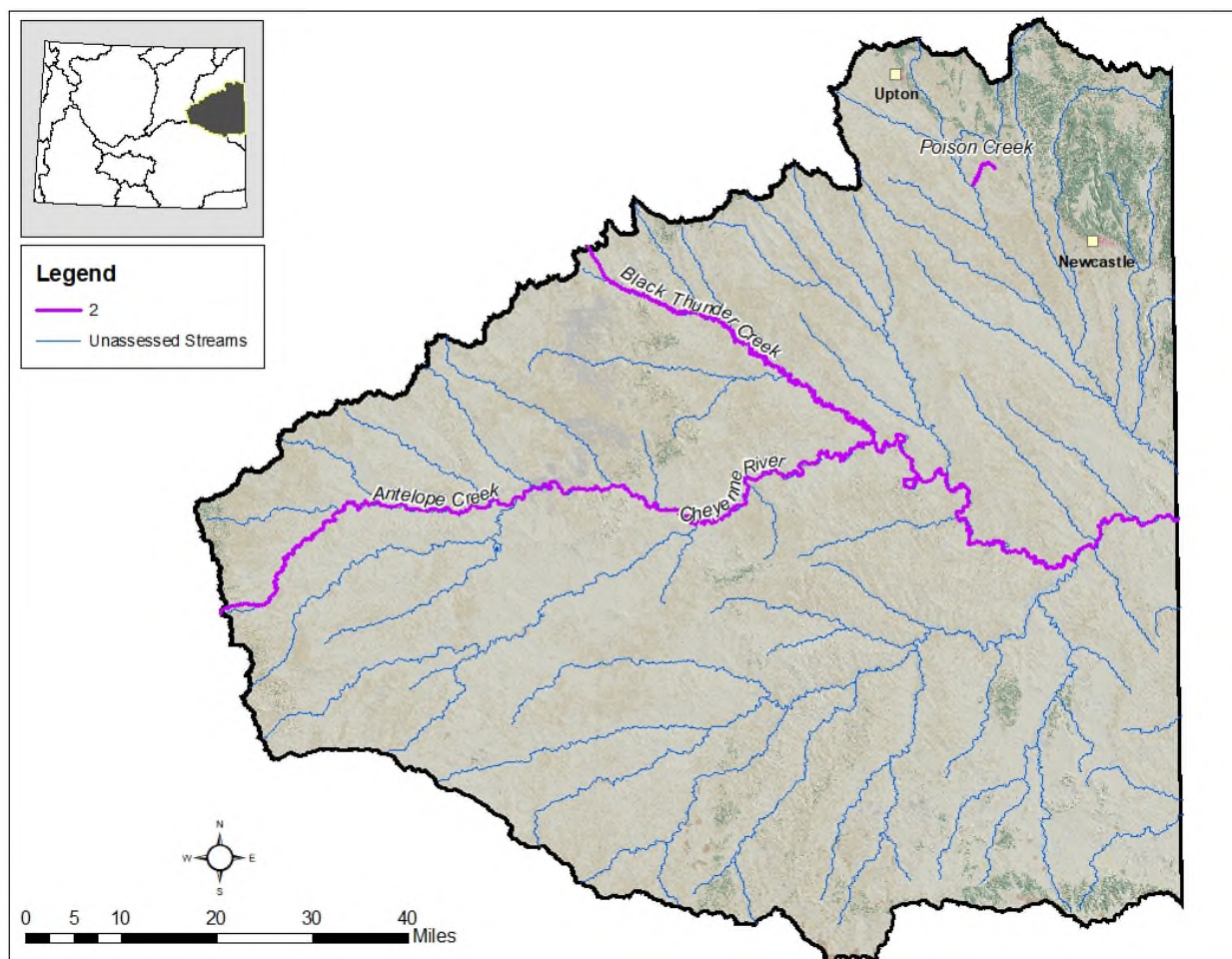


Figure 14. Cheyenne River Basin – Location of Assessed Waters.

Assessed Lakes and Streams in the Cheyenne River Basin

Of the total 32,871 miles of perennial, intermittent, and ephemeral streams and 12,067 acres of lakes/ponds and reservoirs in the Cheyenne River Basin, assessments resulting in use support determinations have been completed on 1 percent of the streams (**Figure 15**). No lakes have been assessed in the Cheyenne River Basin.

All of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2).

Summaries are provided in **Figure 15** and **Table 12**.

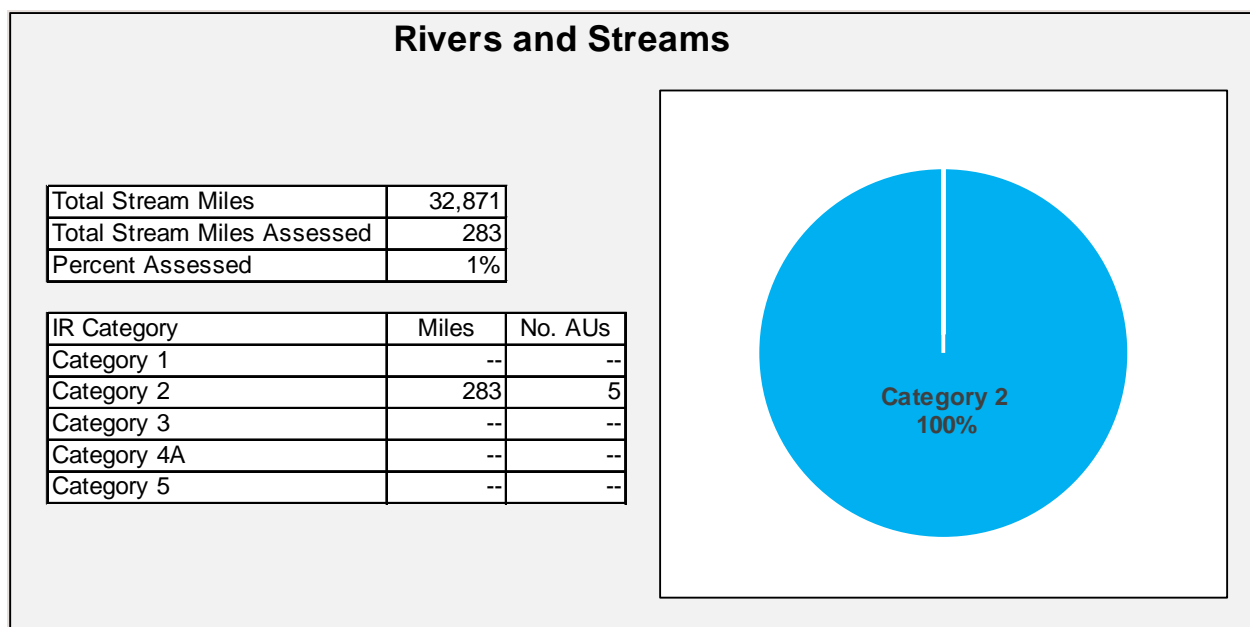


Figure 15. Cheyenne River Basin – Summary Statistics.

Table 12. Assessed Lakes and Streams in the Cheyenne Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Antelope Creek	WYCR101201010000_01	Cheyenne	3B	85.6 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Cheyenne River	WYCR101201030000_01	Cheyenne	2ABW W	92.1 Miles	2007	2	Full	--	Full	NA	Full	NA	NA	NA	Full	Full	NA
Black Thunder Creek	WYCR101201030200_01	Cheyenne	3B	79.8 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Cheyenne River	WYCR101201060100_01	Cheyenne	2ABW W	17.9 Miles	2007	2	Full	--	Full	--	Full	--	NA	NA	Full	Full	--
Poison Creek	WYCR101201070103_01	Cheyenne	3B	7.3 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--

6.3.5 Green River Basin

The Green River Basin in Wyoming drains approximately 16,629 mi² of southwestern Wyoming. The Green River Basin is part of the [Colorado River Compact of 1922](#), which apportions the Colorado River Basin's water among Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming. The headwaters of the Green River are located in the northern one third of the basin, which is bounded by the Wind River, Gros Ventre and Wyoming Mountain Ranges of the Middle Rocky Mountains. The Wind River Mountains are granitic while the Gros Ventre and Wyoming Mountains are sedimentary. All three of these mountain ranges contain alpine, subalpine and foothills ecoregions. The southwest corner of the basin contains mid-elevation portions of the Uinta Mountains. Snow melt runoff from these mountain ranges dominates the hydrology of the Green River and most of its tributaries. Streams flowing from these mountains continue onto sub-irrigated high valleys and then to lower elevation rolling sagebrush steppe and the salt desert shrub lands of the Wyoming Basin. Land uses in the Green River Basin include livestock grazing, wildlife habitat, recreation, mining and oil and gas production.

Wyoming has the world's largest trona (sodium carbonate typically occurring with halite and gypsum) deposits. Extensive natural salt deposits of trona were first noted in late 1890s in the Green River Basin. These deposits were prospected and mined in the late 1930s-40s and mining continues today. Oil and gas development also occurs throughout much of the basin and is an important industry for the region and state; coal deposits have also been mined in parts of the basin. There are currently concerns that energy development may negatively affect water quality by increasing TDS concentrations in the Colorado River Basin ([USBOR, 2011](#)). [Clark and Davidson \(2009\)](#) collected TDS and specific conductance data in an effort to establish regression relationships for sites on the Green River near the town of Green River. These relationships will allow TDS to be monitored more easily in the future using specific conductance measurements as a surrogate.

For more information about water quality activities being led by local conservation districts in the Green River Basin, please see the "Green River Basin" tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

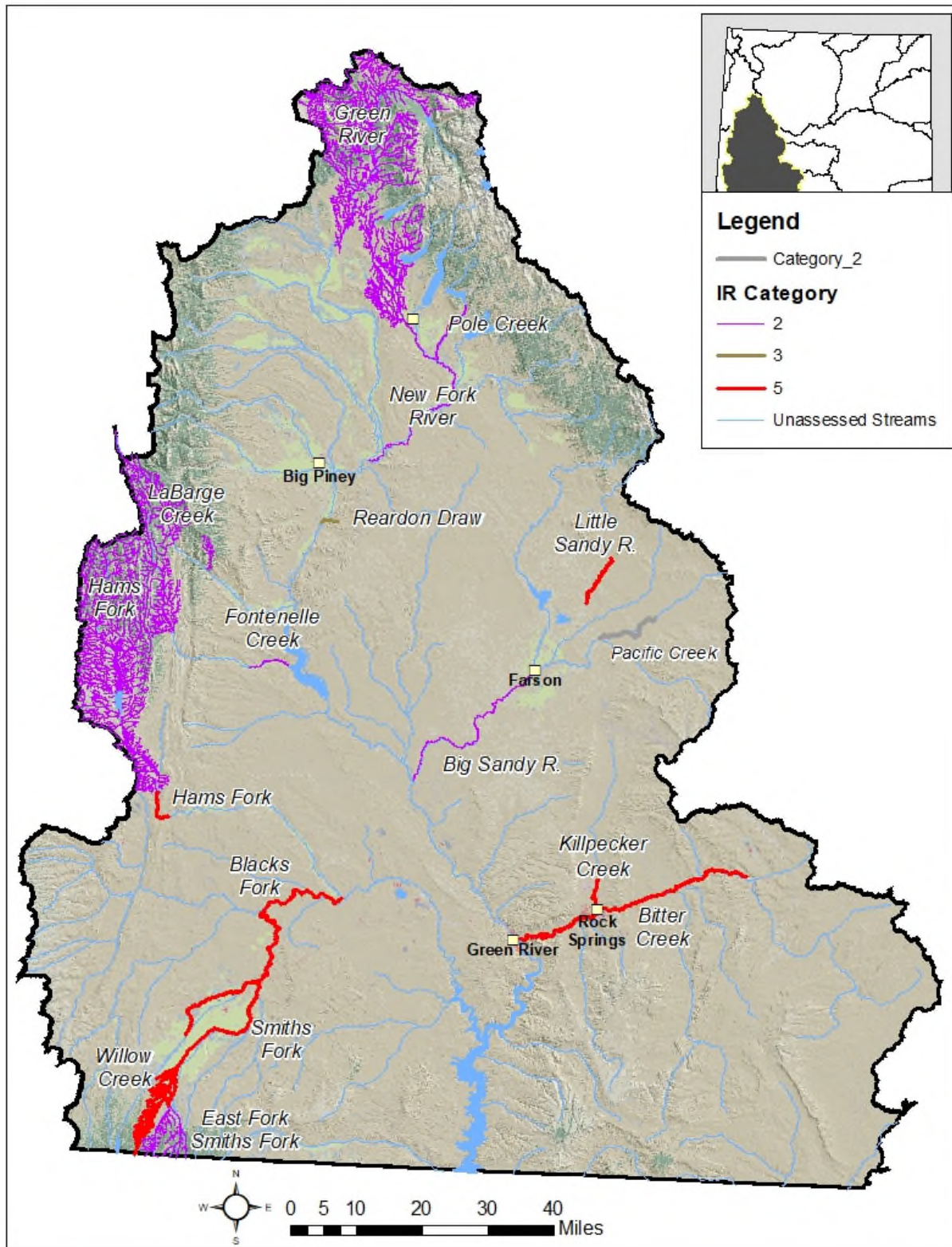


Figure 16. Green River Basin – Location of Assessed Waters.

Assessed Lakes and Streams in the Green River Basin

Of the total 39,065 miles of perennial, intermittent, and ephemeral streams and 79,528 acres of lakes/ponds and reservoirs in the Green River Basin, assessments resulting in use support determinations have been completed on 7 percent of the streams (**Figure 17**). No lakes have been assessed in the Green River Basin.

The majority (93 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 3 percent in IR Category 5), have been addressed by TMDLs (i.e., 4 percent in IR Category 4A), or have insufficient information to determine use support (i.e., less than 1 percent in IR Category 3).

Summaries are provided in **Figure 17** and **Table 13**.

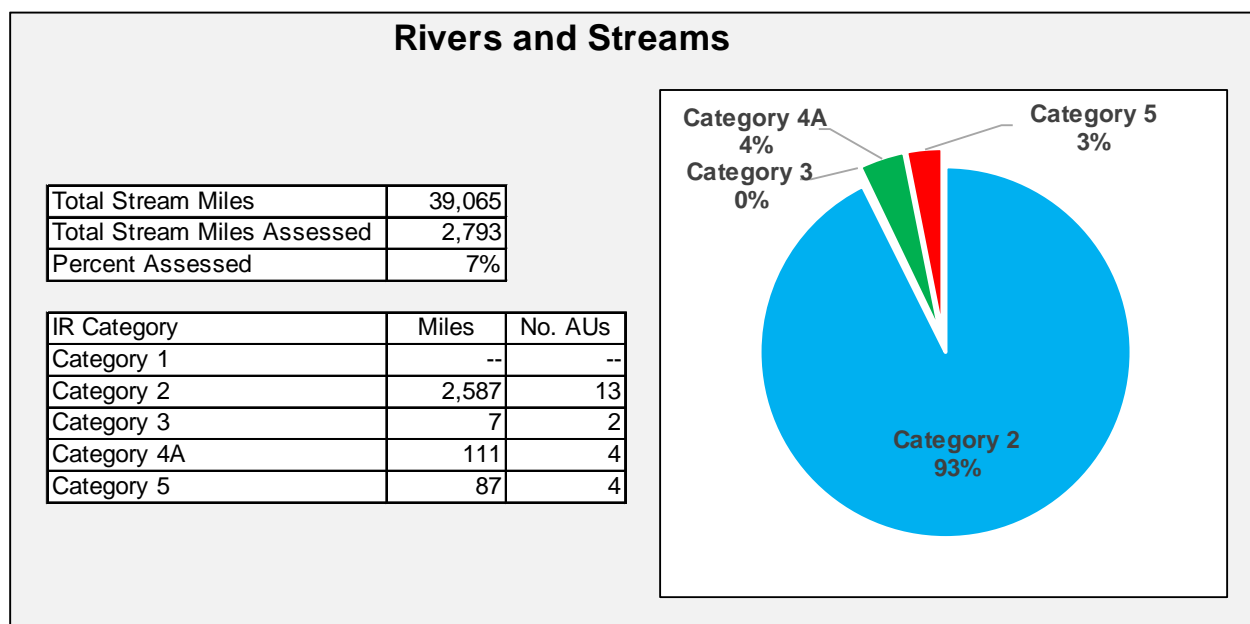


Figure 17. Green River Basin – Summary Statistics.

Table 13. Assessed Lakes and Streams in the Green River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Green River	WYGR140401010200_01	Green	2AB	735.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Reardon Draw	WYGR140401011006_01	Green	3B	3.2 Miles	2005	3	NA	--	--	--	NA	--	NA	NA	II	NA	--
LaBarge Creek	WYGR140401011102_00	Green	2AB	160.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYGR140401011103_01	Green	2AB	16.6 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Fontenelle Creek	WYGR140401011302_00	Green	2AB	210 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Fontenelle Creek	WYGR140401011306_01	Green	2AB	13.2 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
New Fork River	WYGR140401020203_00	Green	2AB	419.3 Miles	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pole Creek	WYGR140401020403_01	Green	2AB	17.2 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Sandy River	WYGR140401040203_01	Green	2AB	17.7 Miles	2010	5	NA	Not	--	NA	NA	Full	NA	NA	Not	NA	Full
Pacific Creek	WYGR140401040303_01	Green	2AB	13.8 Miles	2020	2	NA	NA	--	NA	NA	NA	Full	NA	NA	NA	NA
Big Sandy River	WYGR140401040407_01	Green	2AB	42 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Bitter Creek	WYGR140401050506_01	Green	2C	58.1 Miles	2006	5	NA	--	--	Not	NA	--	Not	NA	Not	NA	NA

Table 13. Assessed Lakes and Streams in the Green River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Killpecker Creek	WYGR140401050808_01	Green	3B	6.3 Miles	2006	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Blacks Fork	WYGR140401070106_01	Green	2AB	25.4 Miles	2006	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
East Fork Smiths Fork	WYGR140401070201_01	Green	2AB	34.6 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
West Fork Smiths Fork	WYGR140401070203_01	Green	2AB	47.2 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Willow Creek	WYGR140401070205_01	Green	2AB	14.5 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Willow Creek	WYGR140401070205_02	Green	2AB	3.8 Miles	2020	3	II	II	--	II	II	NA	NA	NA	II	II	NA
Smiths Fork	WYGR140401070208_00	Green	2AB	34.5 Miles	2006	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Smiths Fork	WYGR140401070208_01	Green	2AB	4 Miles	2006	5	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Blacks Fork	WYGR140401070403_01	Green	2AB	45 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Hams Fork	WYGR140401070600_01	Green	2AB	862.8 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Hams Fork	WYGR140401070701_01	Green	2AB	7.6 Miles	2005	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA

6.3.6 Little Missouri River Basin

The Little Missouri Basin drains approximately 4,659 mi² in northeastern Wyoming. The Little Missouri River Sub-basin contains several ecoregions that include Black Hills foothills, sagebrush steppe, Powder River basin and pine scoria hills within the headwaters and semiarid Pierre shale plains in the lower sub-basin ([Chapman et al., 2003](#)). The foothills of the Black Hills make up the hydrologic divide between the Little Missouri Sub-basin and the Belle Fourche Basin. This ecoregion is characterized by ponderosa pine forests with an understory of grasses and shrubs. Pine scoria hills are located along the western margin of the sub-basin. These hills are mostly covered with ponderosa pine juniper. Porcellanite (or clinker) overlays a mixture of coal, sandstone and shale. The remaining sub-basin is a mix of rolling plains and sagebrush steppe. Land uses within the sub-basin are livestock grazing, oil and gas production, bentonite mining, dryland farming and wildlife habitat.

WDEQ has not completed any water quality assessments for this basin.

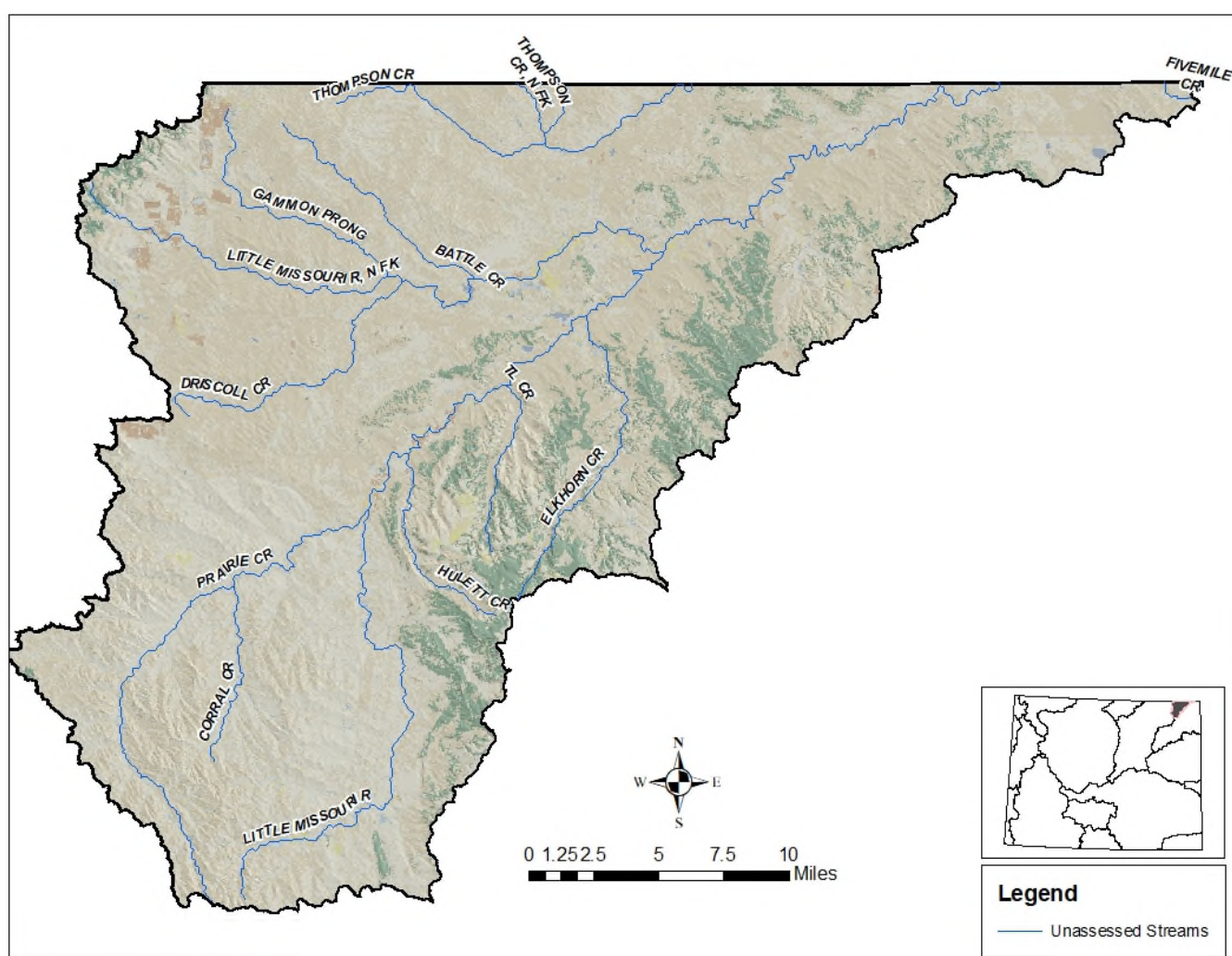


Figure 18. Little Missouri River Basin.

6.3.7 Little Snake River Basin

The Little Snake River Basin drains approximately 3,337 mi² in Wyoming, where it is bordered to the east by the continental divide and Sierra Madre Mountain Range, to the north by the Great Divide Basin and the west by the Green River Basin. The Little Snake River's headwaters are located in the Park Mountain Range in Colorado and Wyoming. The river flows west near the Wyoming/Colorado border for several miles before entering Wyoming near Slater, Colorado. The river then continues flowing west along state highway 70 before turning southwest and re-entering Colorado near the town of Baggs. The river ultimately confluences with the Yampa River in Colorado near Deerlodge Park. The Little Snake River basin has additional WYPDES permit requirements because it is within the Colorado River Basin Salinity Control area.

The Little Snake River Basin in Wyoming largely consists of rolling sagebrush steppe, foothill shrublands and low mountains, salt desert shrub basins and mid-elevation forests and shrublands of the Sierra Madre Mountains ([Chapman et al., 2003](#)). The geology of the lower basin is mostly sedimentary and is dominated by sandstone and conglomerate sedimentary rock; siltstone, shale and limestone are also common. Soils are alkaline and highly erodible in the lower portions of the basin. Land uses throughout the basin include livestock grazing, mineral extraction, wildlife habitat and recreation.

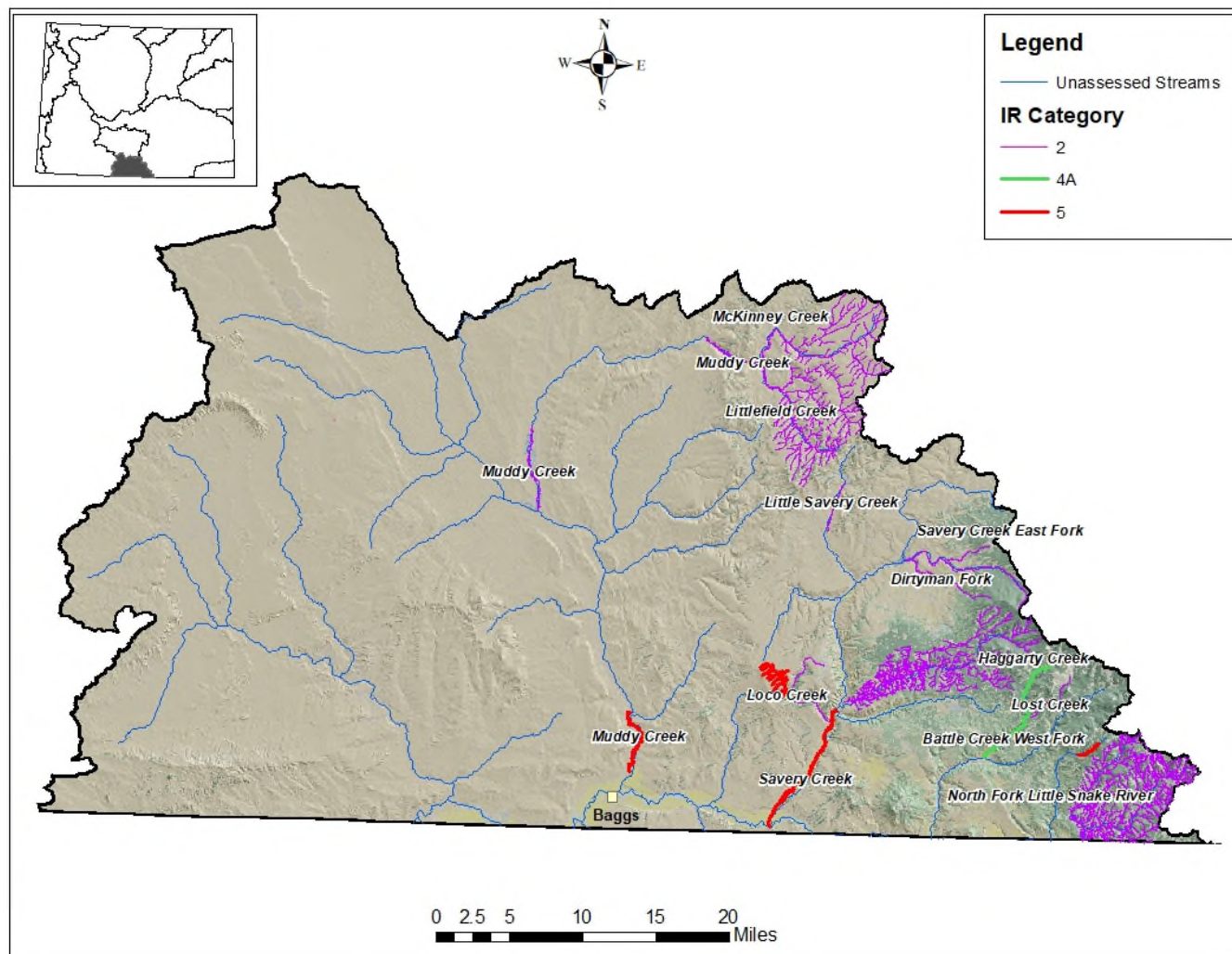


Figure 19. Little Snake River Basin – Assessed Lakes and Streams.

Assessed Lakes and Streams in the Little Snake River Basin

Of the total 7,355 miles of perennial, intermittent, and ephemeral streams and 2,250 acres of lakes/ponds and reservoirs in the Little Snake River Basin, assessments resulting in use support determinations have been completed on 9 percent of the streams (**Figure 20**).

The majority (93 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 5 percent in IR Category 5) or have been addressed by TMDLs (i.e., 2 percent in IR Category 4A).

No lakes have been assessed in the Little Snake River Basin.

Summaries are provided in **Figure 20** and **Table 14**.

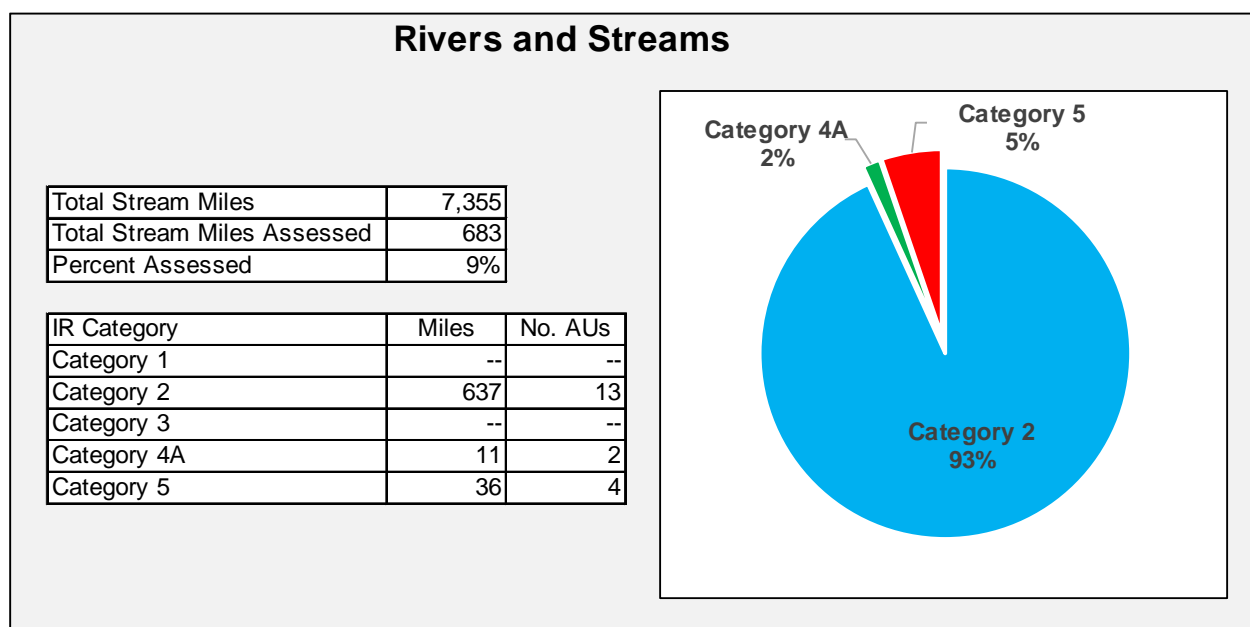


Figure 20. Little Snake River Basin – Summary Statistics.

For more information about water quality activities being led by local conservation districts in the Little Snake River Basin, please see the “Little Snake River/Muddy Watershed” tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

Table 14. Assessed Lakes and Streams in the Little Snake River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Fork Little Snake River	WYLS140500030104_00	Little Snake	2AB	212.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Roaring Fork Little Snake River	WYLS140500030106_01	Little Snake	2AB	1.8 Miles	2014	5	NA	Not	NA	NA	NA	NA	NA	NA	Not	NA	NA
Haggarty Creek	WYLS140500030109_01	Little Snake	2AB	5.6 Miles	1998	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
West Fork Battle Creek	WYLS140500030109_02	Little Snake	2AB	4.9 Miles	1999	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Lost Creek	WYLS140500030109_03	Little Snake	2AB	5.2 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
East Fork Savery Creek	WYLS140500030401_01	Little Snake	2AB	17 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Dirtyman Fork	WYLS140500030402_01	Little Snake	2AB	7.8 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Savery Creek	WYLS140500030405_01	Little Snake	2AB	4.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Big Sandstone Creek	WYLS140500030407_01	Little Snake	2AB	177.5 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Table 14. Assessed Lakes and Streams in the Little Snake River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Savery Creek	WYLS140500030408_01	Little Snake	2AB	13.7 Miles	1998	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
West Fork Loco Creek	WYLS140500030408_02	Little Snake	2AB	12.8 Miles	1998	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Loco Creek	WYLS140500030408_03	Little Snake	2AB	9.1 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Muddy Creek	WYLS140500040101_01	Little Snake	2AB	70.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Littlefield Creek	WYLS140500040101_02	Little Snake	2AB	35.5 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
McKinney Creek	WYLS140500040102_01	Little Snake	2AB	5.9 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
McKinney Creek	WYLS140500040102_02	Little Snake	2AB	60.1 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Muddy Creek	WYLS140500040103_01	Little Snake	2C	13.9 Miles	1999	2	Full	Full	--	--	Full	--	NA	NA	Full	Full	NA
Muddy Creek	WYLS140500040104_01	Little Snake	2C	17.5 Miles	2014	2	NA	NA	--	--	NA	--	NA	NA	Full	NA	NA
Muddy Creek	WYLS140500040308_01	Little Snake	2C	7.7 Miles	2009	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	NA

6.3.8 Niobrara River Basin

The Niobrara River Basin drains approximately 814 mi² in Wyoming and contains only the Niobrara Headwaters Sub-basin. The sub-basin is bounded to the north by the Seventy Seven Hills and Hat Creek Breaks and to the southwest by the Wildcat Hills; these formations are composed of sedimentary geology that has been eroded into pine bluffs and hills ([Chapman et al., 2003](#)). Most of the lower basin is composed of rolling plains and sandy and silty tablelands, where loamy soils have been formed from weathering sandstone. Land uses are primarily livestock grazing with some dry land and irrigated farming.

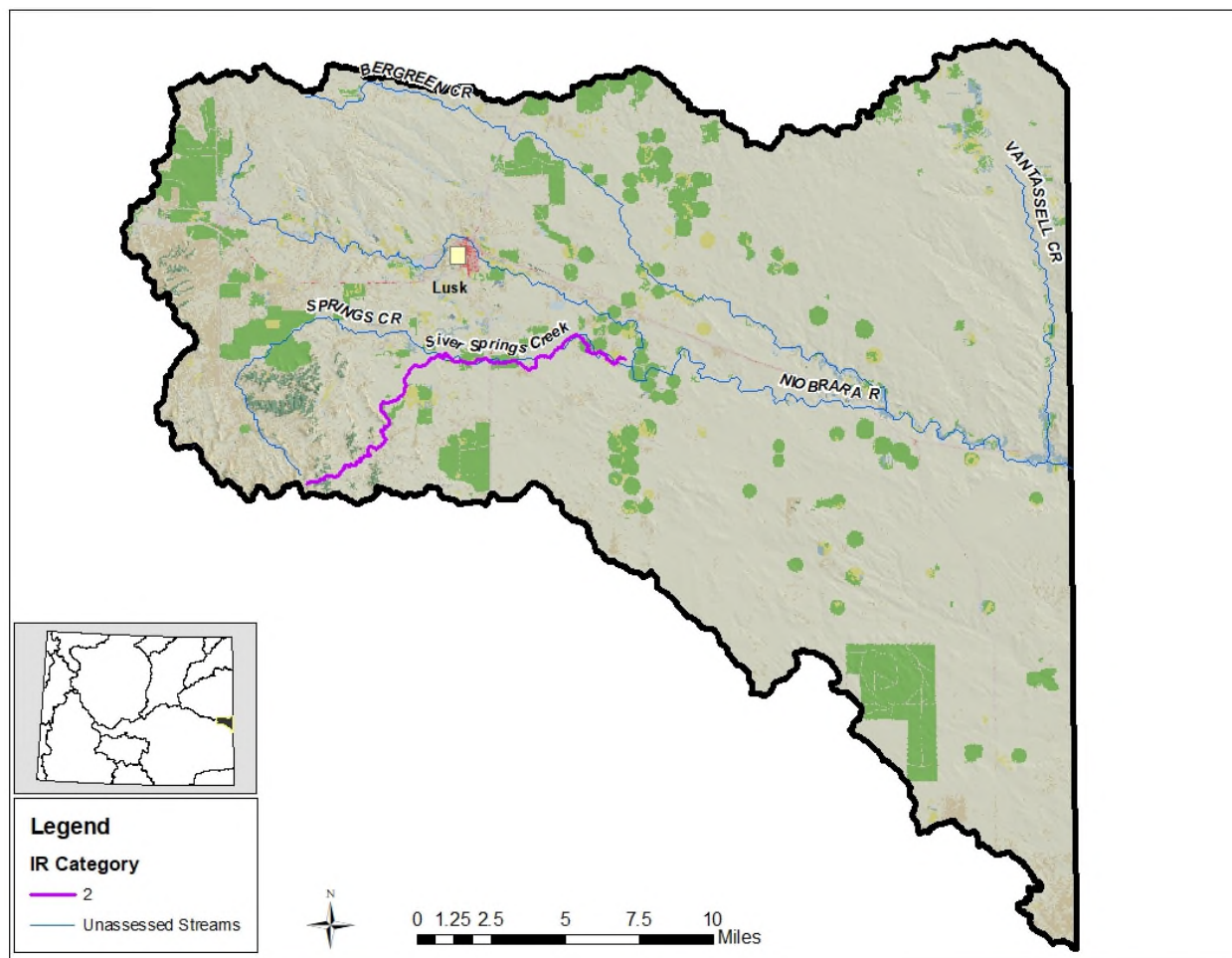


Figure 21. Niobrara River Basin – location of assessed lakes and streams.

Assessed Lakes and Streams in the Niobrara River Basin

Of the total 619 miles of perennial, intermittent, and ephemeral streams and 198 acres of lakes/ponds and reservoirs in the Niobrara Basin, assessments resulting in use support determinations have been completed on 3 percent of the streams (**Figure 22**). No lakes have been assessed in the Niobrara River Basin.

All of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2).

Summaries are provided in **Figure 22** and **Table 15**.

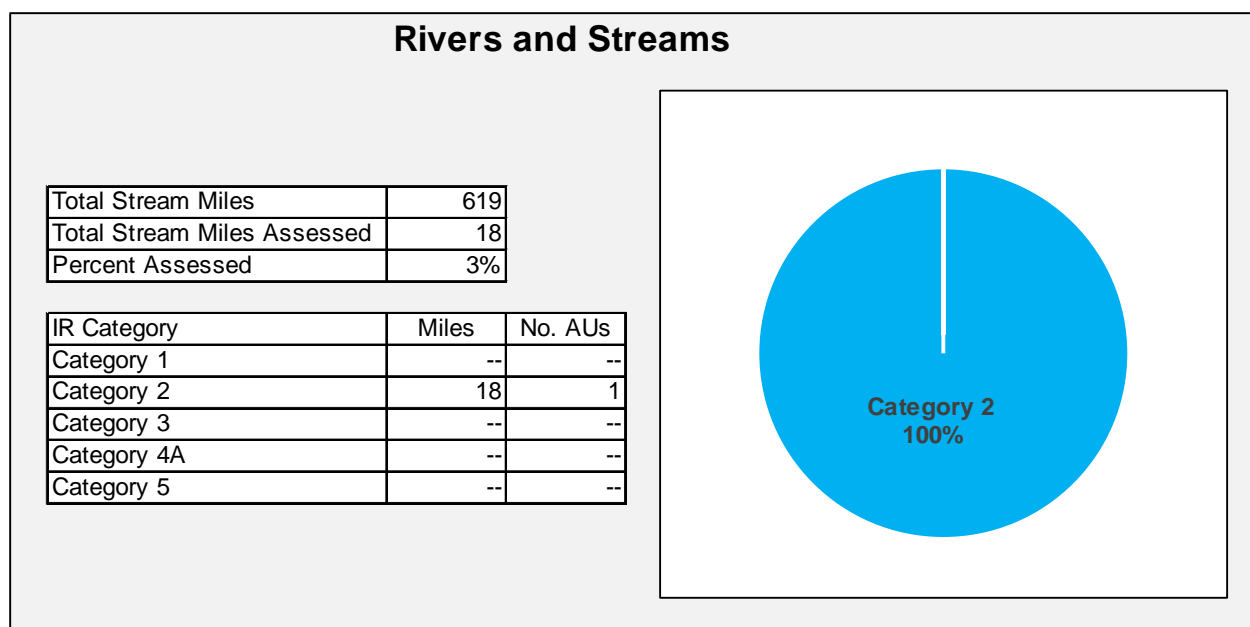


Figure 22. Niobrara River Basin – Summary Statistics.

Table 15. Assessed Lakes and Streams in the Niobrara River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Silver Springs Creek	WYNR101500020104_01	Niobrara	3B	17.8 Miles	2007	2	Full	-	-	-	Full	-	NA	NA	Full	Full	-

6.3.9 North Platte River Basin

The headwaters of the North Platte River Basin originate in Medicine Bow, Never Summer, Rabbit Ears and Park mountain ranges surrounding North Park, Colorado; the river then flows north into Wyoming near the community of Cowdrey, Colorado. The basin is the largest in the state, draining approximately 23,306 mi² of southeastern Wyoming. The North Platte is by far the most geologically diverse river basin in Wyoming, containing 4 level III and 20 level IV ecoregions ([Chapman et al., 2003](#)). The river enters Wyoming in the low elevation forests and shrublands of the Medicine Bow Mountain Range in the Platte River Wilderness Area. It then flows north through the sub-irrigated high valleys south of Saratoga, between the Sierra Madre and Medicine Bow Mountain Ranges, and across a large section of the Wyoming Basin between Saratoga and Casper. The river then flows east around the northern edge of the Laramie Mountains and through the Northwestern Plains and High Plains to the Wyoming/Nebraska border. Primary land uses include irrigated agriculture, livestock grazing, oil and gas production, recreation, timber harvest, uranium mining and wildlife habitat.

The North Platte River is impounded by a series of large reservoirs as it flows through Wyoming; these include, from upstream to downstream, Seminoe, Kortes, Pathfinder, Alcova, Gray Reef, Glendo and Guernsey Reservoirs. These reservoirs are mainly utilized for water storage, hydropower and recreation. The Kendrick Project stores and distributes water and provides hydropower using dams and power plants at Seminoe and Alcova Reservoirs. Water from the project is distributed to approximately 24,000 acres of irrigated land located between Alcova Reservoir and the City of Casper using a series of canals. A portion of the surface water rights in the North Platte River Basin are allocated by the River Decree (1957) and the North Platte Decree (2001). The River Decree restricts water users in Colorado from using more than 19,875 acre-feet per year. The North Platte Decree restricts water users in Wyoming from irrigating more than 39,000 acre-feet along the Laramie River below Wheatland Number 2 Tunnel north of the Town of Wheatland. The North Platte Decree also affected water usage along the North Platte River in Wyoming in three ways: allocating only 25% of the natural flow to Wyoming water users between Guernsey Reservoir and the Tri-State Dam (near the Wyoming/Nebraska border), restricting Wyoming water users to 1,280,000 acre-feet above Pathfinder Dam, and 890,000 acre-feet between Pathfinder Dam and Guernsey Dam during any ten year period.

For more information about water quality activities being led by local conservation districts in the North Platte River Basin, please see the "North Platte River Basin" tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

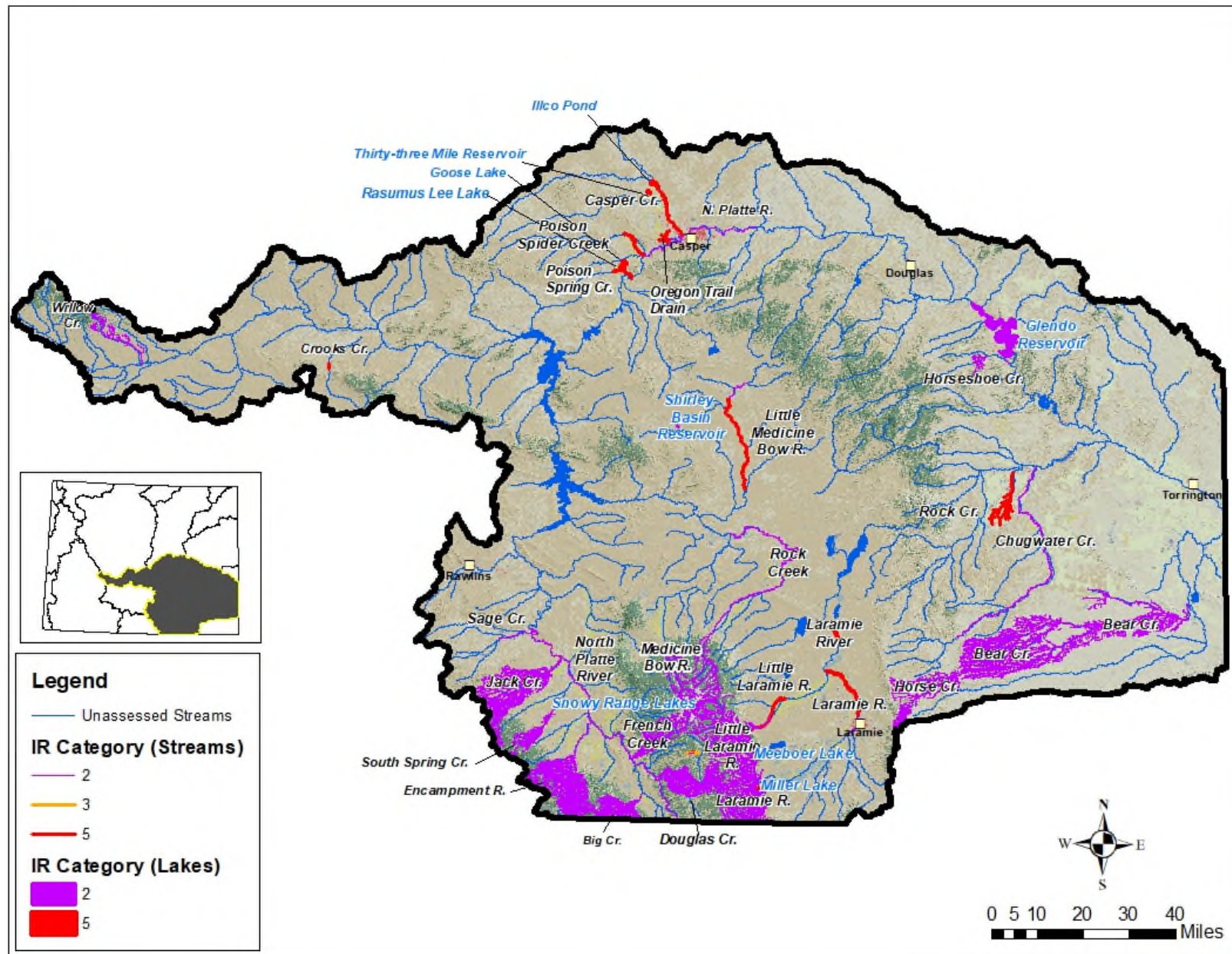


Figure 23. North Platte River Basin – Locations of Assessed Lakes and Streams.

Assessed Lakes and Streams in the North Platte River Basin

Of the total 53,665 miles of perennial, intermittent, and ephemeral streams and 128,924 acres of lakes/ponds and reservoirs in the North Platte River Basin, assessments resulting in use support determinations have been completed on 9 percent of the streams and 10 percent of the lakes (**Figure 24**). The majority (97 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 4 percent in IR Category 5). The majority (99 percent) of the assessed lake acres are supporting those uses that have been assessed (i.e., IR Category 2). The remaining lake acres are impaired (i.e., 1 percent in IR Category 5). Summaries are provided in **Figure 24** and **Table 16**.

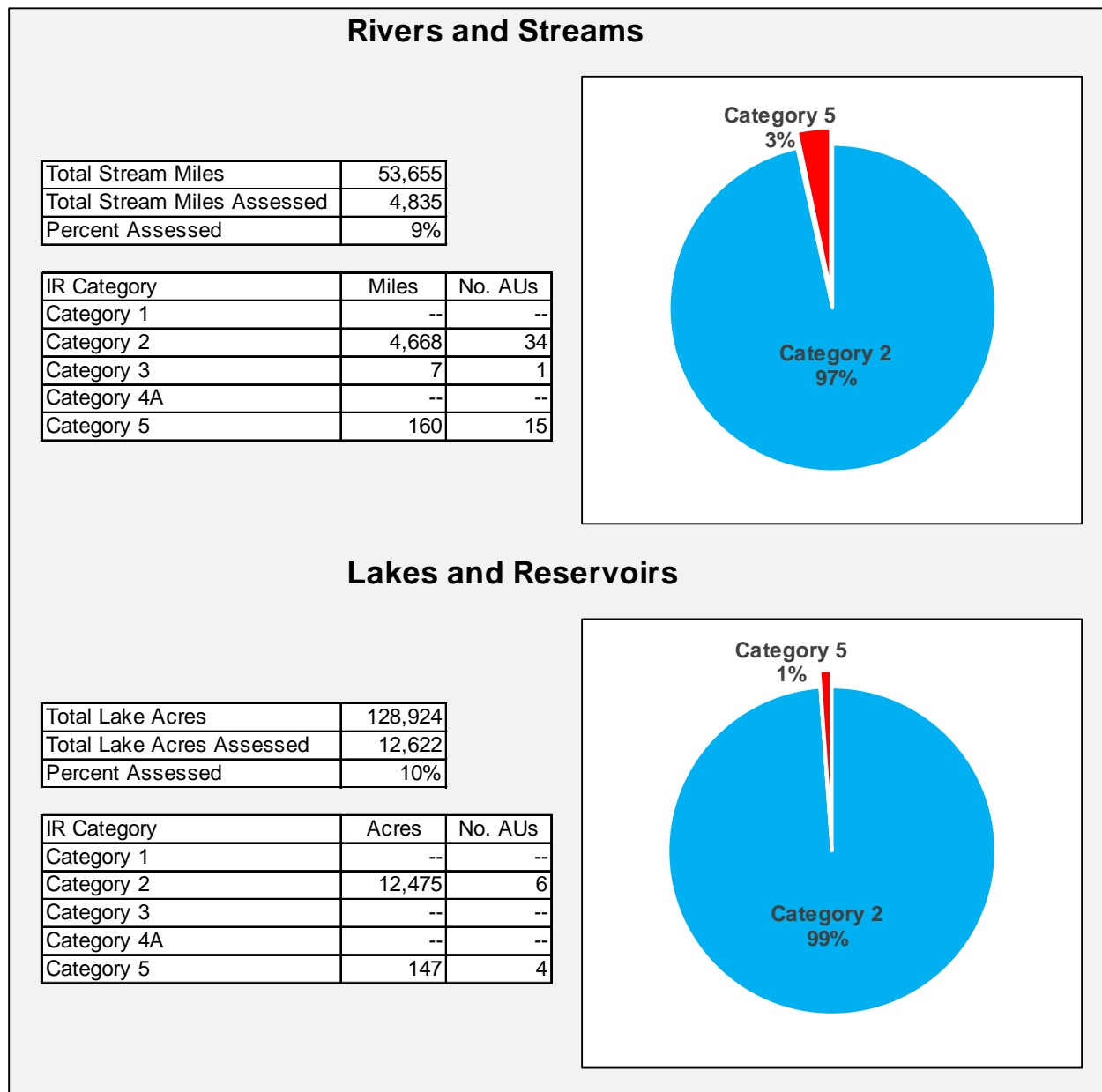


Figure 24. North Platte River Basin - Summary Statistics.

Table 16. Assessed Lakes and Streams in the North Platte River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Platte River	WYNP101800020000_01	North Platte	1	77.3 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Bear Creek	WYNP101800020104_01	North Platte	2AB	0.7 Miles	2014	5	NA	Not	--	--	NA	Full	NA	NA	NA	NA	NA
Bear Creek	WYNP101800020104_02	North Platte	2AB	1.3 Miles	2014	2	Full	Full	NA	--	Full	Full	NA	NA	Full	Full	Full
Rambler Creek	WYNP101800020104_03	North Platte	3B	0.5 Miles	2014	5	II	--	--	--	II	--	NA	NA	Not	II	--
Smith North Creek	WYNP101800020105_01	North Platte	2AB	14.6 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Muddy Creek	WYNP101800020105_02	North Platte	2AB	44.5 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Douglas Creek	WYNP101800020105_03	North Platte	2AB	104.9 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Douglas Creek	WYNP101800020107_01	North Platte	2AB	150.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
French Creek	WYNP101800020203_01	North Platte	2AB	192.8 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Big Creek	WYNP101800020303_01	North Platte	2AB	221.2 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Encampment River	WYNP101800020500_01	North Platte	2AB	536.7 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Encampment River	WYNP101800020504_01	North Platte	1	10 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Table 16. Assessed Lakes and Streams in the North Platte River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
South Fork Hog Park Creek	WYNP101800020505_01	North Platte	2AB	2.3 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Encampment River	WYNP101800020508_01	North Platte	2AB	17.7 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Spring Creek	WYNP101800020703_01	North Platte	2AB	117.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Jack Creek	WYNP101800020800_01	North Platte	2AB	534.7 Miles	2001	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Sage Creek	WYNP101800020903_01	North Platte	2AB	14.7 Miles	2007	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Medicine Bow River	WYNP101800040100_01	North Platte	2AB	109.5 Miles	2001	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYNP101800040201_01	North Platte	2AB	99.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYNP101800040202_01	North Platte	2AB	1.6 Miles	2014	2	Full	Full	NA	Full	Full	Full	NA	NA	Full	Full	Full
Rock Creek	WYNP101800040202_02	North Platte	2AB	106.5 Miles	2014	2	NA	NA	NA	NA	NA	Full	NA	NA	NA	NA	Full
Little Medicine Bow River	WYNP101800050103_01	North Platte	2AB	11.1 Miles	2014	2	Full	Full	NA	--	Full	Full	NA	NA	Full	Full	Full
Little Medicine Bow River	WYNP101800050103_02	North Platte	2AB	26.2 Miles	2014	5	NA	Not	NA	NA	NA	Full	NA	NA	Not	NA	NA

Table 16. Assessed Lakes and Streams in the North Platte River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Shirley Basin Reservoir	WYNP101800050502_01	North Platte	2AB	15.5 Acres	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Lander Creek	WYNP101800060104_01	North Platte	2AB	6.4 miles	2020	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Willow Creek	WYNP101800060204_01	North Platte	2AB	35.98 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Crooks Creek	WYNP101800060603_01	North Platte	2AB	1.4 Miles	1998	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
North Platte River	WYNP101800070300_01	North Platte	2AB	36.8 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Poison Spring Creek	WYNP101800070302_01	North Platte	3B	8.2 Miles	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Rasmus Lee Lake	WYNP101800070302_02	North Platte	3B	85.16 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Goose Lake	WYNP101800070302_03	North Platte	3B	30.1 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Oregon Trail Drain	WYNP101800070303_01	North Platte	3B	8.6 Miles	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Poison Spider Creek	WYNP101800070406_01	North Platte	2AB	1.3 Miles	1999	5	NA	Not	NA	NA	NA	NA	NA	NA	Not	NA	NA
Poison Spider Creek	WYNP101800070406_02	North Platte	2C	5.8 Miles	1999	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	NA

Table 16. Assessed Lakes and Streams in the North Platte River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Poison Spider Creek	WYNP101800070406_03	North Platte	3B	6 Miles	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Illico Pond	WYNP101800070503_01	North Platte	3B	1.1 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Casper Creek	WYNP101800070504_01	North Platte	2AB	21.1 Miles	1999	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Thirty-three Mile Reservoir	WYNP101800070703_01	North Platte	3B	30.2 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Glendo Reservoir	WYNP101800080405_01	North Platte	2AB	12049.8 Acres	2008	2	Full	Full	--	--	Full	--	NA	NA	Full	Full	Full
Horseshoe Creek	WYNP101800080905_01	North Platte	2AB	12.51 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Horseshoe Creek	WYNP101800080905_02	North Platte	2AB	2.3 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Horseshoe Creek	WYNP101800080905_03	North Platte	2AB	7.3 Miles	2004	3	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA
Laramie River	WYNP101800100200_01	North Platte	2AB	354.7 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Laramie River	WYNP101800100201_01	North Platte	2AB	0.3 Miles	2011	2	NA	NA	--	--	NA	NA	Full	NA	NA	NA	NA
Miller Lake	WYNP101800100204_01	North Platte	2AB	7.6 Acres	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Meeboer Lake	WYNP101800100403_01	North Platte	2AB	115.8 Acres	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Table 16. Assessed Lakes and Streams in the North Platte River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Laramie River	WYNP101800100501_01	North Platte	2AB	7.9 Miles	2018	2	NA	II	--	NA	NA	Full	NA	NA	II	NA	NA
Laramie River	WYNP101800100504_01	North Platte	2AB	24 Miles	2018	5	NA	Not	--	Not	NA	NA	NA	NA	Not	NA	NA
Little Laramie River	WYNP101800100600_01	North Platte	2AB	454.4 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
South Fork Little Laramie River	WYNP101800100602_01	North Platte	2AB	5.5 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Hanging Lake	WYNP101800100603_01	North Platte	2AB	3.8 Acres	2008	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Snowy Range Lakes	WYNP101800100603_02	North Platte	2AB	282.7 Acres	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Laramie River	WYNP101800100605_01	North Platte	2AB	15.7 Miles	2011	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Middle Fork Mill Creek	WYNP101800100606_01	North Platte	2AB	2.7 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Laramie River	WYNP101800100707_01	North Platte	2AB	2.9 Miles	2011	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Wheatland Creek	WYNP101800110502_01	North Platte	2C	2.4 Miles	2014	5	NA	--	--	Full	NA	--	Not	NA	Full	NA	NA

Table 16. Assessed Lakes and Streams in the North Platte River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Rock Creek	WYNP101800110502_02	North Platte	2C	34.9 Miles	2001	5	NA	--	--	--	NA	--	Not	NA	NA	NA	NA
Chugwater Creek	WYNP101800110900_02	North Platte	2AB	77.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Chugwater Creek	WYNP101800110906_01	North Platte	2AB	9.7 Miles	2007	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Horse Creek	WYNP101800120100_01	North Platte	2AB	253.7 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Bear Creek	WYNP101800120300_01	North Platte	2AB	1045.9 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

6.3.10 Powder River Basin

The Powder River drains approximately 10,706 mi² in northeastern Wyoming. The Powder River's headwaters are located within the Bighorn Mountain Range and the Casper Arch, which are located to the west and south within the basin, respectively. The Powder River flows northeast through a large expanse of the Northwestern Great Plains before entering Montana near the Town of Moorhead, Montana. Nearly all of the naturally perennial streams that reach the Powder River originate in the Bighorn Mountains. In contrast, streams originating in lower portions of the basin are typically ephemeral and flow only in response to snowmelt or rainfall events unless they receive discharge water from point sources.

The Powder River Basin is composed of two level III and six level IV ecoregions ([Chapman et al., 2003](#)). The western portion of the basin includes alpine zone, granitic subalpine zone, and dry mid-elevation sedimentary mountains of the Bighorn Mountain Range within the Bighorn National Forest. The alpine zone is characterized by high precipitation and rockland, talus, tundra and glacial lakes. Vegetation consists mostly of forbs, sedges, and grasses. This ecoregion transitions to the lower elevation granitic subalpine zone, a region which was once covered in sedimentary rock, but now has exposed granite cores following natural erosion. Vegetation consists of mixed forest with an understory of shrubs and grasses. The mountains ultimately transition to the steep gradient dry mid-elevation mountains, consisting of shale foothills, limestone bluffs, sandstone flatirons and forested canyons. Forested areas are patchy due to low precipitation and are dominated by shrubs and grasses. Land uses in the Bighorn Mountains include livestock grazing, wildlife habitat, and recreation. The remainder of the basin consists of the lower elevation semiarid Northwestern Great Plains. Soils in this ecoregion consist mostly of shale and sandstone and are often alkaline. Located to the northwest of the City of Casper, the Casper Arch is a transitional area between the Wyoming Basin and the Northwestern Great Plains. The Powder River Basin occupies most of the remainder of the basin with occasional outcrops of the Pine Scoria Hills. Land uses in the basin include coal mining, oil and gas production, livestock grazing, recreation, and wildlife habitat. Wohl et. al. (2007) reported that many streams within the Bighorn National Forest have been substantially impacted by cattle grazing, irrigated crop production, flow regulation and diversion, and timber harvest.

CBM production in the Powder River Basin began in the late 1990s, peaked in July, 2009 and steadily declined since. According to WYPDES, approximately 483 CBM permits, including 3,823 outfalls were present in the Powder River Basin during 2009, whereas approximately 214 permits and 1651 outfalls were present as of August, 2014

For more information about water quality activities being led by local conservation districts in the Powder River Basin, please see the "Powder River Basin" tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

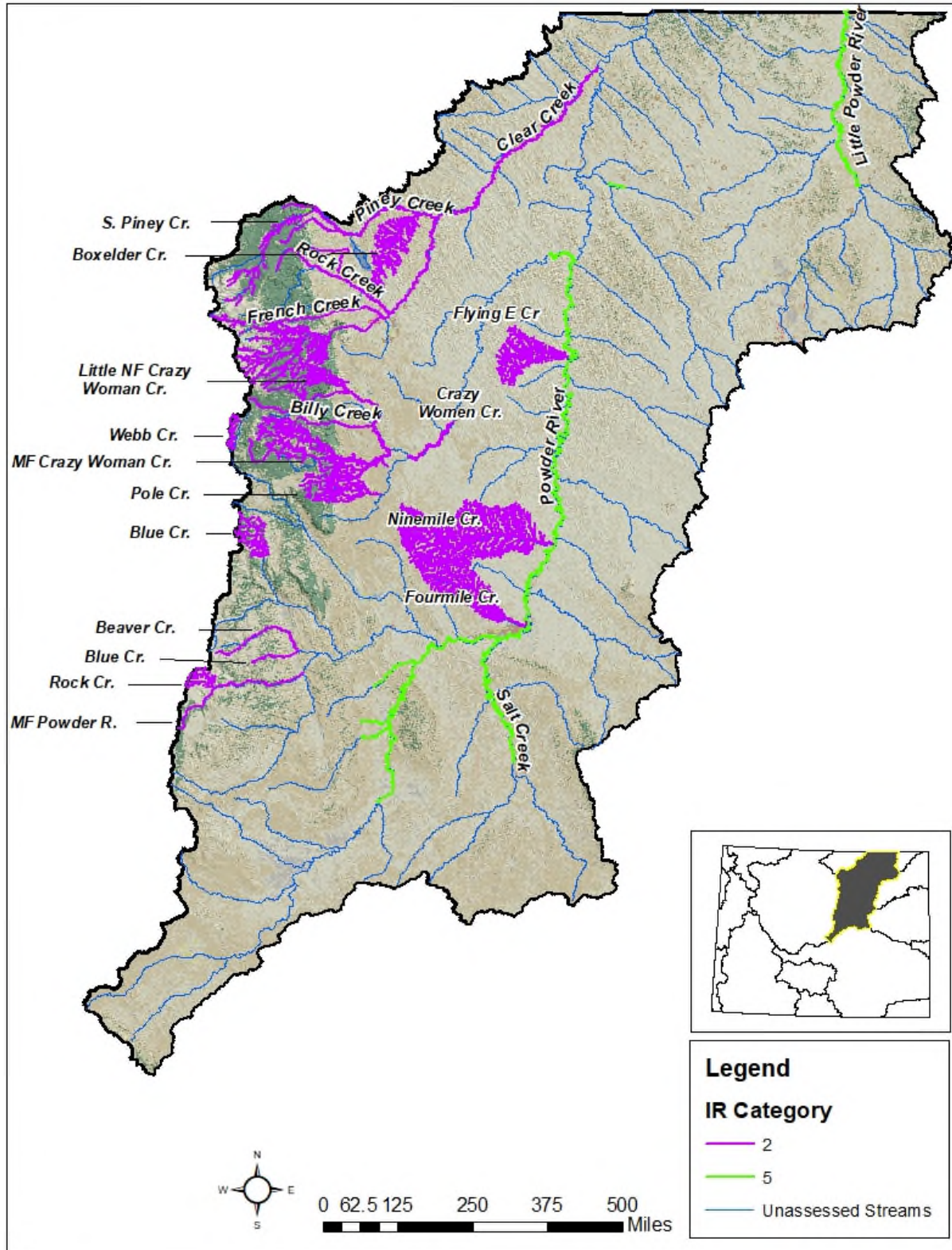


Figure 25. Powder River Basin – Location of Assessed Lakes and Streams.

Assessed Lakes and Streams in the Powder River Basin

Of the total 29,385 miles of perennial, intermittent, and ephemeral streams and 17,192 acres of lakes/ponds and reservoirs in the Powder River Basin, assessments resulting in use support determinations have been completed on 8 percent of the streams (**Figure 26**). No lakes have been assessed in the Powder River Basin.

The majority (86 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 14 percent in IR Category 5).

Summaries are provided in **Figure 26** and **Table 17**.

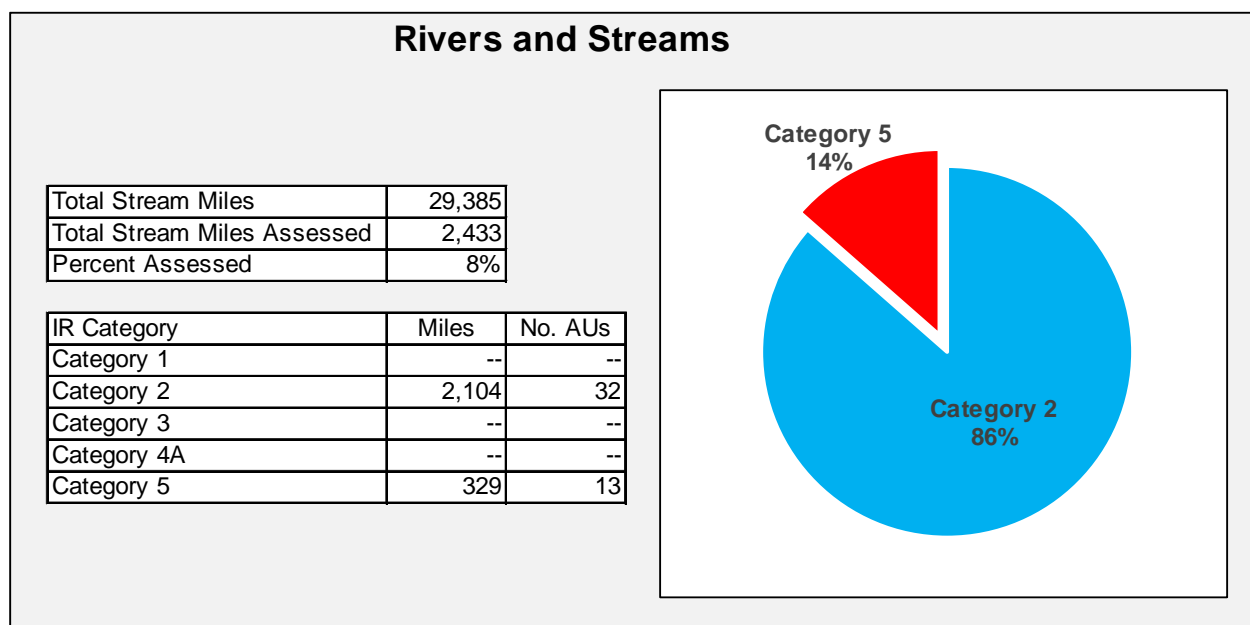


Figure 26. Powder River Basin – Summary Statistics.

Table 17. Assessed Lakes and Streams in the Powder River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Rock Creek	WYPR100902010101_01	Powder	2AB	26.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Middle Fork Powder River	WYPR100902010102_01	Powder	1	26.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beaver Creek	WYPR100902010202_00	Powder	2AB	19 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Blue Creek	WYPR100902010202_01	Powder	2AB	8.8 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beartrap Creek	WYPR100902010206_01	Powder	2AB	48.79 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Webb Creek	WYPR100902010301_01	Powder	2AB	17.8 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Ninemile Creek	WYPR100902020100_01	Powder	3B	543.7 Miles	2005	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Powder River	WYPR100902020102_00	Powder	2AB WW	15.9 Miles	2000	5	NA	--	Not	NA	NA	NA	NA	NA	Not	NA	NA
Powder River	WYPR100902020103_01	Powder	2AB WW	19.3 Miles	2010	5	NA	--	Not	NA	NA	Not	NA	NA	Not	NA	NA
Fourmile Creek	WYPR100902020104_01	Powder	3B	174.9 Miles	2005	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Powder River	WYPR100902020600_01	Powder	2AB WW	100.6 Miles	2010	5	NA	--	Not	NA	NA	Not	NA	NA	Not	NA	NA
Flying E Creek	WYPR100902020602_01	Powder	3B	141.6 Miles	2003	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--

Table 17. Assessed Lakes and Streams in the Powder River Basin.

Waterbody Name	Assessment Unit ID	Basin	Classes	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Middle Prong Wild Horse Creek	WYPR100902020808_01	Powder	3B	4.7 Miles	2003	2	NA	--	--	--	NA	--	Full	NA	NA	NA	--
South Fork Powder River	WYPR100902030400_01	Powder	2C	47.2 Miles	2007	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	--
Willow Creek	WYPR100902030403_01	Powder	2AB	10.5 Miles	2007	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Posey Creek	WYPR100902030404_01	Powder	3B	8 Miles	2007	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Murphy Creek	WYPR100902030407_01	Powder	3B	12.2 Miles	2007	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Salt Creek	WYPR100902040300_01	Powder	2C	45.3 Miles	1998	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	--
North Fork Crazy Woman Creek	WYPR100902050100_01	Powder	2AB	22.6 Miles	2014	2	Full	Full	--	--	Full	Full	NA	NA	Full	Full	Full
Pole Creek	WYPR100902050101_01	Powder	2AB	17.5 Miles	2002	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North Fork Crazy Woman Creek	WYPR100902050102_01	Powder	2AB	28 Miles	2014	2	II	II	NA	--	II	Full	NA	NA	II	II	Full
Little North Fork Crazy	WYPR100902050102_02	Powder	2AB	55.5 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Table 17. Assessed Lakes and Streams in the Powder River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Woman Creek																	
Billy Creek	WYPR100902050103_01	Powder	2AB	13.4 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Doyle Creek	WYPR100902050106_01	Powder	2AB	10.4 Miles	2002	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Poison Creek	WYPR100902050107_01	Powder	2AB	70 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Middle Fork Crazy Woman Creek	WYPR100902050108_00	Powder	2AB	142.2 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beaver Creek	WYPR100902050110_01	Powder	2AB	66 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pole Creek	WYPR100902050110_02	Powder	2AB	25.3 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Crazy Woman Creek	WYPR100902050204_01	Powder	2AB	23.6 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Crazy Woman Creek	WYPR100902050305_01	Powder	2AB	9.2 Miles	2007	5	NA	NA	--	--	NA	Not	NA	NA	NA	NA	NA
Clear Creek	WYPR100902060000_01	Powder	2AB	338 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Table 17. Assessed Lakes and Streams in the Powder River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Hunter Creek	WYPR100902060103_01	Powder	2AB	2.7 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
French Creek	WYPR100902060106_01	Powder	2AB	22.3 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North Rock Creek	WYPR100902060201_01	Powder	2AB	9.6 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYPR100902060202_01	Powder	2AB	19.3 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Piney Creek	WYPR100902060302_01	Powder	2AB	32.93 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North Piney Creek	WYPR100902060303_01	Powder	2AB	6.4 Miles	2005	2	NA	NA	--	--	NA	NA	Full	NA	NA	NA	NA
Dalton Ditch	WYPR100902060303_02	Powder	3B	0.3 Miles	2005	5	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Piney-Cruse Ditch	WYPR100902060303_03	Powder	3B	2.2 Miles	2005	5	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Dalton Ditch	WYPR100902060303_04	Powder	3B	0.04 Miles	2014	5	--	--	--	--	--	--	Not	--	--	--	--
Little Piney Creek	WYPR100902060304_01	Powder	2AB	14 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North and South Fork Shell Creek	WYPR100902060305_01	Powder	3B	14.4 Miles	2008	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Piney Creek	WYPR100902060403_01	Powder	2AB	30.8 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Table 17. Assessed Lakes and Streams in the Powder River Basin.

Waterbody Name	Assessment Unit ID	Basin	Classes	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Boxelder Creek	WYPR100902060404_01	Powder	3B	126.6 Miles	2003	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Little Powder River	WYPR100902080500_01	Powder	2AB	58.7 Miles	2001	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA

6.3.11 Snake River Basin

The Snake River Basin drains 6,179 mi² in Wyoming. Major tributaries to the Snake River include the Gros Ventre River, Hoback River, Greys River, and Salt River. The headwaters of the Snake River are located in Yellowstone National Park near Two Ocean Plateau where it flows southeast into Grand Teton National Park and into Jackson Lake. The river then flows out of Jackson Lake, through Jackson Hole, and enters Palisades Reservoir near the WY/ID border. The Snake River ultimately confluences with the Columbia River in Washington.

The Snake River Basin in Wyoming consists solely of the Middle Rockies level III ecoregion ([Chapman et al., 2003](#)). This ecoregion is characterized by high mountains covered by open canopy coniferous forests. The basin is bordered by the Teton, Snake River, Gros Ventre, Wyoming, and Salt River Mountain Ranges. Mountains transition to sparsely wooded or shrub/grassland foothills. The basin also includes the mid-elevation sedimentary mountains, alpine zone, Yellowstone plateau, granitic subalpine zone, sedimentary subalpine zone, high elevation valleys, partly forested mountains and dissected plateaus and Teton basin level IV ecoregions. The northern portion of the basin consists of the volcanically active Yellowstone Plateau, which is part of the Greater Yellowstone Ecosystem. Soils are dry, coarsely textured and nutrient poor and support coniferous and shrubland forest. Jackson Hole and Star Valley are in the lower elevations of the basin, and both of these areas are considered high elevation valleys with wet riparian meadows and marshes surrounded by upland terraces, alluvial fans, and low elevation foothills. Mid-elevation sedimentary mountains make up much of the middle and lower portions of the basin. These mountains are composed of marine deposits, including limestone, dolomite, sandstone and shale, which are water soluble and result in higher nutrient concentrations in streams. Partially forested mountains make up the remainder of the middle and lower portions of the basin. These mountains are located within the Snake River and Salt River Mountain Ranges along the Wyoming/Idaho border. These mountains are dry and steep with shallow soils that limit the extent to which trees can persist. Therefore, vegetation mostly consists of an even mix of conifers, shrubs and grasses. The alpine zones of these mountains are glaciated areas above timberline that consist of open rocky areas, talus slopes, alpine tundra and glacial basins. The alpine zone receives larger amounts of precipitation as compared to the lower elevation surrounding mountains. The mid-elevation mountains of these ranges have moist sedimentary geology and are characterized by a spruce-fir forest broken by grassy slopes. Lastly, a small portion of the dissected plateaus and Teton Basin ecoregion is situated on the western slope of the Teton Mountain Range. This ecoregion is a high elevation, cold valley, with productive soils and irrigated croplands. Common land uses within the Snake River Basin include wildlife habitat, recreation, logging, mining, and livestock grazing.

Jackson Lake and Palisades Reservoir are both part of the USBOR's Minidoka Project. This large irrigation project was initiated in 1902 and was completed in 1907 for the purpose of irrigating lands adjacent to the Snake River in southern Idaho and northwestern Wyoming. The project includes seven dams, 1,600 miles of canals, 4,000 miles of laterals, and provides hydropower and water for irrigating more than 1,000,000 acres annually. Palisades Reservoir stores approximately 650,000 acre-feet of water and is used for irrigation, recreation, flood control, and hydropower. Jackson Lake Dam was completed in 1916 and stores approximately 847,000 acre-feet of water. A portion of the water stored in Jackson Lake is used for irrigation in the Minidoka Project.

For more information about water quality activities being led by local conservation districts in the Snake River Basin, please see the "Snake River Basin" tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

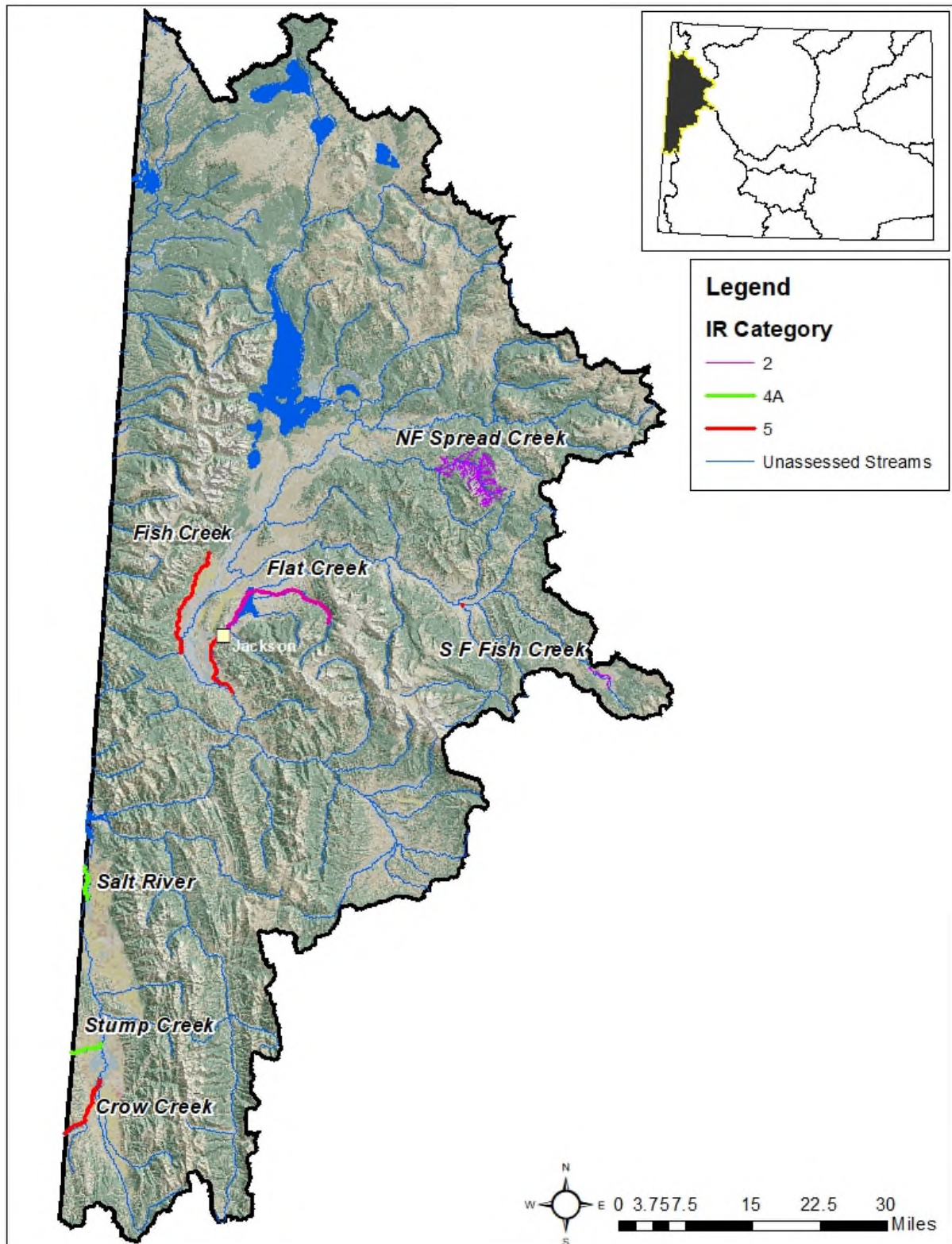


Figure 27. Snake River Basin – Assessed Lakes and Streams.

Assessed Lakes and Streams in the Snake River Basin

Of the total 11,241 miles of perennial, intermittent, and ephemeral streams and 52,084 acres of lakes/ponds and reservoirs in the Snake River Basin, assessments resulting in use support determinations have been completed on 1 percent of the streams (**Figure 28**). No lakes have been assessed in the Snake River Basin.

The majority (65 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 27 percent in IR Category 5) or have been addressed by TMDLs (i.e., 8 percent in IR Category 4A).

Summaries are provided in **Figure 28** and **Table 18**.

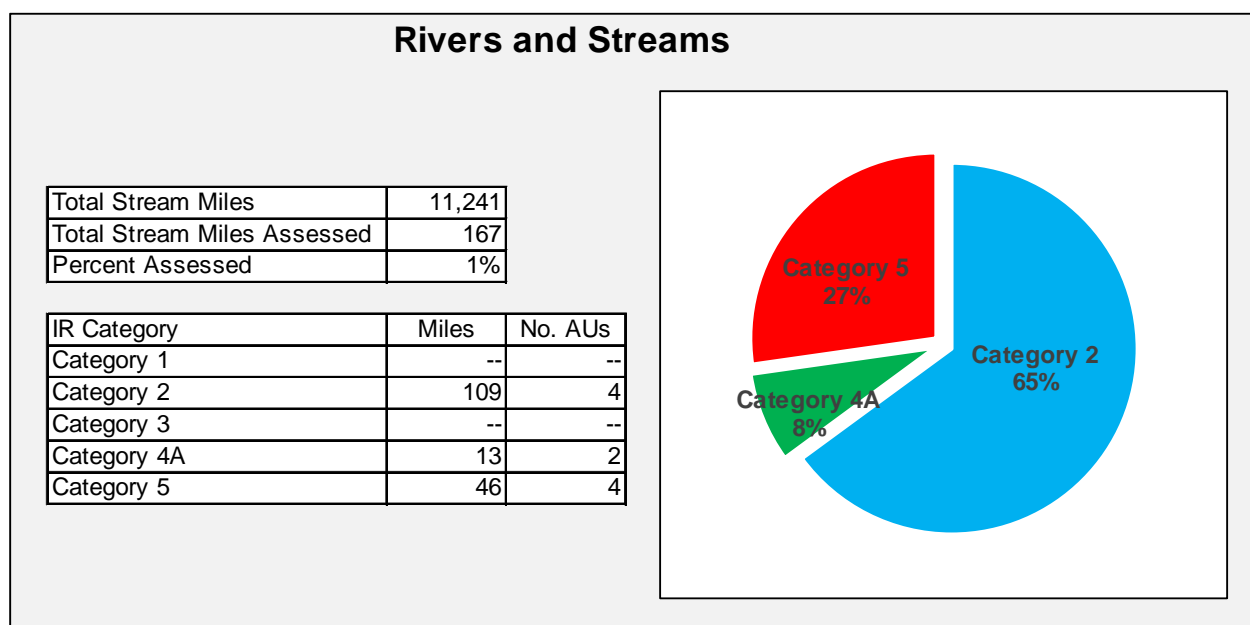


Figure 28. Snake River Basin – Summary Statistics

Table 18. Assessed Lakes and Streams in the Snake River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Fork Spread Creek	WYSR170401010503_01	Snake	2AB	78.4 Miles	2008	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Fork Fish Creek	WYSR170401020102_01	Snake	2AB	5.7 Miles	2018	2	Full	Full	--	--	Full	Full	NA	NA	Full	Full	NA
Fish Creek	WYSR170401030101_01	Snake	2AB	18.6 Miles	2020	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Flat Creek	WYSR170401030205_01	Snake	2AB	8 Miles	1999	5	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Flat Creek	WYSR170401030205_02	Snake	2AB	3.4 Miles	2020	5	NA	NA	--	NA	NA	NA	Full	NA	Not	NA	NA
Flat Creek	WYSR170401030205_03	Snake	2AB	21.4 Miles	2020	2	NA	NA	--	NA	NA	NA	Full	NA	NA	NA	NA
Clark's Draw	WYSR170401030305_01	Snake	3B	3.2 Miles	2020	2	NA	--	--	--	NA	--	Full	NA	NA	NA	--
Crow Creek	WYSR170401050102_01	Snake	2AB	15.6 Miles	2014	5	NA	Not	NA	--	NA	NA	NA	NA	Not	NA	NA
Stump Creek	WYSR170401050203_01	Snake	2AB	5.6 Miles	2007	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Salt River	WYSR170401050309_01	Snake	2AB	7.5 Miles	2007	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA

6.3.12 South Platte River Basin

The South Platte River Basin in Wyoming drains approximately 3,623 mi² and consists of high plains and southern Rockies level III ecoregions ([Chapman et al., 2003](#)). The eastern two thirds of the basin contains rolling high plains and tablelands and typically receives low precipitation. There are three level IV ecoregions within the high plains, including flat to rolling plains and pine bluffs and hills to the east and relief plains within the central part of the basin. The Laramie Mountain Range contains two level IV ecoregions; these include the foothills shrublands and mid-elevation forests and shrublands. The higher precipitation that occurs in the Laramie Mountains promotes a more diverse plant community than lower elevation areas in the basin. The foothills shrubland contains prairie grasses, sagebrush, mountain mahogany inset with aspen, pine and fir trees. The mid-elevation forests and shrublands are dominated by forests of aspen, pine and fir trees broken by expanses of shrublands. Streams are generally perennial in the mountains, but can be intermittent in the plains as they flow southeast into Nebraska and Colorado. Primary land uses include dryland and irrigated farming, livestock grazing, wildlife habitat, recreation, and logging.

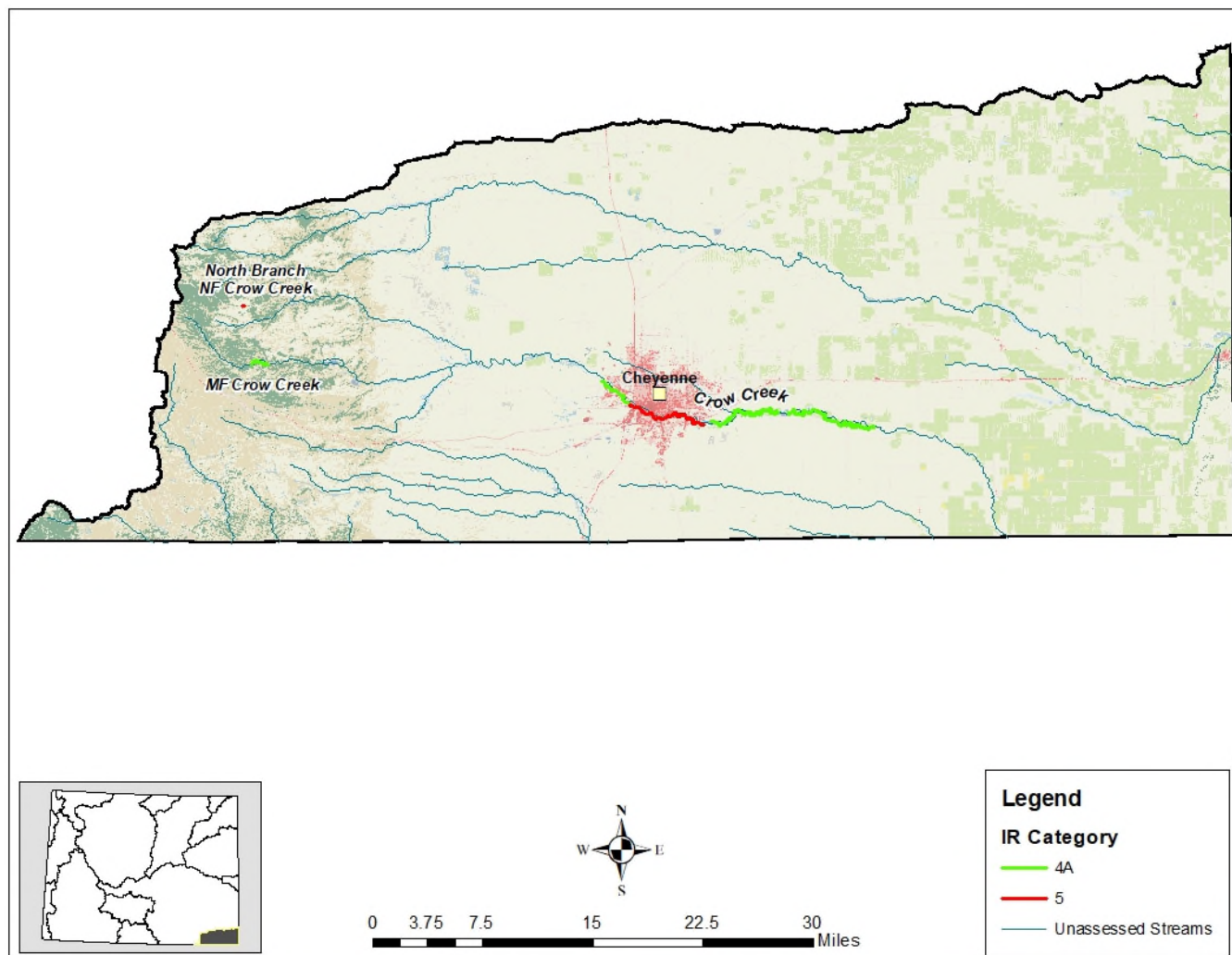


Figure 29. South Platte River Basin – Assessed Lakes and Streams.

Assessed Lakes and Streams in the South Platte River Basin

Of the total 4,940 miles of perennial, intermittent, and ephemeral streams and 2,123 acres of lakes/ponds and reservoirs in the South Platte River Basin, assessments resulting in use support determinations have been completed on 1 percent of the streams (**Figure 30**). No lakes have been assessed in the South Platte River Basin.

None of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The assessed stream miles are impaired (i.e., 25 percent in IR Category 5) or have been addressed by TMDLs (i.e., 75 percent in IR Category 4A).

Summaries are provided in **Figure 30** and **Table 19**.

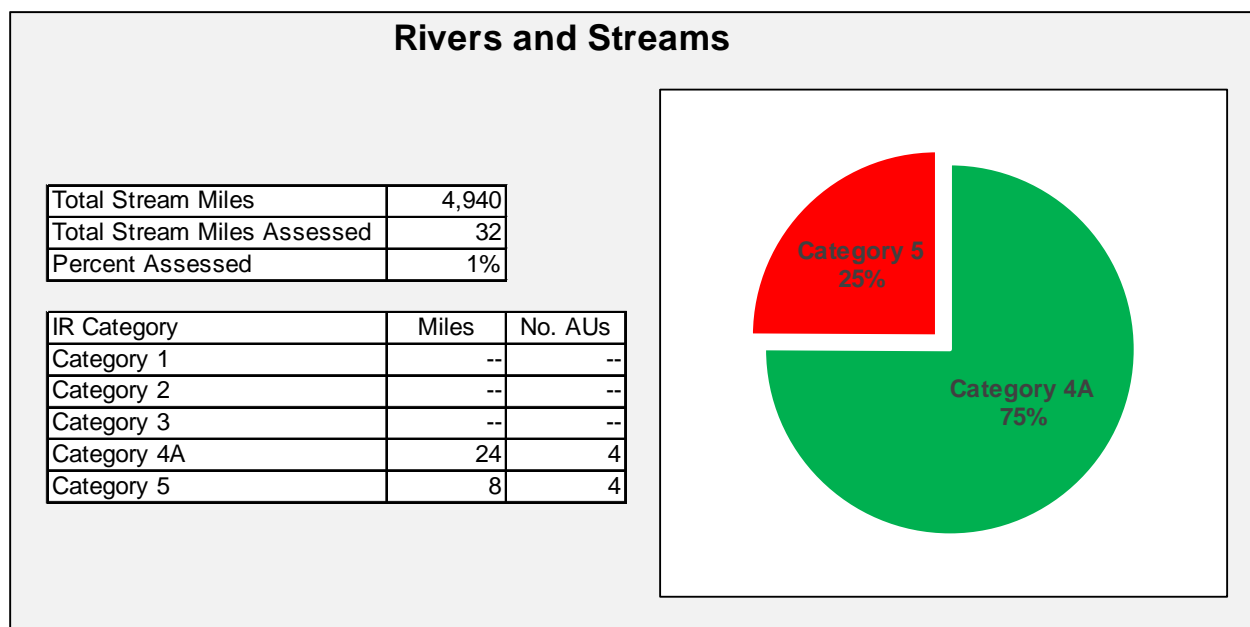


Figure 30. South Platte River Basin – Summary Statistics

For more information about water quality activities being led by local conservation districts in the South Platte River Basin, please see the “South Platte River Basin” tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

Table 19. Assessed Lakes and Streams in the South Platte River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Middle Fork Crow Creek	WYSP101900090101_01	South Platte	2AB	1.5 Miles	2008	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
North Branch North Fork Crow Creek	WYSP101900090104_01	South Platte	2AB	0.2 Miles	2007	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crow Creek	WYSP101900090107_01	South Platte	2AB	9.4 Miles	2008	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crow Creek	WYSP101900090107_02	South Platte	2C	3.7 Miles	2009	5	NA	--	--	Not	NA	--	Not	NA	Not	NA	NA
Crow Creek	WYSP101900090107_03	South Platte	2C	0.7 Miles	2009	5	NA	--	--	Not	NA	--	Not	NA	Not	NA	--
Crow Creek	WYSP101900090107_04	South Platte	2AB	3.4 Miles	2009	5	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Crow Creek	WYSP101900090107_05	South Platte	2AB	3.1 Miles	2010	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crow Creek	WYSP101900090203_01	South Platte	2C	10.1 Miles	2009	4A	NA	--	--	NA	NA	--	Not	NA	NA	NA	--

6.3.13 Tongue River Basin

The Tongue River Basin in Wyoming drains approximately 2,533 mi² and consists of the Middle Rockies and Northwestern Great Plains level III ecoregions ([Chapman et al., 2003](#)). The Middle Rockies ecoregion occupies the western one third of the basin, and includes Alpine Zone, Sedimentary Subalpine Zone, Granitic Subalpine Zone and Dry Mid-Elevation Sedimentary Mountains level IV ecoregions. The Alpine Zone receives high precipitation and is composed of high elevation rocky areas of talus, alpine tundra, and glacial basins. The Alpine Zone transitions to the lower elevation sedimentary subalpine and granitic subalpine zones. The sedimentary subalpine zone contains fine sedimentary soils. Vegetation consists of pine, spruce and fir forests broken by open grassy slopes. The Granitic Subalpine Zone contains coarse granitic and shallow bedrock which allow better moisture retention than the sedimentary subalpine zone. Vegetation consists of a dense canopy of pine, spruce and fir and a sparse understory of shrubs, forbs, and grasses. The Dry Mid-Elevation Sedimentary Mountains form the lower elevation eastern edge of the Big Horn Mountains. These mountains are a mixture of hills, bluffs, flatirons, and canyons of sedimentary rock. The low precipitation has created an open canopy forest of ponderosa pine, mountain mahogany and shrubs. The basin then transitions from the mountains to the Pryor-Bighorn Foothills, Montana Central Grasslands and Mesic Dissected Plains ecoregions making up the eastern two-thirds of the basin. The Pryor-Bighorn Foothills are composed of semi-arid sedimentary terraces, alluvial fans and terraces. Vegetation in this ecoregion consists mostly of grasses, with some scattered ponderosa pine and mountain mahogany. The Montana Central Grasslands consist of clay soils and vegetation dominated by grasses. The Mesic Dissected Plains take up approximately the eastern half of the basin. This ecoregion contains steep grassy hills and alluvial valleys. Perennial streams originating in the Big Horn Mountains and relatively high precipitation have allowed riparian vegetation such as boxelder, snowberry, serviceberry, and bullberry to colonize riparian corridors. Common land uses in the basin include irrigated agriculture, livestock grazing, wildlife habitat, recreation, logging, and mining.

Montana adopted electrical conductivity and sodium adsorption ratio criteria for the Tongue River in 2006. As of Montana DEQ's 2016 Water Quality Integrated Report, the lowermost segment of the Tongue River in Montana is identified as impaired for these two parameters (Twelve Mile Dam to the confluence with the Yellowstone River) and they have begun TMDL development for the portion of the [Tongue River within Montana](#).

For more information about water quality activities being led by local conservation districts in the Tongue River Basin, please see the "Tongue River Basin" tab in the WACD 2018 Watershed Progress Report Story Map at <http://www.conservewy.com/WATERSHEDREPORT18.htm>.

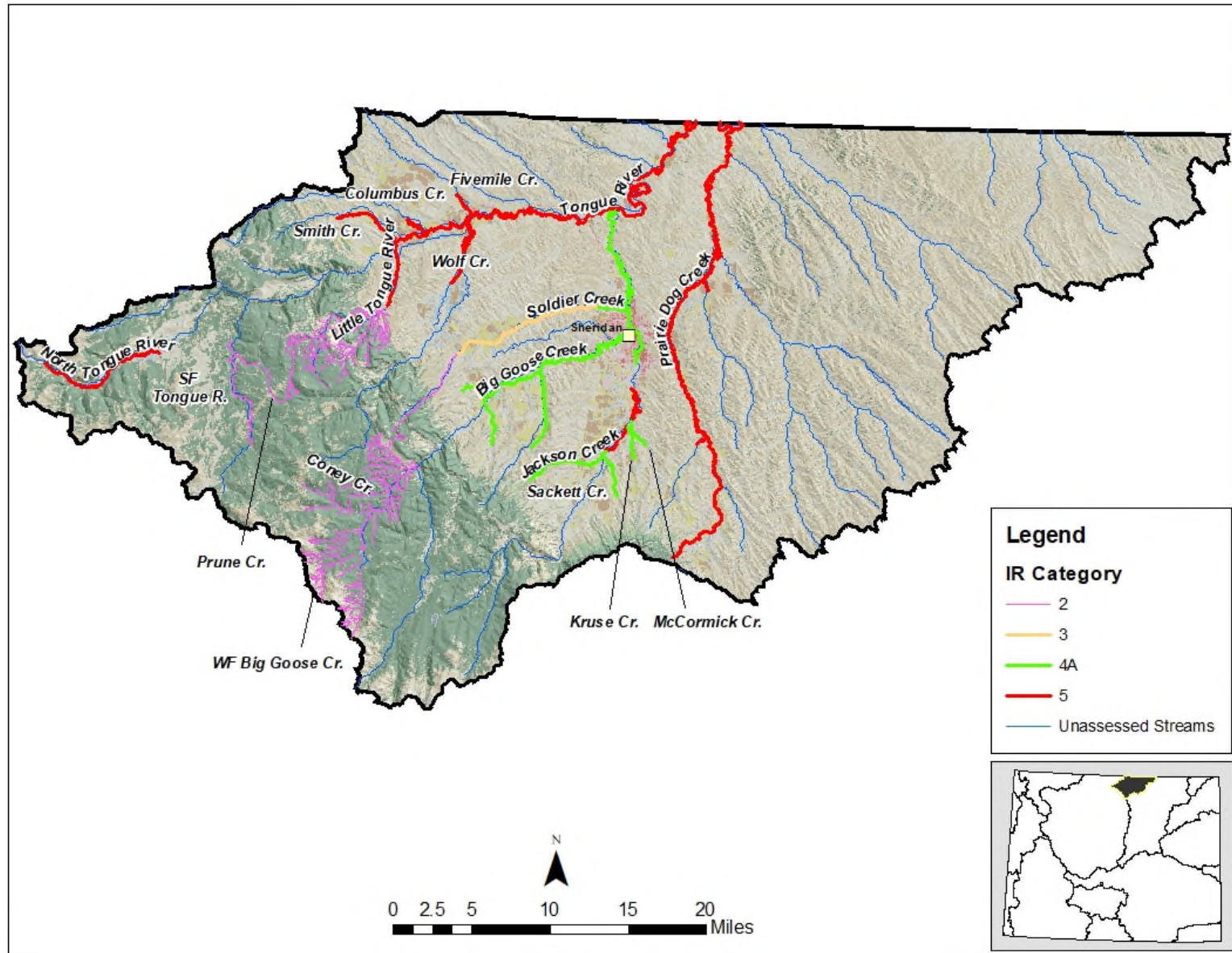


Figure 31. Tongue River Basin – Assessed Lakes and Streams.

Assessed Lakes and Streams in the Tongue River Basin

Of the total 4,491 miles of perennial, intermittent, and ephemeral streams and 3,436 acres of lakes/ponds and reservoirs in the Tongue River Basin, assessments resulting in use support determinations have been completed on 10 percent of the streams (**Figure 32**). No lakes have been assessed in the Tongue River Basin.

Almost half (47 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles are impaired (i.e., 34 percent in IR Category 5), have been addressed by TMDLs (i.e., 15 percent in IR Category 4A), or have insufficient information to determine use support (i.e., 4 percent in IR Category 3).

Summaries are provided in **Figure 32** and **Table 20**.

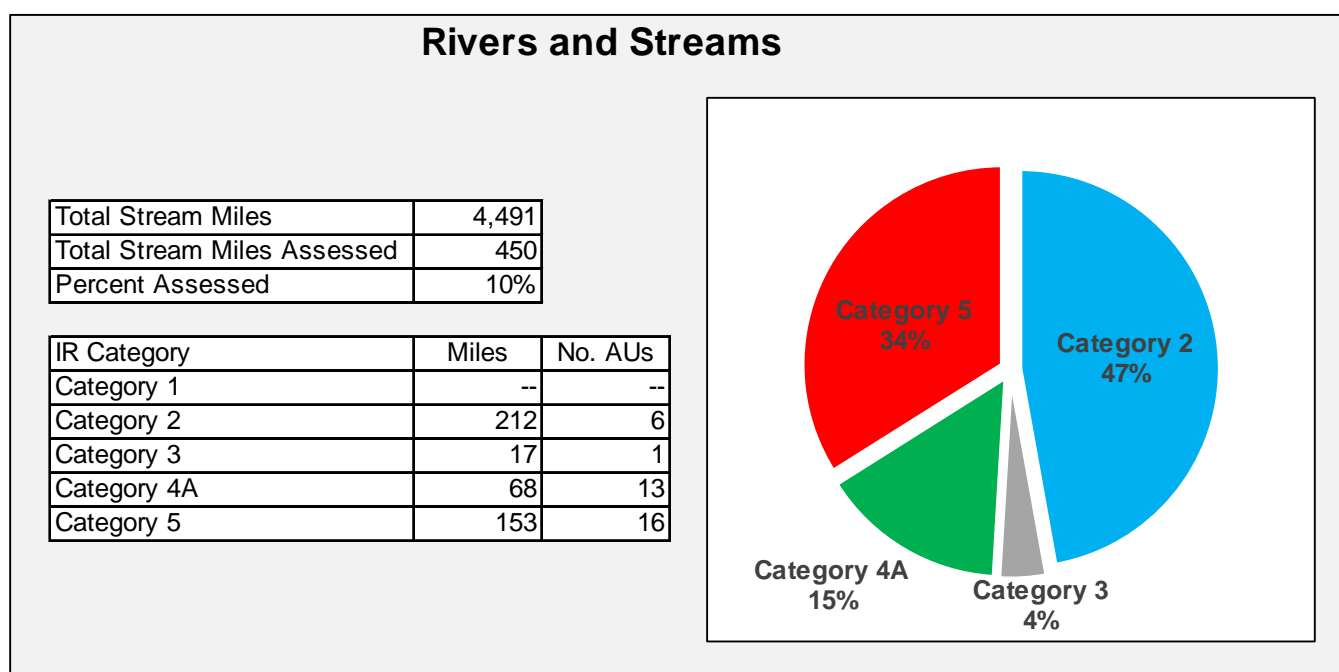


Figure 32. Tongue River Basin – Summary Statistics.

Table 20. Assessed Lakes and Streams in the Tongue River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Tongue River	WYTR100901010101 01	Tongue	1	11.1 Miles	2003	5	NA	NA	NA	--	NA	NA	Not	NA	NA	NA	NA
Prune Creek	WYTR100901010104 01	Tongue	2AB	5.4 Miles	2002	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Fork Tongue River	WYTR100901010104 02	Tongue	1	11.4 Miles	2009	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Columbus Creek	WYTR100901010106 01	Tongue	2AB	3.1 Miles	2001	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Smith Creek	WYTR100901010106 02	Tongue	2AB	5.8 Miles	2001	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Little Tongue River	WYTR100901010107 01	Tongue	2AB	79 Miles	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Tongue River	WYTR100901010107 02	Tongue	2AB	4.8 Miles	2006	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Fivemile Creek	WYTR100901010108 01	Tongue	3B	2.1 Miles	2001	5	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Tongue River	WYTR100901010108 02	Tongue	2AB	7.5 Miles	2018	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Wolf Creek	WYTR100901010110 01	Tongue	2AB	10.6 Miles	2008	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA

Table 20. Assessed Lakes and Streams in the Tongue River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Tongue River	WYTR100901010111_01	Tongue	2AB	13.5 Miles	2009	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Tongue River	WYTR100901010111_02	Tongue	2AB	4.7 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
West Fork Big Goose Creek	WYTR100901010203_01	Tongue	2AB	95.5 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Coney Creek	WYTR100901010203_02	Tongue	2AB	13.54 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Park Creek	WYTR100901010204_01	Tongue	2AB	2.8 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Rapid Creek	WYTR100901010204_02	Tongue	2AB	3.2 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Big Goose Creek	WYTR100901010205_01	Tongue	2AB	19.2 Miles	2005	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Beaver Creek	WYTR100901010205_02	Tongue	3B	6.5 Miles	1999	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Sackett Creek	WYTR100901010207_01	Tongue	2AB	3.1 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Jackson Creek	WYTR100901010207_02	Tongue	2AB	6.4 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Little Goose Creek	WYTR100901010207_03	Tongue	2AB	3 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA

Table 20. Assessed Lakes and Streams in the Tongue River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Little Goose Creek	WYTR100901010208_01	Tongue	2AB	3.5 Miles	2005	4A	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
McCormick Creek	WYTR100901010208_02	Tongue	3B	2.2 Miles	2003	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Kruse Creek	WYTR100901010208_03	Tongue	3B	2.5 Miles	1999	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Little Goose Creek	WYTR100901010208_04	Tongue	2AB	5.3 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Goose Creek	WYTR100901010209_01	Tongue	2AB	12.7 Miles	2005	4A	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Soldier Creek	WYTR100901010209_02	Tongue	2AB	3.1 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Soldier Creek	WYTR100901010209_03	Tongue	2AB	17 Miles	2003	3	NA	NA	--	--	NA	NA	NA	NA	II	NA	NA
Soldier Creek	WYTR100901010209_04	Tongue	2AB	7.3 Miles	2009	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Tongue River	WYTR100901010301_01	Tongue	2AB	22.1 Miles	2001	5	NA	Not	--	--	NA	NA	NA	NA	NA	NA	NA
Prairie Dog Creek	WYTR100901010400_01	Tongue	2AB	47.2 Miles	2010	5	NA	Not	--	--	NA	Not	Not	NA	Full	NA	NA
Meade Creek	WYTR100901010401_01	Tongue	2AB	1.1 Miles	2010	5	NA	NA	--	--	NA	Not	Not	NA	NA	NA	NA

Table 20. Assessed Lakes and Streams in the Tongue River Basin

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Prairie Dog Creek	WYTR100901010401_02	Tongue	2AB	4 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Prairie Dog Creek	WYTR100901010402_01	Tongue	2AB	6.7 Miles	2010	5	NA	Not	--	--	NA	Not	Not	NA	Full	NA	NA
Wildcat Creek	WYTR100901010402_02	Tongue	3B	0.8 Miles	2010	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Dutch Creek	WYTR100901010405_01	Tongue	3B	1.9 Miles	2010	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--

6.3.14 Yellowstone River Basin

The Yellowstone River Basin drains approximately 6,618 mi² in northwest Wyoming. The headwaters of the Yellowstone River are located along the western edge of the Teton Wilderness Area within the Absaroka Mountain Range. The river flows northwest into Yellowstone National Park near Bridger Lake, then continues approximately 15 miles to its confluence with the southeastern arm of Yellowstone Lake. The river flows from Yellowstone Lake's outlet on the north side of the lake and continues flowing north to the Wyoming/Montana border. The river ultimately flows northeast across Montana and conflues with the Missouri River near the Montana/North Dakota border.

The Yellowstone River Basin consists of two level III ecoregions, including the Middle Rockies and Wyoming Basin ([Chapman et al., 2003](#)). The Middle Rockies make up the majority of the basin, whereas the Wyoming Basin represents a relatively small portion of the easternmost portion of the basin. The Middle Rockies consist of high mountains covered by coniferous forests. In contrast, the Wyoming Basin consists of a broad intermountain arid basin. The Middle Rockies in this basin is ecologically diverse, containing Alpine Zone, Absaroka-Gallatin Volcanic Mountains, Yellowstone Plateau, Granitic Subalpine Zone, High Elevation Valleys and Absaroka Volcanic and Sedimentary Subalpine Zones Level IV ecoregions. The Yellowstone Plateau occurs across approximately the western half of the basin. This area contains low mountains composed mostly of rhyolite, basalt, and tuff. The plateau is still volcanically active, as is evidenced by numerous geysers and mudpots. Mountains are covered in a mixture of Lodgepole pine and Douglas-fir while side slopes contain big sagebrush and other shrubs. The plateau is interrupted by several small high elevation valleys, including those for the Yellowstone (Hayden Valley) and Lamar Rivers and Pelican Creek. These valleys are characterized by wet riparian areas and marshes surrounded by terraces and foothill slopes. These valleys are important habitat for ungulates such as elk and bison. There is a small area of sedimentary subalpine zone in the northwest corner of the basin. This ecoregion is composed of limestone, dolomite, shale and sandstone and vegetation consists of subalpine fir, Engelmann spruce and Lodgepole pine. The central portion of the basin transitions to the Absaroka-Gallatin Volcanic Mountains, which consists of steep sided mountains, ash beds and mud flows. Due to natural geology, streams originating in these mountains are often very turbid following precipitation events and have elevated nutrients. These mountains transition to the higher elevation intermediate Absaroka Volcanic and Granitic Subalpine Zones before terminating in the Alpine Zone. The Absaroka Volcanic ecoregion, occurring in the Absaroka Mountain Range, is relatively narrow in scope due to the erosion of its steep, broken and loosely consolidated cliff faces composed of ash, tuff, basalt and pumice. The Granitic Subalpine Zone occurs in the Beartooth Mountain Range and consists of broad glacial valleys with many lakes. The Alpine Zone is a high precipitation area above treeline and vegetation is limited due to high wind and snow drifting, and largely consists of krummholz (twisted or bent trees) and alpine forbs, sedges and grasses. The east slope of the Beartooth and Absaroka Mountain Ranges transition to the Bighorn and Bighorn Salt Desert Shrub Basins. These ecoregions receive little precipitation and soils are composed of alkaline sedimentary geology such as shale, sandstone and siltstone. Vegetation consists mostly of sagebrush, saltbush greasewood and saltgrass. Common land uses in the Yellowstone Basin include wildlife habitat, livestock grazing, recreation, logging, oil and gas production, and mining.

The riparian areas of Yellowstone National Park have been heavily grazed by elk and/or bison and many water quality concerns have been reported (Houston, 1982; Singer, 1996). For example, historical photos of the lower Lamar River Valley show thick stands of willow, which are very important for stabilizing streambanks. Most of these willows were nearly eradicated because of sustained browsing by wildlife, and as a consequence, considerable bank erosion occurred along the river. With the reintroduction of wolves to Yellowstone National Park, ungulates have been forced to become more mobile, and

consequently spend less time in riparian areas. As a result, riparian vegetation is recovering within Yellowstone National Park (Ripple and Beschta, 2003).



WDEQ WQD staff sampling Clarks Fork.

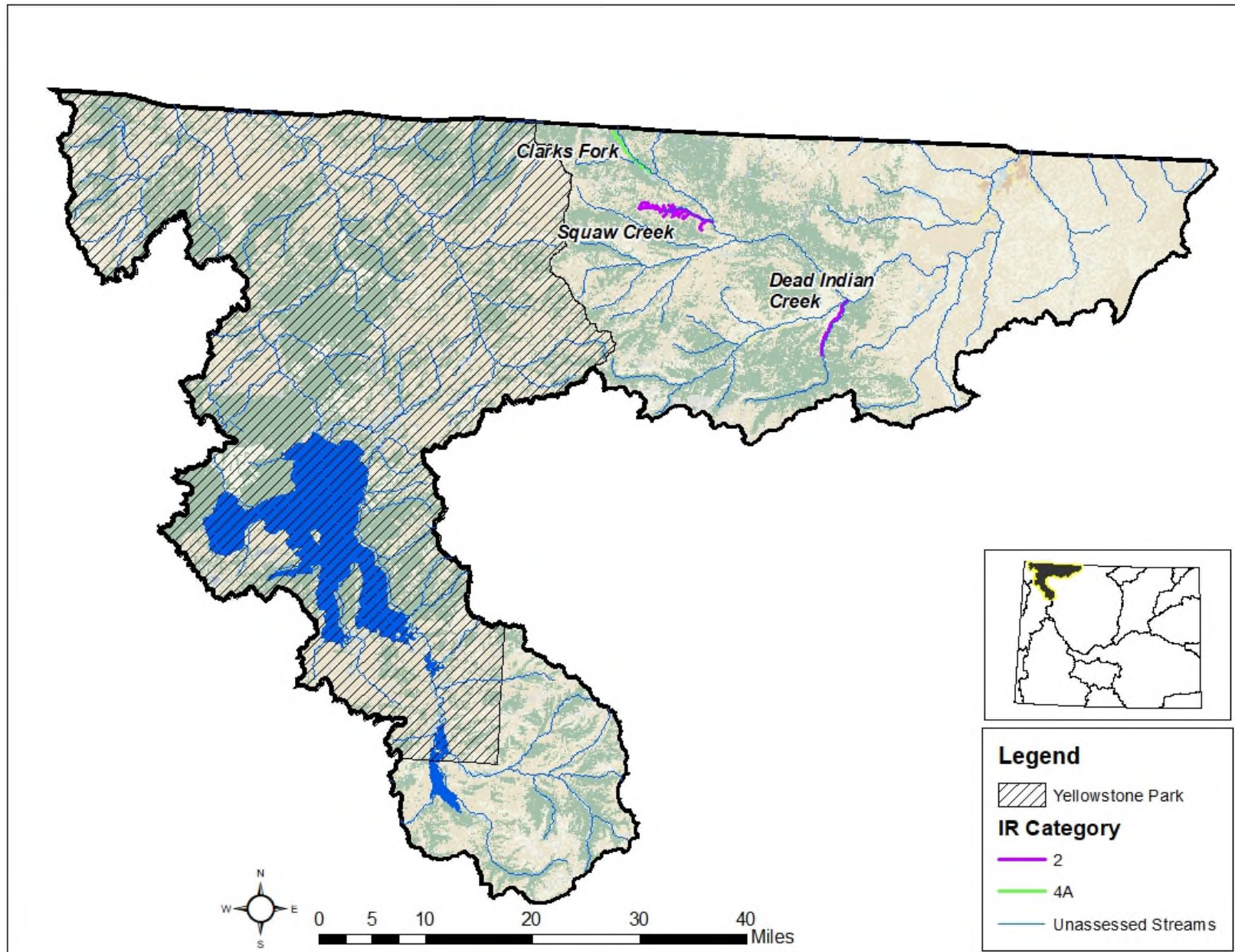


Figure 33. Yellowstone River Basin – Assessed Lakes and Streams.

Assessed Lakes and Streams in the Yellowstone River Basin

Of the total 7,695 miles of perennial, intermittent, and ephemeral streams and 91,684 acres of lakes/ponds and reservoirs in the Yellowstone River Basin, assessments resulting in use support determinations have been completed on less than 1 percent of the streams (**Figure 34**). No lakes have been assessed in the Yellowstone River Basin.

The majority (78 percent) of the assessed stream miles are supporting those uses that have been assessed (i.e., IR Category 2). The remaining stream miles have been addressed by TMDLs (i.e., 22 percent in IR Category 4A).

Summaries are provided in **Figure 34** and **Table 21**.

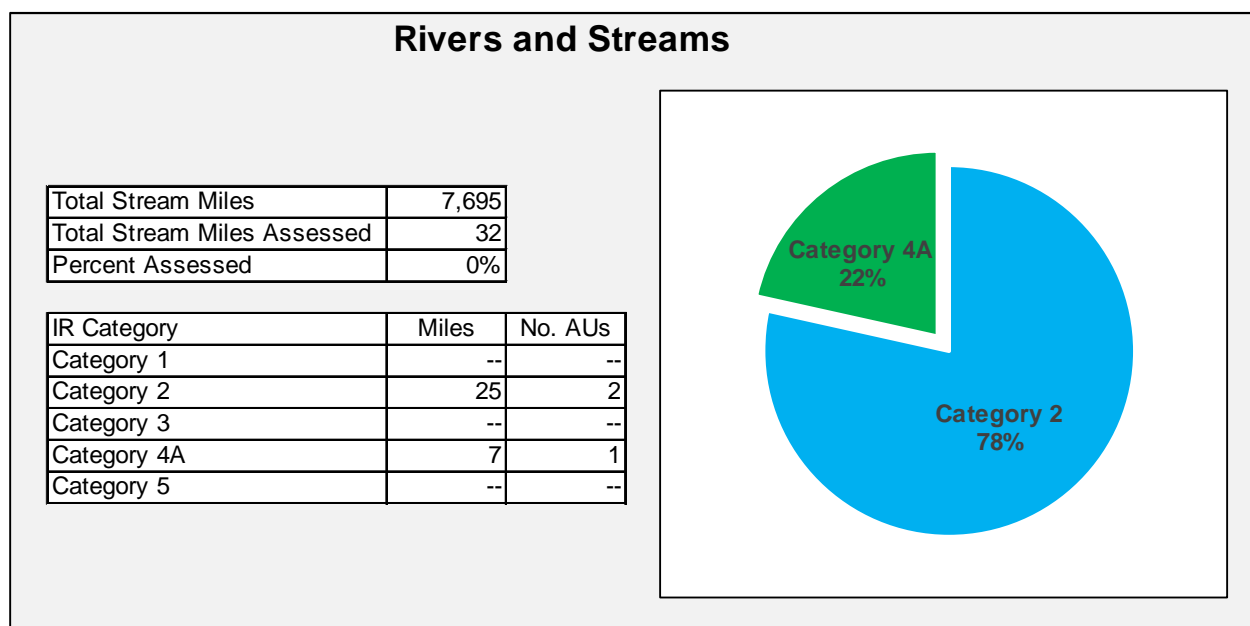


Figure 34. Yellowstone River Basin – Summary Statistics.

Table 21. Assessed Lakes and Streams in the Yellowstone River Basin.

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Clarks Fork Yellowstone River	WYYR100700060101_01	Yellowstone	1	6.8 Miles	1999	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Squaw Creek	WYYR100700060106_01	Yellowstone	2AB	17.9 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Dead Indian Creek	WYYR100700060304_01	Yellowstone	2AB	6.9 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

7 Public Participation

WDEQ/WQD encourages public participation during development and revision of this biennial document. Many entities routinely submit water quality data during WDEQ/WQD's biennial call for data. WDEQ/WQD also provides a 45-day public comment period for the draft Integrated Report and formally responds to comments received prior to finalizing the Integrated Report. Once WDEQ/WQD has reviewed the comments and developed responses, the IR is finalized and released to the public. There is then a two-week period during which the public may contact the WQD Administrator and request a review of the 303(d) List before the Water and Waste Advisory Board in circumstances where there may be objections to waters either included or not included on the list. The Water and Waste Advisory Board will consider the comments and make recommendations to WDEQ. Once the two-week period has lapsed, WDEQ/WQD submits the report to EPA for approval. The public participation process provides an essential component to the development and review of this report. WDEQ/WQD therefore encourages members of the public to participate in the development and review process and recommends that the public contact WDEQ/WQD with any questions.

8 References

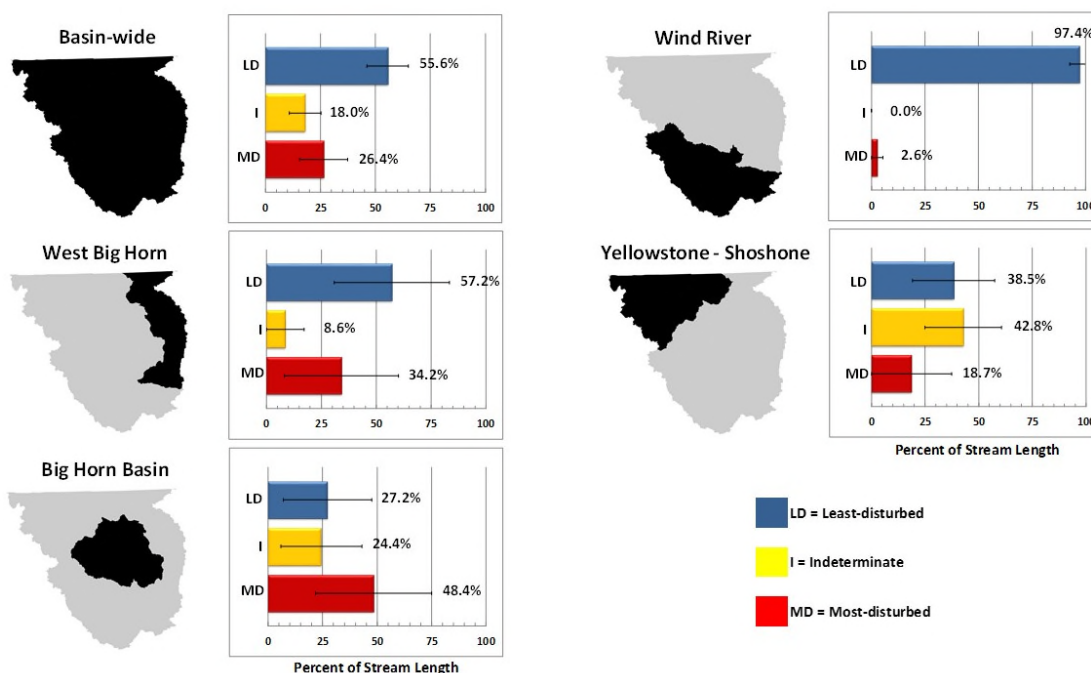
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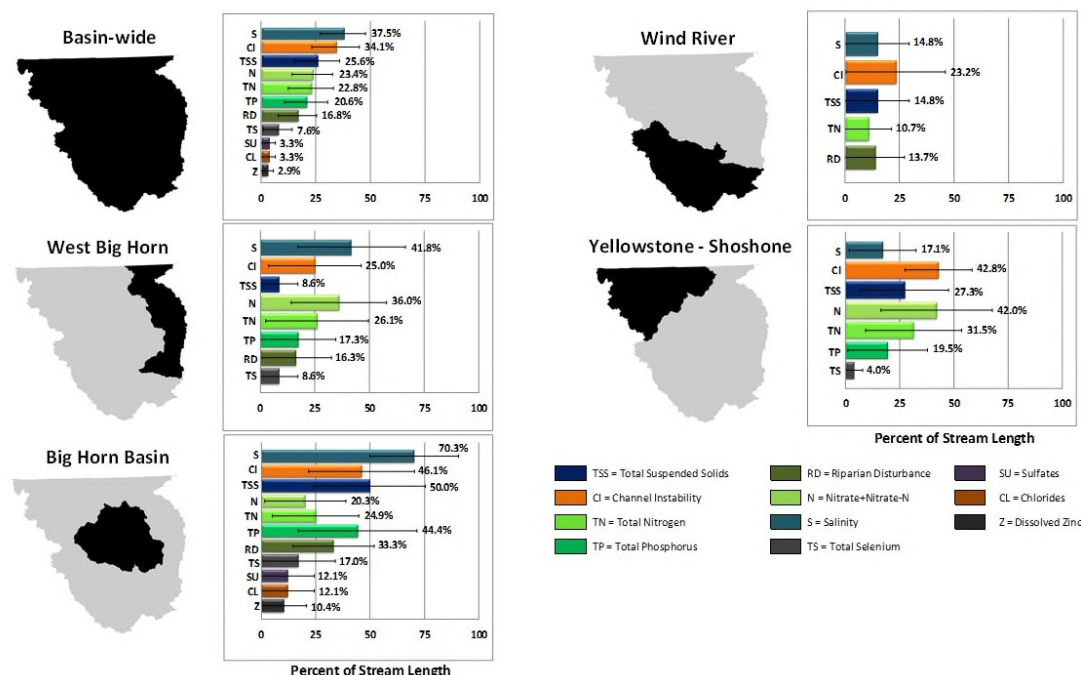
Appendix A. Probability Survey Results

A-1. Bighorn-Yellowstone Survey

Findings from the Bighorn-Yellowstone (BYS) Probabilistic Survey ([Hargett and ZumBerge 2014](#)) indicate that 56% of non-wilderness, non-first order perennial stream and river length (stream miles) in the BYS were in the least-disturbed biological condition or comparable to reference expectations. Approximately 26% of BYS stream miles were considered most-disturbed, implying an appreciable deviation from reference expectations associated with anthropogenic stressors. The remaining 18% of BYS stream miles were considered indeterminate with respect to biological condition.



Of fourteen stressors evaluated, elevated salinity (38% of stream miles), channel instability (34% of stream miles), and elevated total suspended solids (TSS) (26% of stream miles) were the three most common stressors that influenced biological condition in the BYS. Of the 34% of stream miles with channel instability, 94% were due to excess sediment, 28% attributed to accelerated bank erosion, and 25% linked to channel incision. Elevated salinity was the most common stressor in the Big Horn Basin and West Big Horn at 70% and 42%, respectively, of stream miles. Channel instability was within the top three most common stressors in all HUC 8 clusters: 46% Big Horn Basin, 43% Yellowstone-Shoshone, 25% West Big Horn and 23% Wind River. Elevated TSS was the second most common stressor in the Big Horn Basin (50%) and Wind River (15%). Some form of nutrient enrichment (elevated concentrations of total nitrogen, nitrate+nitrite-N or total phosphorus) was among the top four most common stressors in all HUC 8 clusters (11% - 44% of stream miles).

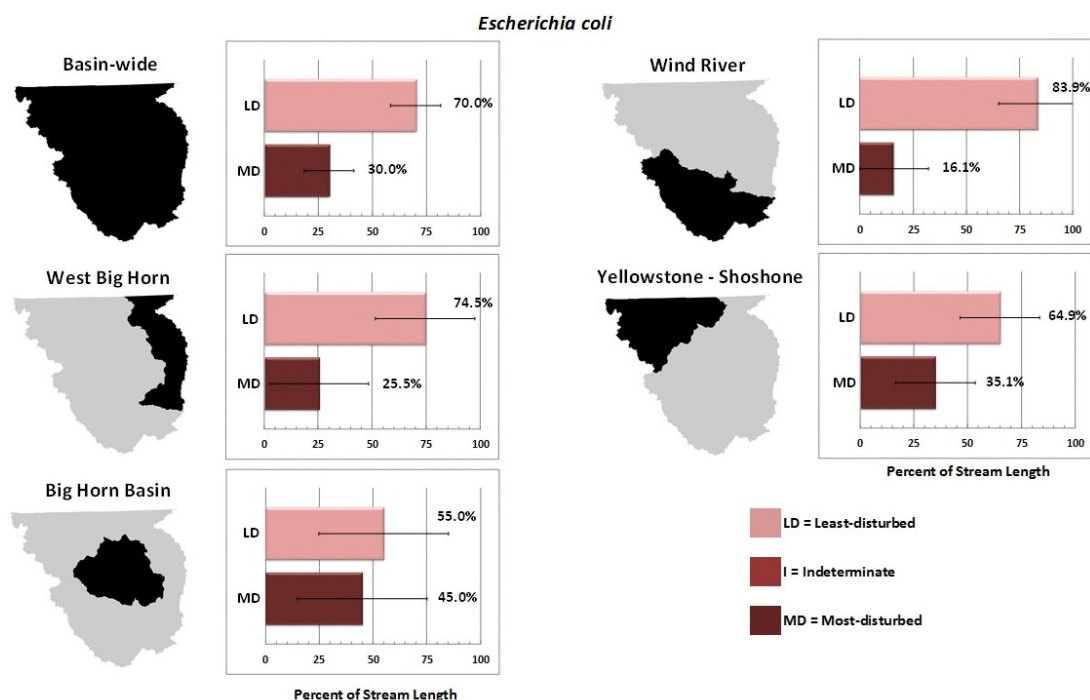


With regard to the potential influence of stressors on biological condition, elevated salinity ranked highest among stressors likely to be associated with degraded biological condition in BYS streams. Specifically, stream benthic macroinvertebrates in the BYS were 5.1 times more likely to be in a most-disturbed biological condition when elevated salinity was present than when elevated salinity was not present. The fact that elevated salinity is the most widespread and of greatest potential influence to biological condition emphasizes its importance as a pollutant of focus in the BYS. Total phosphorus (4.9) and channel instability (2.7) ranked second and third, respectively, among stressors associated with degraded biological condition. Degraded biological condition was just as likely to occur with or without elevated TSS. As such, TSS likely poses no additional risk to benthic macroinvertebrates when present in BYS streams. Rather, its subsequent deposition has the most likely direct impact to the benthic macroinvertebrate component of the aquatic community. Nevertheless, TSS is the third more prevalent stressor in the BYS and may pose a risk to other aquatic organisms such as fish that are potentially more directly affected by suspended sediment.

With regard to human health condition, 70% of stream miles in the BYS had *Escherichia coli* (an indicator of human health risk for recreational uses of water) concentrations in the least-disturbed condition (single sample concentration <126 colony forming units per 100 mL). One-hundred percent of stream miles in the BYS exhibited concentrations of total cadmium, nitrate+nitrate-N, total selenium and total zinc in the least-disturbed condition with respect to suitability of the water for drinking. Similar findings were evident for 98% of stream miles with respect to total arsenic. This indicates that the vast majority of the evaluated stream miles in the BYS would require minimal treatment as potential drinking water sources with respect to the aforementioned constituents.

Elevated salinity and channel instability's commonality, combined with their moderate to high influence to aquatic life, suggest that efforts aimed at reduction in these two stressors could have broad benefits to biological condition of the BYS. Because of its linkage to channel instability and its function as a transport mechanism for other pollutants such as nutrients, efforts to reduce excess sediment in BYS streams would not only help address channel instability, but may also reduce nutrient loading. The commonality of elevated

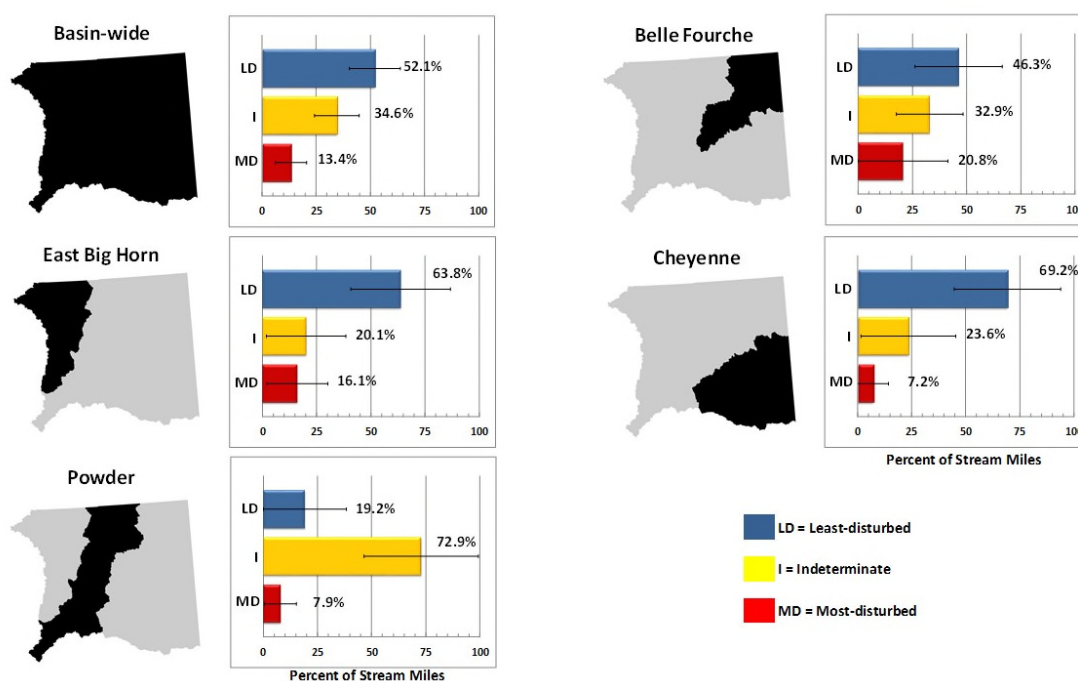
total phosphorus in particular areas combined with its second highest relative risk to biological condition, suggests efforts to reduce this stressor at watershed-scales could improve overall water quality condition through minimizing the onset of eutrophication that could lead to episodes of hypoxia or toxic algal blooms.



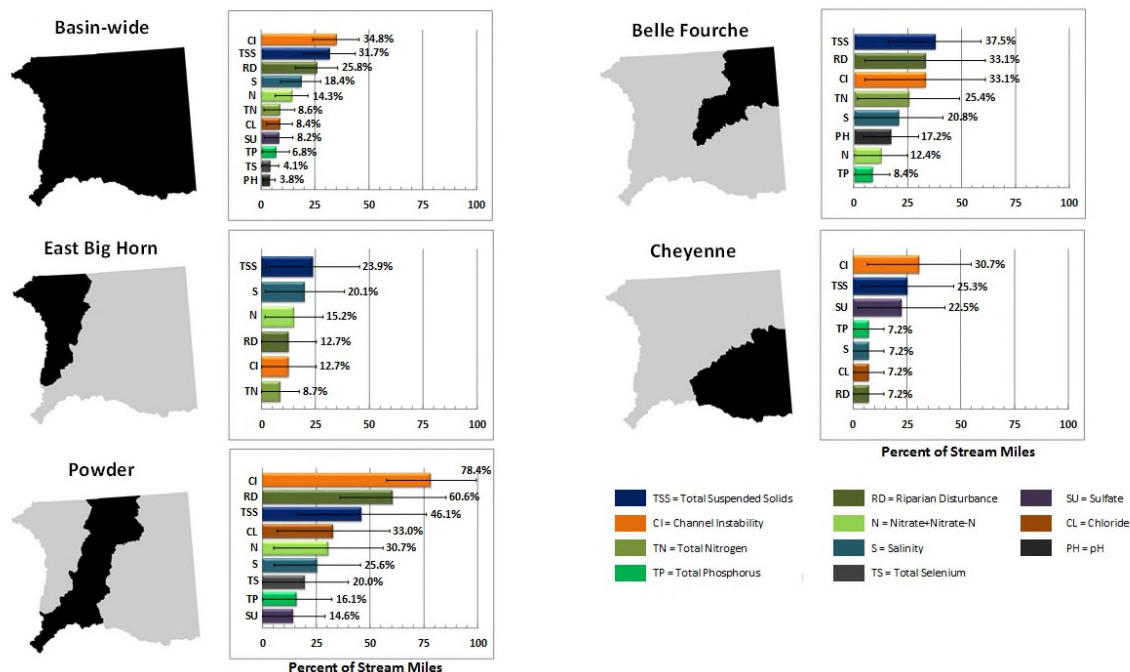
Of the four HUC 8 clusters that comprise the greater BYS, the Big Horn Basin and Yellowstone-Shoshone emerge as two areas with the greatest potential need for additional investigation into whether aquatic life uses are being supported with respect to the influences of channel instability (namely excess sediment), elevated TSS and elevated total phosphorus. The highest relative extent percentage for nitrate+nitrite-N was also found in the Yellowstone-Shoshone. In addition, the highest percentages of stream miles with elevated salinity, total selenium, sulfate, chloride, and zinc were found in the Big Horn Basin. Combined, this information suggests that where aquatic life may not be supported in these areas, the causes may be many and their effects to aquatic life variable and perhaps interrelated.

A-2. Northeast Wyoming Basins

Findings from the Northeast Wyoming Basins (NE) Probabilistic Survey ([Hargett and ZumBerge 2016](#)) indicate that 52% of the stream miles in the NE were in the least-disturbed biological condition or comparable to reference expectations. Approximately 13% of NE stream miles were considered most-disturbed, implying an appreciable deviation from reference expectations associated with anthropogenic stressors. The remaining 35% of NE stream miles were considered indeterminate with respect to biological condition. A combination of historic and current anthropogenic disturbances and accelerated channel morphological alterations exacerbated by record high flows are presumed to be primarily responsible for the less favorable biological condition in areas of the NE.



Of 20 stressors evaluated, channel instability (35% of stream miles), elevated total suspended solids (TSS) (32% of stream miles) and riparian disturbance (26% of stream miles) were the three most common stressors that influence biological condition in the NE. Of the 35% of stream miles with channel instability, 29% were due to excess sediment, 47% attributed to accelerated bank erosion and 24% linked to channel incision.

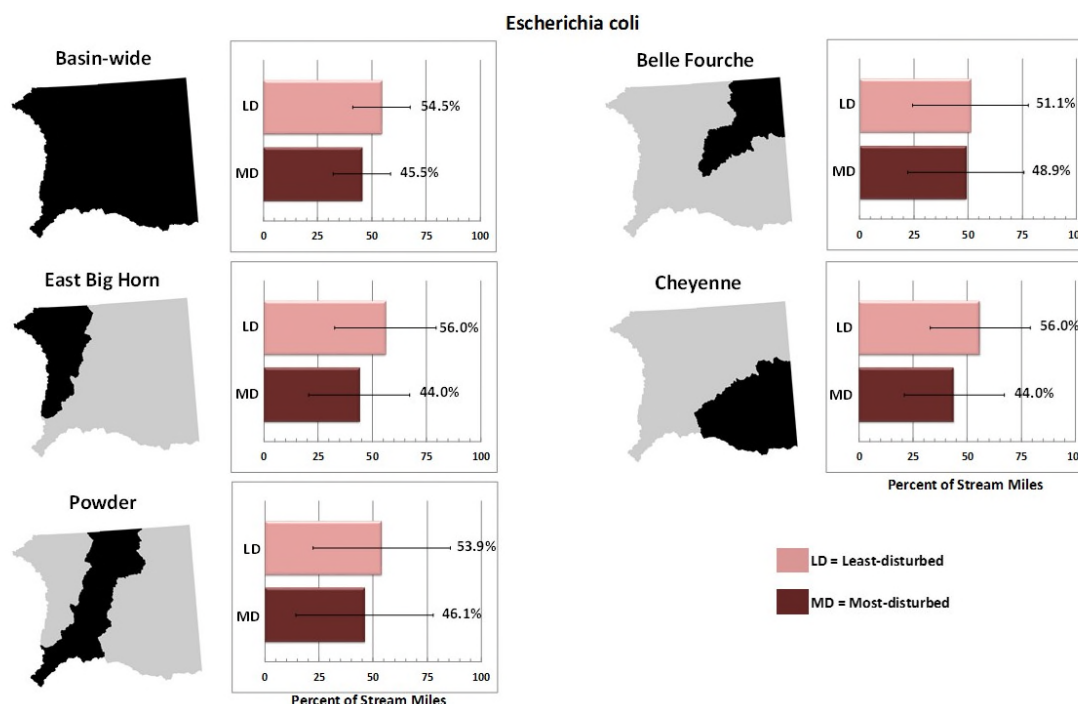


With regard to the relative risk of stressors on biological condition, elevated chloride ranked highest among stressors likely to be associated with degraded biological condition in NE streams. Specifically, stream benthic macroinvertebrates in the NE were 5.8 times more likely to be in a most-disturbed biological condition when elevated chloride was present than when not present. However, elevated chloride was only the 7th most common stressor (8% of stream miles) in the NE. Total phosphorus (4.9) ranked second among stressors associated with degraded biological condition though again was less prevalent throughout the NE (7% of stream miles). The relative risk of total nitrogen (4.2) implies its association with degraded biological condition though further investigation suggests this is likely an overestimation as the elevated nitrogen in some streams appeared to be natural and/or the indirect effects of this stressor on the aquatic community is not clear in the NE. Excluding total nitrogen, channel instability and elevated total selenium tied for 3rd (3.7) among stressors associated with degraded biological condition. The wide-spread extent of channel instability and its potential influence to biological condition emphasizes its importance as a pollutant of focus in the NE. Similar to chloride and total phosphorus, elevated total selenium was only the 10th ranked stressor (4% of stream miles) throughout the NE. Though TSS ranked as the second most common stressor in NE streams, a degraded biological condition was just as likely to occur with or without elevated concentrations of this stressor. Therefore, elevated TSS apparently poses no additional risk to benthic macroinvertebrates when present in NE streams. Rather, its subsequent deposition has the most likely direct impact to the benthic macroinvertebrate component of the aquatic community. As such, TSS when deposited is reflected as part of the channel instability stressor. Nevertheless, the commonality of TSS may pose a risk to other aquatic organisms such as fish that are potentially more directly affected by suspended sediment.

With regard to human health condition, 54% of stream miles in the NE had *E. coli* concentrations in the least-disturbed condition (single sample concentration <126 colonies per 100ml), whereas 46% were in a most-disturbed condition (>126 colonies per 100ml). One-hundred percent of stream miles in the NE exhibited concentrations of total cadmium, nitrate+nitrate-N, total selenium and total zinc in the least-

disturbed condition with respect to suitability of the water for drinking. Similar findings were evident for 91% of stream miles with respect to total arsenic. Only 66% of stream miles were in the least-disturbed condition for dissolved manganese, which appears largely due to natural factors. This indicates that the vast majority of the evaluated stream miles in the NE would require minimal treatment as potential drinking water sources with respect to the aforementioned constituents (with the exception of manganese).

The commonality of channel instability and riparian disturbance combined with their moderately high risk to aquatic life, suggest that where benthic macroinvertebrates communities have been degraded, efforts aimed at reduction in these two stressors could have broad benefits to biological condition of the NE. Based on the survey data, both stressors were often linked, and from a resource management perspective, efforts that address one could benefit the other. Accelerated bank erosion was the most prominent of the three stressors linked to channel instability. Efforts to reduce accelerated bank erosion will not only help to address channel instability and consequently elevated TSS, but may also reduce nutrient loading to streams in the NE since sediment can function as a transport mechanism for pollutants such as total phosphorus. The commonality of elevated total phosphorus in particular areas of the NE combined with its second highest relative risk to biological condition, suggests efforts to reduce this stressor at watershed-scales could improve overall water quality condition through minimizing the onset of eutrophication that could lead to episodes of hypoxia or toxic algal blooms. Elevated chloride and total selenium exhibited the highest and third highest relative risks, respectively, to biological condition. Though their prevalence is confined to particular watersheds, addressing these stressors could offer large benefits to the biological condition of some NE streams.



A-3. Statewide Surveys

Prior to implementing the current monitoring strategy, WDEQ conducted two statewide probabilistic surveys of Wyoming's perennial streams and rivers (WDEQ, 2013a) in 2004-2007 and 2008-2011. Results from these surveys provided an objective summary of the biological condition of Wyoming's streams and rivers and identified the most important stressors. These surveys represent a more focused and representative effort to characterize Wyoming's streams relative to EPA's EMAP-West (Peterson and others 2007). The target population for the statewide surveys was approximately 17,513 miles (based on 1:24K RF3 digital stream coverage) of perennial streams and rivers or almost one-half of the total miles of perennial streams and rivers in Wyoming. Biological condition was evaluated at both the statewide scale and separately for three climatic regions of the State: mountain, plains and xeric. A total of 64 and 45 study sites were evaluated for the first and second statewide surveys, respectively.

According to the most recent statewide survey conducted in 2008-2011, 58% of stream miles in Wyoming were in a least disturbed biological condition or comparable to reference expectations. This percentage is statistically similar to that estimated during 2004-2007 state wide survey (53%) and the EMAP-West study period of 2000-2003 (52%). Approximately 18% of Wyoming's stream miles were considered most-disturbed, implying an appreciable deviation from reference expectations associated with anthropogenic stressors. This estimate is similar to the first statewide survey (22%). Both statewide surveys showed a significant reduction from the estimate of most-disturbed stream miles documented during EMAP-WY (32%).

Channel instability and total suspended solids (TSS) were the most widespread stressors for both statewide surveys, whereas sedimentation and riparian disturbance were the most common stressors statewide during EMAP-WY. Based on the most recent statewide survey, riparian disturbance was among the most common stressor in all three climatic regions. Nutrient enrichment was the least important stressor both statewide and within climatic regions.

Appendix B. List of Completed TMDLs

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Belle Fourche River	WYBF101202010501_01	Belle Fourche	From the confluence with Donkey Creek to a point 6.2 miles upstream	2ABWW	6.2 Miles	Recreation	FECAL COLIFORM	2007	2013
Belle Fourche River	WYBF101202010504_00	Belle Fourche	From the confluence with Keyhole Reservoir upstream to the confluence with Donkey Creek	2ABWW	14.2 Miles	Aquatic Life other than Fish	AMMONIA, UN-IONIZED	2007	2013
							CHLORIDE	2007	2013
						Recreation	FECAL COLIFORM	2007	2013
						Warm Water Fishery	AMMONIA, UN-IONIZED	2007	2013
							CHLORIDE	2007	2013
Donkey Creek	WYBF101202010600_01	Belle Fourche	From the confluence with the Belle Fourche River upstream to Brorby Boulevard within the City of Gillette	3B	61.4 Miles	Recreation	FECAL COLIFORM	2012	2013
Gillette Fishing Lake	WYBF101202010601_01	Belle Fourche	Within the City of Gillette	2AB	15.4 Acres	Aquatic Life other than Fish	PHOSPHATE	1998	2013
							SEDIMENTATION/SILTATION	1998	2013
						Cold Water Fishery	PHOSPHATE	1998	2013
							SEDIMENTATION/SILTATION	1998	2013
Stonepile Creek	WYBF101202010602_01	Belle Fourche	From the confluence with Donkey Creek upstream to the junction of highways 14/16 and 59	3B	7.6 Miles	Recreation	FECAL COLIFORM	2012	2013

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Belle Fourche River	WYBF101202010904_00	Belle Fourche	From the confluence with Arch Creek downstream to the confluence with Sourdough Creek	2ABWW	60.7 Miles	Recreation	FECAL COLIFORM	2004	2013
Ocean Lake	WYBH100800050202_01	Big Horn	Within the Ocean Lake Wildlife Management Area	2ABWW	6075.8 Acres	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	2005	2009
						Warm Water Fishery	SEDIMENTATION/SILTATION	2005	2009
Owl Creek	WYBH100800070305_01	Big Horn	From the confluence with the Bighorn River to a point 3.8 miles upstream	2AB	3.8 Miles	Recreation	FECAL COLIFORM	2001	2014
Kirby Creek	WYBH100800070500_01	Big Horn	From the confluence with the Bighorn River to a point 21.9 miles upstream	2C	21.8 Miles	Recreation	FECAL COLIFORM	2005	2014
Nowater Creek	WYBH100800070809_01	Big Horn	From the confluence with the Bighorn River to a point 6.6 miles upstream	3B	6.61 Miles	Recreation	FECAL COLIFORM	2001	2014
Fifteenmile Creek	WYBH100800070909_01	Big Horn	From the confluence with the Bighorn River to a point 2.2 miles upstream	3B	2.19 Miles	Recreation	FECAL COLIFORM	2001	2014
Bighorn River	WYBH100800071000_01	Big Horn	From the Confluence with the Nowood River to a point 36.1 miles upstream	2AB	36.1 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2002	2014
Bighorn River	WYBH100800071000_02	Big Horn	From the confluence with the Greybull River upstream to the confluence with the Nowood River	2AB	22.1 Miles	Recreation	FECAL COLIFORM	2001	2014
Sage Creek	WYBH100800071001_01	Big Horn	From the confluence with the Bighorn River to a point 7.4 miles upstream	3B	7.4 Miles	Recreation	FECAL COLIFORM	2001	2014

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Slick Creek	WYBH100800071001_02	Big Horn	From the confluence with the Bighorn River to a point 5.8 miles upstream	3B	5.8 Miles	Recreation	FECAL COLIFORM	2001	2014
Paint Rock Creek	WYBH100800080603_01	Big Horn	From the confluence with the Nowood River to a point 5.2 miles upstream	2AB	5.2 Miles	Recreation	FECAL COLIFORM	2001	2014
Nowood River	WYBH100800080705_01	Big Horn	From the confluence with the Bighorn River to a point 13.4 miles upstream	2AB	13.4 Miles	Recreation	FECAL COLIFORM	2001	2014
Greybull River	WYBH100800090405_01	Big Horn	From the confluence with the Bighorn River upstream to Sheets Flat bridge.	2AB	44.7 Miles	Recreation	FECAL COLIFORM	2001	2014
Granite Creek	WYBH100800100102_01	Big Horn	From the confluence with Shell Creek upstream 5.8 miles, near the Antelope Butte Ski Area	2AB	5.8 Miles	Recreation	FECAL COLIFORM	2001	2014
Beaver Creek	WYBH100800100204_01	Big Horn	From the confluence with Shell Creek to a point 7.9 miles upstream	2AB	7.9 Miles	Recreation	FECAL COLIFORM	2001	2014
Shell Creek	WYBH100800100206_01	Big Horn	From the confluence with the Bighorn River to a point 5.3 miles upstream	2AB	5.3 Miles	Recreation	FECAL COLIFORM	2001	2014
Bighorn River	WYBH100800100301_01	Big Horn	From the confluence with the Greybull River to a point 10.5 miles downstream	2AB	10.53 Miles	Recreation	FECAL COLIFORM	2001	2014
Dry Creek	WYBH100800110204_01	Big Horn	From the confluence with the Bighorn River to a point 4.7 miles upstream	2ABWW	4.7 Miles	Recreation	FECAL COLIFORM	2001	2014
Dry Gulch	WYBH100800140107_01	Big Horn	From the confluence with the Shoshone River to a point 7.0 miles upstream	3B	7 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2005	2014

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Bitter Creek	WYBH100800140206_01	Big Horn	From the confluence with the Shoshone River to a point 13.9 miles upstream	2AB	13.91 Miles	Recreation	FECAL COLIFORM	1999	2014
Whistle Creek	WYBH100800140303_01	Big Horn	From the confluence with the Shoshone River to a point 8.7 miles upstream	3B	8.7 Miles	Recreation	FECAL COLIFORM	2001	2014
Foster Gulch	WYBH100800140307_01	Big Horn	From the confluence with the Shoshone River to a point 2.0 miles upstream	2C	2 Miles	Recreation	FECAL COLIFORM	2001	2014
Polecat Creek	WYBH100800140407_01	Big Horn	From the confluence with Sage Creek to a point 2.5 miles upstream	2AB	2.5 Miles	Recreation	FECAL COLIFORM	2001	2014
Sage Creek	WYBH100800140408_01	Big Horn	From the confluence with the Shoshone River to a point 14.0 miles upstream	2AB	14 Miles	Recreation	FECAL COLIFORM	2001	2014
Big Wash	WYBH100800140408_02	Big Horn	From the confluence with Sage Creek upstream to Sidon Canal	3B	3.2 Miles	Recreation	FECAL COLIFORM	2001	2014
Shoshone River	WYBH100800140504_00	Big Horn	From the confluence with Bighorn Lake to a point 9.7 miles upstream	2AB	9.73 Miles	Recreation	FECAL COLIFORM	2001	2014
Bear River	WYBR160101010303_01	Bear	From the confluence with Woodruff Narrows Reservoir upstream to the confluence with Sulphur Creek	2AB	36.5 Miles	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	2001	2017
						Cold Water Fishery	SEDIMENTATION/SILTATION	2001	2017
Bitter Creek	WYGR140401050506_01	Green	From the confluence with the Green River upstream to Point of Rocks	2C	58.1 Miles	Recreation	FECAL COLIFORM	2006	2018

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Killpecker Creek	WYGR140401050808_01	Green	From the confluence with Bitter Creek upstream to Reliance	3B	6.3 Miles	Recreation	FECAL COLIFORM	2006	2018
Blacks Fork	WYGR140401070106_01	Green	From the confluence with the Smiths Fork upstream to Millburne	2AB	25.4 Miles	Recreation	FECAL COLIFORM	2006	2019
Smiths Fork	WYGR140401070208_00	Green	From the confluence with Cottonwood Creek upstream to the confluence with East and West Forks Smiths Fork	2AB	34.5 Miles	Recreation	FECAL COLIFORM	2006	2019
Smiths Fork	WYGR140401070208_01	Green	From the confluence with the Blacks Fork upstream to the confluence with Cottonwood Creek	2AB	4 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2006	2019
Blacks Fork	WYGR140401070403_01	Green	From the confluence with the Hams Fork upstream to the confluence with the Smiths Fork	2AB	45 Miles	Recreation	FECAL COLIFORM	1999	2019
Haggarty Creek	WYLS140500030109_01	Little Snake	From Ferris-Haggarty Mine downstream to the confluence with West Fork Battle Creek	2AB	5.6 Miles	Aquatic Life other than Fish	CADMIUM	1998	2011
							COPPER	1998	2011
							SILVER	1998	2011
						Cold Water Fishery	CADMIUM	1998	2011
							COPPER	1998	2011
							SILVER	1998	2011
West Fork Battle Creek	WYLS140500030109_02	Little Snake	From the confluence with Battle Creek upstream to	2AB	4.9 Miles	Aquatic Life other than Fish	COPPER	1999	2011

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
			the confluence with Haggarty Creek			Cold Water Fishery	COPPER	1999	2011
Middle Fork Crow Creek	WYSP101900090101_01	South Platte	A 1.5 mile section of creek at FS Road 700 crossing	2AB	1.5 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2008	2016
Crow Creek	WYSP101900090107_01	South Platte	From the inlet of Hereford Reservoir #2 upstream to the outlet of Hereford Reservoir #1	2AB	9.4 Miles	Recreation	FECAL COLIFORM	2008	2014
Crow Creek	WYSP101900090107_02	South Platte	From 0.7 miles below Morrie Avenue downstream to the inlet of Hereford Reservoir #1	2C	3.7 Miles	Aquatic Life other than Fish	SELENIUM	2009	2013
						Non-Game Fish	SELENIUM	2009	2013
						Recreation	ESCHERICHIA COLI (E. COLI)	2009	2014
Crow Creek	WYSP101900090107_03	South Platte	From Morrie Avenue to a point 0.7 miles downstream	2C	0.7 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2009	2014
Crow Creek	WYSP101900090107_04	South Platte	From Morrie Avenue upstream to Happy Jack Road	2AB	3.4 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2009	2014
Crow Creek	WYSP101900090107_05	South Platte	From Happy Jack Road upstream to Roundtop Road	2AB	3.1 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2010	2014
Crow Creek	WYSP101900090203_01	South Platte	From Missile Road (HWY 217) upstream to the outlet of Hereford Reservoir #2	2C	10.1 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2009	2014
Stump Creek	WYSR170401050203_01	Snake	From the confluence with the Salt River upstream to the Idaho border	2AB	5.6 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2007	2016

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Salt River	WYSR170401050309_01	Snake	A 7.5 mile section of river located 3.4 miles northwest of Etna	2AB	7.5 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2007	2016
Park Creek	WYTR100901010204_01	Tongue	From the confluence with Big Goose Creek to a point 2.8 miles upstream	2AB	2.8 Miles	Recreation	FECAL COLIFORM	1999	2010
Rapid Creek	WYTR100901010204_02	Tongue	From the confluence with Big Goose Creek to a point 3.2 miles upstream	2AB	3.2 Miles	Recreation	FECAL COLIFORM	1999	2010
Big Goose Creek	WYTR100901010205_01	Tongue	From the confluence with Little Goose Creek upstream to the confluence with Rapid Creek	2AB	19.2 Miles	Recreation	FECAL COLIFORM	2005	2010
Beaver Creek	WYTR100901010205_02	Tongue	From the confluence with Big Goose Creek upstream to the confluence with Apple Run	3B	6.5 Miles	Recreation	FECAL COLIFORM	1999	2010
Sackett Creek	WYTR100901010207_01	Tongue	From the Confluence with Little Goose Creek upstream to the confluence with East Fork Sackett Creek	2AB	3.1 Miles	Recreation	FECAL COLIFORM	1999	2010
Jackson Creek	WYTR100901010207_02	Tongue	From the Confluence with Little Goose Creek to a point 6.4 miles upstream	2AB	6.4 Miles	Recreation	FECAL COLIFORM	1999	2010
Little Goose Creek	WYTR100901010208_01	Tongue	From the Confluence with Big Goose Creek upstream to Brundage Lane in Sheridan	2AB	3.5 Miles	Aquatic Life other than Fish	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	2005	2010
							SEDIMENTATION/SILTATION	2005	2010
							PHYSICAL SUBSTRATE HABITAT ALTERATIONS	2005	2010

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
						Cold Water Fishery	SEDIMENTATION/SILTATION	2005	2010
						Recreation	FECAL COLIFORM	2005	2010
McCormick Creek	WYTR100901010208_02	Tongue	From the confluence with Little Goose Creek to a point 2.2 miles upstream	3B	2.2 Miles	Recreation	FECAL COLIFORM	2003	2010
Kruse Creek	WYTR100901010208_03	Tongue	From the Confluence with Little Goose Creek upstream to the confluence with East Fork Kruse Creek	3B	2.5 Miles	Recreation	FECAL COLIFORM	1999	2010
Goose Creek	WYTR100901010209_01	Tongue	From the confluence with Little Goose Creek downstream to the confluence with the Tongue River	2AB	12.7 Miles	Aquatic Life other than Fish	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	2005	2010
							SEDIMENTATION/SILTATION	2005	2010
						Cold Water Fishery	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	2005	2010
							SEDIMENTATION/SILTATION	2005	2010
						Recreation	FECAL COLIFORM	2005	2010
Soldier Creek	WYTR100901010209_02	Tongue	From the confluence with Goose Creek to a point 3.1 miles upstream	2AB	3.1 Miles	Recreation	FECAL COLIFORM	1999	2010
Prairie Dog Creek	WYTR100901010400_01	Tongue	From I-90 to a point 47.2 miles downstream	2AB	47.2 Miles	Recreation	FECAL COLIFORM	2010	2018
Meade Creek	WYTR100901010401_01	Tongue	From the confluence with Prairie Dog Creek upstream 1.1 miles to the confluence with an unnamed tributary	2AB	1.1 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2010	2018
Prairie Dog Creek	WYTR100901010402_01	Tongue	From the confluence with the Tongue River to a point 6.7 miles upstream	2AB	6.7 Miles	Recreation	FECAL COLIFORM	2010	2018

List of Completed TMDLs									
Waterbody Name	AUID	Basin	Location Description	Class	Miles/ Acres	Addressed Use	Addressed Pollutant	Cycle First Listed	Year TMDL Completed
Wildcat Creek	WYTR100901010402_02	Tongue	From the confluence with Prairie Dog Creek to a point 0.8 miles upstream	3B	0.8 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2010	2018
Dutch Creek	WYTR100901010405_01	Tongue	From the confluence with Prairie Dog Creek upstream 1.9 miles to the confluence with an unnamed tributary	3B	1.9 Miles	Recreation	ESCHERICHIA COLI (E. COLI)	2010	2018
Clarks Fork Yellowstone River	WYYR100700060101_01	Yellowstone	From the Montana border downstream to the confluence with Crazy Creek	1	6.8 Miles	Aquatic Life other than Fish	CADMIUM	1999	2003
							COPPER	1999	2003
							SILVER	1999	2003
						Cold Water Fishery	CADMIUM	1999	2003
							COPPER	1999	2003
							SILVER	1999	2003

Appendix C. 305(b) List

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Mill Creek Watershed	WYBR1601010106_01	Bear	2AB	32.9 Miles	2012	2	NA	Full	--	NA	NA	NA	NA	NA	Full	NA	NA
Bear River	WYBR160101010201_01	Bear	2AB	85.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pleasant Valley Creek	WYBR160101010301_01	Bear	3B	64.5 Miles	2012	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Bear River	WYBR160101010303_01	Bear	2AB	36.5 Miles	2001	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Bridger Creek	WYBR160101010801_01	Bear	3B	191.4 Miles	2003	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Hobble Creek	WYBR160101020201_01	Bear	2AB	126.9 Miles	1999	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Coantag Creek	WYBR160101020201_02	Bear	2AB	55.1 Miles	2002	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Smiths Fork	WYBR160101020204_01	Bear	2AB	280.7 Miles	1999	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Salt Creek	WYBR160101020303_01	Bear	2AB	105 Miles	2005	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Giraffe Creek	WYBR160101020304_00	Bear	2AB	40.9 Miles	2002	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Belle Fourche River	WYBF101202010501_01	Belle Fourche	2ABW W	6.2 Miles	2007	4A	NA	--	NA	NA	NA	NA	Not	NA	--	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Belle Fourche River	WYBF101202010504_00	Belle Fourche	2ABW W	14.2 Miles	2007	4A	NA	--	Not	NA	NA	NA	Not	NA	Not	NA	NA
Donkey Creek	WYBF101202010600_01	Belle Fourche	3B	61.4 Miles	2012	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Gillette Fishing Lake	WYBF101202010601_01	Belle Fourche	2AB	15.4 Acres	1998	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Stonepile Creek	WYBF101202010602_01	Belle Fourche	3B	7.6 Miles	2012	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Blacktail Creek	WYBF101202010903_01	Belle Fourche	2AB	28.9 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Belle Fourche River	WYBF101202010904_00	Belle Fourche	2ABW W	60.7 Miles	2004	4A	NA	--	Full	NA	NA	NA	Not	NA	Full	NA	NA
Beaver Creek	WYBF101202010906_00	Belle Fourche	2AB	32.1 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Wood Canyon Creek	WYBF101202010906_02	Belle Fourche	3B	2.7 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Reservoir Gulch	WYBF101202010906_03	Belle Fourche	3B	2.1 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Cub Creek	WYBF101202010906_04	Belle Fourche	2AB	2.22 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Little Creek	WYBF101202010906_05	Belle Fourche	3B	1.3 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Fawn Creek	WYBF101202010906_06	Belle Fourche	3B	3.1 Miles	2004	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Brooks Lake	WYBH100800010104_01	Big Horn	2AB	209 Acres	2018	5	NA	Not	--	Not	NA	NA	NA	NA	Not	NA	NA
Trappers Creek	WYBH100800010110_01	Big Horn	2AB	13.5 Miles	2007	2	Full	Full	--	Full	Full	NA	NA	NA	Full	Full	NA
Bear Creek	WYBH100800010408_00	Big Horn	2AB	79.94 Miles	2012	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Wind River, East Fork	WYBH100800010409_00	Big Horn	2AB	465.2 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Beaver Creek	WYBH100800020301_01	Big Horn	2AB	24.1 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beaver Creek	WYBH100800020301_02	Big Horn	2AB	19.7 Miles	2005	2	Full	Full	--	--	Full	Full	NA	NA	Full	Full	Full
Deep Creek	WYBH100800030103_01	Big Horn	2AB	10.5 Miles	2012	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Popo Agie River	WYBH100800030104_01	Big Horn	2AB	8.7 Miles	2013	2	Full	Full	NA	NA	Full	Full	NA	NA	Full	Full	Full
Twin Creek	WYBH100800030106_01	Big Horn	2AB	6.1 Miles	2014	2	NA	NA	NA	--	NA	Full	NA	NA	NA	NA	Full

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Twin Creek	WYBH100800030106_02	Big Horn	2AB	3.3 Miles	2014	2	NA	NA	NA	NA	NA	Full	NA	NA	NA	NA	Full
Twin Creek	WYBH100800030106_03	Big Horn	2AB	15.6 Miles	2014	5	NA	Not	NA	--	NA	Full	NA	NA	Not	NA	Full
Little Popo Agie River	WYBH100800030108_01	Big Horn	2AB	12.4 Miles	2013	2	Full	Full	NA	--	Full	Full	NA	NA	Full	Full	Full
Little Popo Agie River	WYBH100800030108_02	Big Horn	2AB	11.1 Miles	2014	2	NA	NA	NA	NA	NA	Full	NA	NA	NA	NA	Full
Little Popo Agie River	WYBH100800030108_03	Big Horn	2AB	4.5 Miles	2013	5	NA	Not	NA	NA	NA	Full	NA	NA	Not	NA	Full
Middle Fork Popo Agie River	WYBH100800030207_01	Big Horn	2AB	4 Miles	2001	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Baldwin Creek	WYBH100800030207_02	Big Horn	2AB	39.3 Miles	2001	2	NA	Full	--	NA	NA	NA	NA	NA	Full	NA	NA
Hornecker Creek	WYBH100800030207_03	Big Horn	2AB	1.5 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Middle Fork Popo Agie River	WYBH100800030207_04	Big Horn	2AB	0.02 Miles	2020	2	NA	NA	--	--	NA	NA	Full	NA	NA	NA	NA
Middle Fork Popo Agie River	WYBH100800030207_05	Big Horn	2AB	0.7 Miles	2018	2	NA	NA	--	NA	NA	NA	Full	NA	NA	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Squaw Creek	WYBH100800030210_00	Big Horn	2AB	44.5 Miles	2001	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Ocean Lake	WYBH100800050202_01	Big Horn	2ABW W	6075.8 Acres	2005	4A	NA	--	Not	NA	NA	NA	NA	NA	Not	NA	NA
Poison Creek	WYBH100800050404_01	Big Horn	2AB	2 Miles	2006	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Muddy Creek	WYBH100800050607_01	Big Horn	2AB	11.8 Miles	2006	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Owl Creek	WYBH100800070305_01	Big Horn	2AB	3.8 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Kirby Creek	WYBH100800070500_01	Big Horn	2C	21.8 Miles	2005	4A	NA	--	--	NA	NA	--	Not	NA	NA	NA	NA
Grass Creek	WYBH100800070607_01	Big Horn	2AB	124.2 Miles	2003	2	Full	Full	--	NA	Full	NA	NA	NA	Full	Full	NA
Grass Creek	WYBH100800070608_01	Big Horn	2AB	14.1 Miles	2003	2	NA	NA	--	NA	NA	Full	NA	NA	NA	NA	Full
Cottonwood Creek	WYBH100800070609_01	Big Horn	2AB	29.5 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Nowater Creek	WYBH100800070809_01	Big Horn	3B	6.61 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Fifteenmile Creek	WYBH100800070909_01	Big Horn	3B	2.19 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Bighorn River	WYBH100800071000_01	Big Horn	2AB	36.1 Miles	2002	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Bighorn River	WYBH100800071000_02	Big Horn	2AB	22.1 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Sage Creek	WYBH100800071001_01	Big Horn	3B	7.4 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Slick Creek	WYBH100800071001_02	Big Horn	3B	5.8 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Canyon Creek	WYBH100800080406_01	Big Horn	2AB	4.3 Miles	2009	3	II	II	--	--	II	II	II	NA	II	II	NA
Paint Rock Creek	WYBH100800080603_01	Big Horn	2AB	5.2 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
South Paintrock Creek	WYBH100800080603_02	Big Horn	2AB	3.6 Miles	2010	2	NA	NA	--	--	NA	Full	NA	NA	NA	NA	Full
Soldier Creek	WYBH100800080607_01	Big Horn	2AB	7.4 Miles	2007	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Nowood River	WYBH100800080705_01	Big Horn	2AB	13.4 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Rawhide Creek	WYBH100800090301_01	Big Horn	2B	6.7 Miles	2020	2	Full	Full	--	Full	Full	--	NA	NA	Full	Full	NA
Rawhide Creek	WYBH100800090301_02	Big Horn	2B	8.4 Miles	2020	3	II	II	--	II	II	--	NA	NA	II	II	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Rawhide Creek	WYBH100800090301_03	Big Horn	2C	14 Miles	2020	3	II	--	--	II	II	--	NA	NA	II	II	NA
Greybull River	WYBH100800090405_01	Big Horn	2AB	44.7 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Mail Creek	WYBH100800100101_01	Big Horn	2AB	5.6 Miles	2004	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Granite Creek	WYBH100800100102_01	Big Horn	2AB	5.8 Miles	2001	4A	NA	Full	--	--	NA	NA	Not	NA	Full	NA	NA
Beaver Creek	WYBH100800100204_01	Big Horn	2AB	7.9 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Shell Creek	WYBH100800100206_01	Big Horn	2AB	5.3 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Bighorn River	WYBH100800100301_01	Big Horn	2AB	10.53 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crooked Creek	WYBH100800100500_01	Big Horn	2AB	7.9 Miles	2005	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Crooked Creek	WYBH100800100502_01	Big Horn	2AB	3 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Porcupine Creek	WYBH100800100600_01	Big Horn	2AB	178.1 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Dry Creek	WYBH100800110204_01	Big Horn	2ABW W	4.7 Miles	2001	4A	NA	--	NA	NA	NA	NA	Not	NA	NA	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Fork Shoshone River	WYBH100800120000_00	Big Horn	2AB	3235 Miles	2004	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Dry Gulch	WYBH100800140107_01	Big Horn	3B	7 Miles	2005	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Bitter Creek	WYBH100800140206_01	Big Horn	2AB	13.91 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Whistle Creek	WYBH100800140303_01	Big Horn	3B	8.7 Miles	2001	4A	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Foster Gulch	WYBH100800140307_01	Big Horn	2C	2 Miles	2001	4A	NA	NA	--	NA	NA	--	Not	NA	NA	NA	--
Polecat Creek	WYBH100800140407_01	Big Horn	2AB	2.5 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Sage Creek	WYBH100800140408_01	Big Horn	2AB	14 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Big Wash	WYBH100800140408_02	Big Horn	3B	3.2 Miles	2001	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Shoshone River	WYBH100800140504_00	Big Horn	2AB	9.73 Miles	2001	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Little Bighorn River	WYBH100800160100_01	Big Horn	2AB	165.1 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
West Pass Creek	WYBH100800160107_01	Big Horn	2AB	43.7 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Antelope Creek	WYCR101201010000_01	Cheyenne	3B	85.6 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Cheyenne River	WYCR101201030000_01	Cheyenne	2ABW W	92.1 Miles	2007	2	Full	--	Full	NA	Full	NA	NA	NA	Full	Full	NA
Black Thunder Creek	WYCR101201030200_01	Cheyenne	3B	79.8 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Cheyenne River	WYCR101201060100_01	Cheyenne	2ABW W	17.9 Miles	2007	2	Full	--	Full	--	Full	--	NA	NA	Full	Full	--
Poison Creek	WYCR101201070103_01	Cheyenne	3B	7.3 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Green River	WYGR140401010200_01	Green	2AB	735.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Reardon Draw	WYGR140401011006_01	Green	3B	3.2 Miles	2005	3	NA	--	--	--	NA	--	NA	NA	II	NA	--
LaBarge Creek	WYGR140401011102_00	Green	2AB	160.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYGR140401011103_01	Green	2AB	16.6 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Fontenelle Creek	WYGR140401011302_00	Green	2AB	210 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Fontenelle Creek	WYGR140401011306_01	Green	2AB	13.2 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
New Fork River	WYGR140401020203_00	Green	2AB	419.3 Miles	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pole Creek	WYGR140401020403_01	Green	2AB	17.2 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Sandy River	WYGR140401040203_01	Green	2AB	17.7 Miles	2010	5	NA	Not	--	NA	NA	Full	NA	NA	Not	NA	Full
Pacific Creek	WYGR140401040303_01	Green	2AB	13.8 Miles	2020	2	NA	NA	--	NA	NA	NA	Full	NA	NA	NA	NA
Big Sandy River	WYGR140401040407_01	Green	2AB	42 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Bitter Creek	WYGR140401050506_01	Green	2C	58.1 Miles	2006	5	NA	--	--	Not	NA	--	Not	NA	Not	NA	NA
Killpecker Creek	WYGR140401050808_01	Green	3B	6.3 Miles	2006	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Blacks Fork	WYGR140401070106_01	Green	2AB	25.4 Miles	2006	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
East Fork Smiths Fork	WYGR140401070201_01	Green	2AB	34.6 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
West Fork Smiths Fork	WYGR140401070203_01	Green	2AB	47.2 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Willow Creek	WYGR140401070205_01	Green	2AB	14.5 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Willow Creek	WYGR140401070205_02	Green	2AB	3.8 Miles	2020	3	II	II	--	II	II	NA	NA	NA	II	II	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Smiths Fork	WYGR140401070208_00	Green	2AB	34.5 Miles	2006	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Smiths Fork	WYGR140401070208_01	Green	2AB	4 Miles	2006	5	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Blacks Fork	WYGR140401070403_01	Green	2AB	45 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Hams Fork	WYGR140401070600_01	Green	2AB	862.8 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Hams Fork	WYGR140401070701_01	Green	2AB	7.6 Miles	2005	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
North Fork Little Snake River	WYLS140500030104_00	Little Snake	2AB	212.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Roaring Fork Little Snake River	WYLS140500030106_01	Little Snake	2AB	1.8 Miles	2014	5	NA	Not	NA	NA	NA	NA	NA	NA	Not	NA	NA
Haggarty Creek	WYLS140500030109_01	Little Snake	2AB	5.6 Miles	1998	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
West Fork Battle Creek	WYLS140500030109_02	Little Snake	2AB	4.9 Miles	1999	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Lost Creek	WYLS140500030109_03	Little Snake	2AB	5.2 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
East Fork Savery Creek	WYLS140500030401_01	Little Snake	2AB	17 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Dirtyman Fork	WYLS140500030402_01	Little Snake	2AB	7.8 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Savery Creek	WYLS140500030405_01	Little Snake	2AB	4.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Big Sandstone Creek	WYLS140500030407_01	Little Snake	2AB	177.5 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Savery Creek	WYLS140500030408_01	Little Snake	2AB	13.7 Miles	1998	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
West Fork Loco Creek	WYLS140500030408_02	Little Snake	2AB	12.8 Miles	1998	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Loco Creek	WYLS140500030408_03	Little Snake	2AB	9.1 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Muddy Creek	WYLS140500040101_01	Little Snake	2AB	70.6 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Littlefield Creek	WYLS140500040101_02	Little Snake	2AB	35.5 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
McKinney Creek	WYLS140500040102_01	Little Snake	2AB	5.9 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
McKinney Creek	WYLS140500040102_02	Little Snake	2AB	60.1 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Muddy Creek	WYLS140500040103_01	Little Snake	2C	13.9 Miles	1999	2	Full	Full	--	--	Full	--	NA	NA	Full	Full	NA
Muddy Creek	WYLS140500040104_01	Little Snake	2C	17.5 Miles	2014	2	NA	NA	--	--	NA	--	NA	NA	Full	NA	NA
Muddy Creek	WYLS140500040308_01	Little Snake	2C	7.7 Miles	2009	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	NA
Silver Springs Creek	WYNR101500020104_01	Niobrara	3B	17.8 Miles	2007	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
North Platte River	WYNP101800020000_01	North Platte	1	77.3 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Bear Creek	WYNP101800020104_01	North Platte	2AB	0.7 Miles	2014	5	NA	Not	--	--	NA	Full	NA	NA	NA	NA	NA
Bear Creek	WYNP101800020104_02	North Platte	2AB	1.3 Miles	2014	2	Full	Full	NA	--	Full	Full	NA	NA	Full	Full	Full
Rambler Creek	WYNP101800020104_03	North Platte	3B	0.5 Miles	2014	5	II	--	--	--	II	--	NA	NA	Not	II	--
Smith North Creek	WYNP101800020105_01	North Platte	2AB	14.6 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Muddy Creek	WYNP101800020105_02	North Platte	2AB	44.5 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Douglas Creek	WYNP101800020105_03	North Platte	2AB	104.9 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Douglas Creek	WYNP101800020107_01	North Platte	2AB	150.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
French Creek	WYNP101800020203_01	North Platte	2AB	192.8 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Big Creek	WYNP101800020303_01	North Platte	2AB	221.2 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Encampment River	WYNP101800020500_01	North Platte	2AB	536.7 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Encampment River	WYNP101800020504_01	North Platte	1	10 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Fork Hog Park Creek	WYNP101800020505_01	North Platte	2AB	2.3 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Encampment River	WYNP101800020508_01	North Platte	2AB	17.7 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Spring Creek	WYNP101800020703_01	North Platte	2AB	117.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Jack Creek	WYNP101800020800_01	North Platte	2AB	534.7 Miles	2001	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Sage Creek	WYNP101800020903_01	North Platte	2AB	14.7 Miles	2007	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Medicine Bow River	WYNP101800040100_01	North Platte	2AB	109.5 Miles	2001	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYNP101800040201_01	North Platte	2AB	99.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYNP101800040202_01	North Platte	2AB	1.6 Miles	2014	2	Full	Full	NA	Full	Full	Full	NA	NA	Full	Full	Full
Rock Creek	WYNP101800040202_02	North Platte	2AB	106.5 Miles	2014	2	NA	NA	NA	NA	NA	Full	NA	NA	NA	NA	Full
Little Medicine Bow River	WYNP101800050103_01	North Platte	2AB	11.1 Miles	2014	2	Full	Full	NA	--	Full	Full	NA	NA	Full	Full	Full
Little Medicine Bow River	WYNP101800050103_02	North Platte	2AB	26.2 Miles	2014	5	NA	Not	NA	NA	NA	Full	NA	NA	Not	NA	NA
Shirley Basin Reservoir	WYNP101800050502_01	North Platte	2AB	15.5 Acres	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Lander Creek	WYNP101800060104_01	North Platte	2AB	6.4 miles	2020	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Willow Creek	WYNP101800060204_01	North Platte	2AB	35.98 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Crooks Creek	WYNP101800060603_01	North Platte	2AB	1.4 Miles	1998	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Platte River	WYNP101800070300_01	North Platte	2AB	36.8 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Poison Spring Creek	WYNP101800070302_01	North Platte	3B	8.2 Miles	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Rasmus Lee Lake	WYNP101800070302_02	North Platte	3B	85.16 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Goose Lake	WYNP101800070302_03	North Platte	3B	30.1 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Oregon Trail Drain	WYNP101800070303_01	North Platte	3B	8.6 Miles	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Poison Spider Creek	WYNP101800070406_01	North Platte	2AB	1.3 Miles	1999	5	NA	Not	NA	NA	NA	NA	NA	NA	Not	NA	NA
Poison Spider Creek	WYNP101800070406_02	North Platte	2C	5.8 Miles	1999	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	NA
Poison Spider Creek	WYNP101800070406_03	North Platte	3B	6 Miles	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Illco Pond	WYNP101800070503_01	North Platte	3B	1.1 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Casper Creek	WYNP101800070504_01	North Platte	2AB	21.1 Miles	1999	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Thirty-three Mile Reservoir	WYNP101800070703_01	North Platte	3B	30.2 Acres	1999	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Glendo Reservoir	WYNP101800080405_01	North Platte	2AB	12049.8 Acres	2008	2	Full	Full	--	--	Full	--	NA	NA	Full	Full	Full
Horseshoe Creek	WYNP101800080905_01	North Platte	2AB	12.51 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Horseshoe Creek	WYNP101800080905_02	North Platte	2AB	2.3 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Horseshoe Creek	WYNP101800080905_03	North Platte	2AB	7.3 Miles	2004	3	--	--	--	NA	NA	NA	NA	NA	NA	NA	NA
Laramie River	WYNP101800100200_01	North Platte	2AB	354.7 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Laramie River	WYNP101800100201_01	North Platte	2AB	0.3 Miles	2011	2	NA	NA	--	--	NA	NA	Full	NA	NA	NA	NA
Miller Lake	WYNP101800100204_01	North Platte	2AB	7.6 Acres	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Meeboer Lake	WYNP101800100403_01	North Platte	2AB	115.8 Acres	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Laramie River	WYNP101800100501_01	North Platte	2AB	7.9 Miles	2018	2	NA	II	--	NA	NA	Full	NA	NA	II	NA	NA
Laramie River	WYNP101800100504_01	North Platte	2AB	24 Miles	2018	5	NA	Not	--	Not	NA	NA	NA	NA	Not	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Little Laramie River	WYNP101800100600_01	North Platte	2AB	454.4 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
South Fork Little Laramie River	WYNP101800100602_01	North Platte	2AB	5.5 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Hanging Lake	WYNP101800100603_01	North Platte	2AB	3.8 Acres	2008	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Snowy Range Lakes	WYNP101800100603_02	North Platte	2AB	282.7 Acres	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Laramie River	WYNP101800100605_01	North Platte	2AB	15.7 Miles	2011	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Middle Fork Mill Creek	WYNP101800100606_01	North Platte	2AB	2.7 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Laramie River	WYNP101800100707_01	North Platte	2AB	2.9 Miles	2011	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Wheatland Creek	WYNP101800110502_01	North Platte	2C	2.4 Miles	2014	5	NA	--	--	Full	NA	--	Not	NA	Full	NA	NA
Rock Creek	WYNP101800110502_02	North Platte	2C	34.9 Miles	2001	5	NA	--	--	--	NA	--	Not	NA	NA	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Chugwater Creek	WYNP101800110900_02	North Platte	2AB	77.1 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Chugwater Creek	WYNP101800110906_01	North Platte	2AB	9.7 Miles	2007	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Horse Creek	WYNP101800120100_01	North Platte	2AB	253.7 Miles	1999	2	NA	Full	--	--	NA	NA	NA	NA	Full	NA	NA
Bear Creek	WYNP101800120300_01	North Platte	2AB	1045.9 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYPR100902010101_01	Powder	2AB	26.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Middle Fork Powder River	WYPR100902010102_01	Powder	1	26.4 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beaver Creek	WYPR100902010202_00	Powder	2AB	19 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Blue Creek	WYPR100902010202_01	Powder	2AB	8.8 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beartrap Creek	WYPR100902010206_01	Powder	2AB	48.79 Miles	1999	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Webb Creek	WYPR100902010301_01	Powder	2AB	17.8 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Ninemile Creek	WYPR100902020100_01	Powder	3B	543.7 Miles	2005	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Powder River	WYPR100902020102_00	Powder	2ABW W	15.9 Miles	2000	5	NA	--	Not	NA	NA	NA	NA	NA	Not	NA	NA
Powder River	WYPR100902020103_01	Powder	2ABW W	19.3 Miles	2010	5	NA	--	Not	NA	NA	Not	NA	NA	Not	NA	NA
Fourmile Creek	WYPR100902020104_01	Powder	3B	174.9 Miles	2005	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Powder River	WYPR100902020600_01	Powder	2ABW W	100.6 Miles	2010	5	NA	--	Not	NA	NA	Not	NA	NA	Not	NA	NA
Flying E Creek	WYPR100902020602_01	Powder	3B	141.6 Miles	2003	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Middle Prong Wild Horse Creek	WYPR100902020808_01	Powder	3B	4.7 Miles	2003	2	NA	--	--	--	NA	--	Full	NA	NA	NA	--
South Fork Powder River	WYPR100902030400_01	Powder	2C	47.2 Miles	2007	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	--
Willow Creek	WYPR100902030403_01	Powder	2AB	10.5 Miles	2007	5	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Posey Creek	WYPR100902030404_01	Powder	3B	8 Miles	2007	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Murphy Creek	WYPR100902030407_01	Powder	3B	12.2 Miles	2007	5	NA	--	--	--	NA	--	NA	NA	Not	NA	--
Salt Creek	WYPR100902040300_01	Powder	2C	45.3 Miles	1998	5	NA	--	--	Not	NA	--	NA	NA	Not	NA	--
North Fork Crazy Woman Creek	WYPR100902050100_01	Powder	2AB	22.6 Miles	2014	2	Full	Full	--	--	Full	Full	NA	NA	Full	Full	Full
Pole Creek	WYPR100902050101_01	Powder	2AB	17.5 Miles	2002	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North Fork Crazy Woman Creek	WYPR100902050102_01	Powder	2AB	28 Miles	2014	2	II	II	NA	--	II	Full	NA	NA	II	II	Full
Little North Fork Crazy Woman Creek	WYPR100902050102_02	Powder	2AB	55.5 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Billy Creek	WYPR100902050103_01	Powder	2AB	13.4 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Doyle Creek	WYPR100902050106_01	Powder	2AB	10.4 Miles	2002	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Poison Creek	WYPR100902050107_01	Powder	2AB	70 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Middle Fork Crazy Woman Creek	WYPR100902050108_00	Powder	2AB	142.2 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Beaver Creek	WYPR100902050110_01	Powder	2AB	66 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Pole Creek	WYPR100902050110_02	Powder	2AB	25.3 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Crazy Woman Creek	WYPR100902050204_01	Powder	2AB	23.6 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Crazy Woman Creek	WYPR100902050305_01	Powder	2AB	9.2 Miles	2007	5	NA	NA	--	--	NA	Not	NA	NA	NA	NA	NA
Clear Creek	WYPR100902060000_01	Powder	2AB	338 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Hunter Creek	WYPR100902060103_01	Powder	2AB	2.7 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
French Creek	WYPR100902060106_01	Powder	2AB	22.3 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North Rock Creek	WYPR100902060201_01	Powder	2AB	9.6 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Rock Creek	WYPR100902060202_01	Powder	2AB	19.3 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
South Piney Creek	WYPR100902060302_01	Powder	2AB	32.93 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North Piney Creek	WYPR100902060303_01	Powder	2AB	6.4 Miles	2005	2	NA	NA	--	--	NA	NA	Full	NA	NA	NA	NA
Dalton Ditch	WYPR100902060303_02	Powder	3B	0.3 Miles	2005	5	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Piney-Cruse Ditch	WYPR100902060303_03	Powder	3B	2.2 Miles	2005	5	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Dalton Ditch	WYPR100902060303_04	Powder	3B	0.04 Miles	2014	5	--	--	--	--	--	--	Not	--	--	--	--
Little Piney Creek	WYPR100902060304_01	Powder	2AB	14 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
North and South Fork Shell Creek	WYPR100902060305_01	Powder	3B	14.4 Miles	2008	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Piney Creek	WYPR100902060403_01	Powder	2AB	30.8 Miles	2003	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Boxelder Creek	WYPR100902060404_01	Powder	3B	126.6 Miles	2003	2	Full	--	--	--	Full	--	NA	NA	Full	Full	--
Little Powder River	WYPR100902080500_01	Powder	2AB	58.7 Miles	2001	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Fork Spread Creek	WYSR170401010503_01	Snake	2AB	78.4 Miles	2008	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Fork Fish Creek	WYSR170401020102_01	Snake	2AB	5.7 Miles	2018	2	Full	Full	--	--	Full	Full	NA	NA	Full	Full	NA
Fish Creek	WYSR170401030101_01	Snake	2AB	18.6 Miles	2020	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Flat Creek	WYSR170401030205_01	Snake	2AB	8 Miles	1999	5	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Flat Creek	WYSR170401030205_02	Snake	2AB	3.4 Miles	2020	5	NA	NA	--	NA	NA	NA	Full	NA	Not	NA	NA
Flat Creek	WYSR170401030205_03	Snake	2AB	21.4 Miles	2020	2	NA	NA	--	NA	NA	NA	Full	NA	NA	NA	NA
Clark's Draw	WYSR170401030305_01	Snake	3B	3.2 Miles	2020	2	NA	--	--	--	NA	--	Full	NA	NA	NA	--
Crow Creek	WYSR170401050102_01	Snake	2AB	15.6 Miles	2014	5	NA	Not	NA	--	NA	NA	NA	NA	Not	NA	NA
Stump Creek	WYSR170401050203_01	Snake	2AB	5.6 Miles	2007	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Salt River	WYSR170401050309_01	Snake	2AB	7.5 Miles	2007	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Middle Fork Crow Creek	WYSP101900090101_01	South Platte	2AB	1.5 Miles	2008	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
North Branch North Fork Crow Creek	WYSP101900090104_01	South Platte	2AB	0.2 Miles	2007	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crow Creek	WYSP101900090107_01	South Platte	2AB	9.4 Miles	2008	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crow Creek	WYSP101900090107_02	South Platte	2C	3.7 Miles	2009	5	NA	--	--	Not	NA	--	Not	NA	Not	NA	NA
Crow Creek	WYSP101900090107_03	South Platte	2C	0.7 Miles	2009	5	NA	--	--	Not	NA	--	Not	NA	Not	NA	--
Crow Creek	WYSP101900090107_04	South Platte	2AB	3.4 Miles	2009	5	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Crow Creek	WYSP101900090107_05	South Platte	2AB	3.1 Miles	2010	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Crow Creek	WYSP101900090203_01	South Platte	2C	10.1 Miles	2009	4A	NA	--	--	NA	NA	--	Not	NA	NA	NA	--
North Tongue River	WYTR100901010101_01	Tongue	1	11.1 Miles	2003	5	NA	NA	NA	--	NA	NA	Not	NA	NA	NA	NA
Prune Creek	WYTR100901010104_01	Tongue	2AB	5.4 Miles	2002	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
South Fork Tongue River	WYTR100901010104_02	Tongue	1	11.4 Miles	2009	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Columbus Creek	WYTR100901010106_01	Tongue	2AB	3.1 Miles	2001	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Smith Creek	WYTR100901010106_02	Tongue	2AB	5.8 Miles	2001	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Little Tongue River	WYTR100901010107_01	Tongue	2AB	79 Miles	2006	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Little Tongue River	WYTR100901010107_02	Tongue	2AB	4.8 Miles	2006	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Fivemile Creek	WYTR100901010108_01	Tongue	3B	2.1 Miles	2001	5	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Tongue River	WYTR100901010108_02	Tongue	2AB	7.5 Miles	2018	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Wolf Creek	WYTR100901010110_01	Tongue	2AB	10.6 Miles	2008	5	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Tongue River	WYTR100901010111_01	Tongue	2AB	13.5 Miles	2009	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Tongue River	WYTR100901010111_02	Tongue	2AB	4.7 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
West Fork Big Goose Creek	WYTR100901010203_01	Tongue	2AB	95.5 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Coney Creek	WYTR100901010203_02	Tongue	2AB	13.54 Miles	2004	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Park Creek	WYTR100901010204_01	Tongue	2AB	2.8 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Rapid Creek	WYTR100901010204_02	Tongue	2AB	3.2 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Big Goose Creek	WYTR100901010205_01	Tongue	2AB	19.2 Miles	2005	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Beaver Creek	WYTR100901010205_02	Tongue	3B	6.5 Miles	1999	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Sackett Creek	WYTR100901010207_01	Tongue	2AB	3.1 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Jackson Creek	WYTR100901010207_02	Tongue	2AB	6.4 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Little Goose Creek	WYTR100901010207_03	Tongue	2AB	3 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Little Goose Creek	WYTR100901010208_01	Tongue	2AB	3.5 Miles	2005	4A	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
McCormick Creek	WYTR100901010208_02	Tongue	3B	2.2 Miles	2003	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Kruse Creek	WYTR100901010208_03	Tongue	3B	2.5 Miles	1999	4A	NA	NA	--	--	NA	--	Not	NA	NA	NA	--
Little Goose Creek	WYTR100901010208_04	Tongue	2AB	5.3 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Goose Creek	WYTR100901010209_01	Tongue	2AB	12.7 Miles	2005	4A	NA	Not	--	--	NA	NA	Not	NA	Not	NA	NA
Soldier Creek	WYTR100901010209_02	Tongue	2AB	3.1 Miles	1999	4A	NA	NA	--	--	NA	NA	Not	NA	NA	NA	NA
Soldier Creek	WYTR100901010209_03	Tongue	2AB	17 Miles	2003	3	NA	NA	--	--	NA	NA	NA	NA	II	NA	NA
Soldier Creek	WYTR100901010209_04	Tongue	2AB	7.3 Miles	2009	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Tongue River	WYTR100901010301_01	Tongue	2AB	22.1 Miles	2001	5	NA	Not	--	--	NA	NA	NA	NA	NA	NA	NA
Prairie Dog Creek	WYTR100901010400_01	Tongue	2AB	47.2 Miles	2010	5	NA	Not	--	--	NA	Not	Not	NA	Full	NA	NA
Meade Creek	WYTR100901010401_01	Tongue	2AB	1.1 Miles	2010	5	NA	NA	--	--	NA	Not	Not	NA	NA	NA	NA
Prairie Dog Creek	WYTR100901010401_02	Tongue	2AB	4 Miles	2018	5	NA	NA	--	NA	NA	NA	Not	NA	NA	NA	NA
Prairie Dog Creek	WYTR100901010402_01	Tongue	2AB	6.7 Miles	2010	5	NA	Not	--	--	NA	Not	Not	NA	Full	NA	NA
Wildcat Creek	WYTR100901010402_02	Tongue	3B	0.8 Miles	2010	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--
Dutch Creek	WYTR100901010405_01	Tongue	3B	1.9 Miles	2010	4A	NA	--	--	--	NA	--	Not	NA	NA	NA	--

Waterbody Name	Assessment Unit ID	Basin	Class	Miles/Acres	Year Assessed	Segment IR Category	Agriculture	Cold water game fish	Warm water game fish	Nongame Fish	Industry	Drinking water	Recreation	Scenic Value	Aquatic life other than fish	Wildlife	Fish consumption
Clarks Fork Yellowstone River	WYYR100700060101_01	Yellowstone	1	6.8 Miles	1999	4A	NA	Not	--	--	NA	NA	NA	NA	Not	NA	NA
Squaw Creek	WYYR100700060106_01	Yellowstone	2AB	17.9 Miles	1998	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA
Dead Indian Creek	WYYR100700060304_01	Yellowstone	2AB	6.9 Miles	2005	2	Full	Full	--	--	Full	NA	NA	NA	Full	Full	NA

Note: This table is sorted first by basin (alphabetically) and then by assessment unit ID (alphanumerically).

Appendix D. 303(d) List

Wyoming's 2020 Section 303(d) List									
Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
Twin Creek	WYBH100800030106_03	Big Horn	From Old Highway 287 downstream 15.6 miles to the confluence with the Popo Agie River	2AB	15.6 Miles	2014	Aquatic Life other than Fish	SEDIMENTATION/ SILTATION	LIVESTOCK (GRAZING OR FEEDING OPERATIONS)
									SOURCE UNKNOWN
							Cold Water Fishery	SEDIMENTATION/ SILTATION	LIVESTOCK (GRAZING OR FEEDING OPERATIONS)
Little Popo Agie River	WYBH100800030108_03	Big Horn	From the confluence with Willow Creek to a point 4.5 miles upstream	2AB	4.5 Miles	2013	Aquatic Life other than Fish	OIL AND GREASE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
							Cold Water Fishery	OIL AND GREASE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
Middle Fork Popo Agie River	WYBH100800030207_01	Big Horn	From the confluence with Baldwin Creek to a point 4.0 miles upstream	2AB	4 Miles	2001	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Hornecker Creek	WYBH100800030207_03	Big Horn	From the confluence with Middle Fork Popo Agie River upstream 1.5 miles to Sinks Canyon Road	2AB	1.5 Miles	2018	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Poison Creek	WYBH100800050404_01	Big Horn	From the confluence with Boysen Reservoir to a point 2.0 miles upstream	2AB	2 Miles	2006	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Muddy Creek	WYBH100800050607_01	Big Horn	From the confluence with Boysen Reservoir upstream to the Wind River Indian Reservation	2AB	11.8 Miles	2006	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Bridger Creek	WYBR160101010801_01	Bear	Entire watershed upstream of the Utah border	3B	191.4 Miles	2003	Aquatic Life other than Fish	SEDIMENTATION/ SILTATION	GRAZING IN RIPARIAN OR SHORELINE ZONES

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Wyoming's 2020 Section 303(d) List									
Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
Little Sandy River	WYGR140401040203_01	Green	From the northern boundary of Section 33-Township 28 North-Range 104 West downstream 17.7 Miles to the Sublette/Sweetwater County line	2AB	17.7 Miles	2010	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION
									RANGELAND GRAZING
									WILDLIFE OTHER THAN WATERFOWL
							Cold Water Fishery	SEDIMENTATION/SILTATION	HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION
									RANGELAND GRAZING
									WILDLIFE OTHER THAN WATERFOWL
Bitter Creek	WYGR140401050506_01	Green	From the confluence with the Green River upstream to Point of Rocks	2C	58.1 Miles	2006	Aquatic Life other than Fish	CHLORIDE	NATURAL SOURCES
									SOURCE UNKNOWN
							Non-Game Fish	CHLORIDE	NATURAL SOURCES
									SOURCE UNKNOWN
Smiths Fork	WYGR140401070208_01	Green	From the confluence with the Blacks Fork upstream to the confluence with Cottonwood Creek	2AB	4 Miles	2006	Aquatic Life other than Fish	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	SOURCE UNKNOWN
							Cold Water Fishery	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	SOURCE UNKNOWN
Hams Fork	WYGR140401070701_01	Green	From below the Kemmerer-Diamondville WWTF to a point 7.6 miles downstream	2AB	7.6 Miles	2005	Aquatic Life other than Fish	PH	MUNICIPAL POINT SOURCE DISCHARGES
							Cold Water Fishery	PH	MUNICIPAL POINT SOURCE DISCHARGES
Roaring Fork Little Snake River	WYLS140500030106_01	Little Snake	From the confluence with a tributary draining the Standard Mine	2AB	1.8 Miles	2014	Aquatic Life other than Fish	COPPER	HARDROCK MINING DISCHARGES (PERMITTED)

Wyoming's 2020 Section 303(d) List									
Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
			downstream 1.8 miles to the confluence with an unnamed tributary				Cold Water Fishery	COPPER	HARDROCK MINING DISCHARGES (PERMITTED)
Savery Creek	WYLS140500030408_01	Little Snake	From the confluence with Little Sandstone Creek downstream to the confluence with the Little Snake River	2AB	13.7 Miles	1998	Aquatic Life other than Fish	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	GRAZING IN RIPARIAN OR SHORELINE ZONES
							Cold Water Fishery	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	GRAZING IN RIPARIAN OR SHORELINE ZONES
West Fork Loco Creek	WYLS140500030408_02	Little Snake	Entire West Fork Loco Creek watershed upstream from the confluence with Loco Creek	2AB	12.8 Miles	1998	Aquatic Life other than Fish	NUTRIENTS	GRAZING IN RIPARIAN OR SHORELINE ZONES
								PHYSICAL SUBSTRATE HABITAT ALTERATIONS	GRAZING IN RIPARIAN OR SHORELINE ZONES
								TEMPERATURE	GRAZING IN RIPARIAN OR SHORELINE ZONES
							Cold Water Fishery	NUTRIENTS	GRAZING IN RIPARIAN OR SHORELINE ZONES
								PHYSICAL SUBSTRATE HABITAT ALTERATIONS	GRAZING IN RIPARIAN OR SHORELINE ZONES
								TEMPERATURE	GRAZING IN RIPARIAN OR SHORELINE ZONES
Muddy Creek	WYLS140500040308_01	Little Snake	From below the confluence with Youngs Draw upstream to the confluence with Deep Creek	2C	7.7 Miles	2009	Aquatic Life other than Fish	CHLORIDE	NATURAL SOURCES
									SOURCE UNKNOWN
								SELENIUM	NATURAL SOURCES
									SOURCE UNKNOWN
							Non-Game Fish	CHLORIDE	NATURAL SOURCES
									SOURCE UNKNOWN
								SELENIUM	NATURAL SOURCES
									SOURCE UNKNOWN

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Bear Creek	WYNP101800020104_01	North Platte	From the confluence with Rambler Creek downstream 0.7 miles to the confluence with Rob Roy Reservoir	2AB	0.7 Miles	2014	Cold Water Fishery	COPPER	HARDROCK MINING DISCHARGES (PERMITTED)
Rambler Creek	WYNP101800020104_03	North Platte	From the confluence with Bear Creek to a point 0.5 miles upstream	3B	0.5 Miles	2014	Aquatic Life other than Fish	COPPER	HARDROCK MINING DISCHARGES (PERMITTED)
Little Medicine Bow River	WYNP101800050103_02	North Platte	From County Road 2E downstream 26.2 miles to the confluence with Sheep Creek	2AB	26.2 Miles	2014	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	SURFACE MINING
							Cold Water Fishery	SEDIMENTATION/SILTATION	SURFACE MINING
Crooks Creek	WYNP101800060603_01	North Platte	From the confluence with Mason Creek to a point 1.4 miles downstream	2AB	1.4 Miles	1998	Aquatic Life other than Fish	OIL AND GREASE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
							Cold Water Fishery	OIL AND GREASE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
Poison Spring Creek	WYNP101800070302_01	North Platte	From Casper Canal downstream to the confluence with the North Platte River	3B	8.2 Miles	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Rasmus Lee Lake	WYNP101800070302_02	North Platte	Within the Kendrick Reclamation Project	3B	85.16 Acres	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Goose Lake	WYNP101800070302_03	North Platte	Within the Kendrick Reclamation Project	3B	30.1 Acres	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Oregon Trail Drain	WYNP101800070303_01	North Platte	Within the Kendrick Reclamation Project	3B	8.6 Miles	1999		SELENIUM	CROP PRODUCTION (IRRIGATED)

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							Aquatic Life other than Fish		NATURAL SOURCES
Poison Spider Creek	WYNP101800070406_01	North Platte	From the confluence with the North Platte River to the confluence with Iron Creek, within the Kendrick Reclamation Project	2AB	1.3 Miles	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
							Cold Water Fishery	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Poison Spider Creek	WYNP101800070406_02	North Platte	From the confluence with Iron Creek to a point 5.8 miles upstream	2C	5.8 Miles	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
							Non-Game Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Poison Spider Creek	WYNP101800070406_03	North Platte	From the HUC 12 boundary (101800070406) to a point 6.0 miles downstream, within the Kendrick Reclamation Project	3B	6 Miles	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Ilco Pond	WYNP101800070503_01	North Platte	NE S13 T35N R81W, within HUC 12 boundary (101800070503)	3B	1.1 Acres	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Casper Creek	WYNP101800070504_01	North Platte	From the confluence with the North Platte River to a point 21.1 miles upstream, within the Kendrick Reclamation Project	2AB	21.1 Miles	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
							Cold Water Fishery	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES

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Thirty-three Mile Reservoir	WYNP101800070703_01	North Platte	Along South Fork Casper Creek, within Kendrick Reclamation Project	3B	30.2 Acres	1999	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Little Laramie River	WYNP101800100605_01	North Platte	From Mandel Lane upstream to Snowy Range Road	2AB	15.7 Miles	2011	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Laramie River	WYNP101800100707_01	North Platte	A 2.9 mile section of stream intersecting Lone Lane, below Bosler Junction	2AB	2.9 Miles	2011	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Wheatland Creek	WYNP101800110502_01	North Platte	From the confluence with Rock Creek downstream to Wheatland Highway	2C	2.4 Miles	2014	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Rock Creek	WYNP101800110502_02	North Platte	Entire watershed above the confluence with Wheatland Creek	2C	34.9 Miles	2001	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Powder River	WYPR100902020102_00	Powder	From the confluence with Salt Creek upstream to the confluence with the South Fork Powder River	2AB WW	15.9 Miles	2000	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
							Warm Water Fishery	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
Powder River	WYPR100902020103_01	Powder	From the confluence with Salt Creek downstream to the confluence with Soldier Creek	2AB WW	19.3 Miles	2010	Aquatic Life other than Fish	CHLORIDE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
								SELENIUM	CROP PRODUCTION (IRRIGATED)

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Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
									NATURAL SOURCES
									SOURCE UNKNOWN
							Drinking Water	ARSENIC	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
									SOURCE UNKNOWN
							Warm Water Fishery	CHLORIDE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
								SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
Powder River	WYPR100902020600_01	Powder	From the confluence with Soldier Creek downstream to the confluence with Crazy Woman Creek	2AB WW	100.6 Miles	2010	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
							Drinking Water	ARSENIC	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
									SOURCE UNKNOWN
							Warm Water Fishery	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
South Fork Powder River	WYPR100902030400_01	Powder	From the confluence with Cloud Creek to a point 47.2 miles downstream	2C	47.2 Miles	2007	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
							Non-Game Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES

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									SOURCE UNKNOWN
Willow Creek	WYPR100902030403_01	Powder	From the confluence with the South Fork Powder River to a point 10.5 miles upstream	2AB	10.5 Miles	2007	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
							Cold Water Fishery	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
Posey Creek	WYPR100902030404_01	Powder	From the confluence with the South Fork Powder River to a point 8.0 miles upstream	3B	8 Miles	2007	Aquatic Life other than Fish	SELENIUM	CROP PRODUCTION (IRRIGATED)
									NATURAL SOURCES
									SOURCE UNKNOWN
Murphy Creek	WYPR100902030407_01	Powder	From the confluence with the South Fork Powder River to a point 12.2 miles upstream	3B	12.2 Miles	2007	Aquatic Life other than Fish	SELENIUM	NATURAL SOURCES
									SOURCE UNKNOWN
Salt Creek	WYPR100902040300_01	Powder	From Powder River upstream to Castle Creek.	2C	45.3 Miles	1998	Aquatic Life other than Fish	OIL AND GREASE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
								SELENIUM	NATURAL SOURCES
									PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
									SOURCE UNKNOWN
							Non-Game Fish	OIL AND GREASE	PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
								SELENIUM	NATURAL SOURCES

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Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
									PETROLEUM/NATURAL GAS PRODUCTION ACTIVITIES (PERMITTED)
									SOURCE UNKNOWN
Crazy Woman Creek	WYPR100902050305_01	Powder	From the confluence with the Powder River to a point 9.2 miles upstream	2AB	9.2 Miles	2007	Drinking Water	MANGANESE	NATURAL SOURCES
									SOURCE UNKNOWN
Dalton Ditch	WYPR100902060303_02	Powder	Within and near the town of Story	3B	0.3 Miles	2005	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Piney-Cruse Ditch	WYPR100902060303_03	Powder	From the confluence with North Piney Creek to a point 2.2 miles upstream	3B	2.2 Miles	2005	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Dalton Ditch	WYPR100902060303_04	Powder	From Cottage Grove to a point 0.04 miles (232 feet) upstream	3B	0.04 Miles	2014	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Little Powder River	WYPR100902080500_01	Powder	From the WY/MT state line upstream to the confluence with Spring Creek	2AB	58.7 Miles	2001	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
North Branch North Fork Crow Creek	WYSP101900090104_01	South Platte	From FS Road 701 upstream 300 yards	2AB	0.2 Miles	2007	Recreation	ESCHERICHIA COLI (E. COLI)	GRAZING IN RIPARIAN OR SHORELINE ZONES
Crow Creek	WYSP101900090107_02	South Platte	From 0.7 miles below Morrie Avenue downstream to the inlet of Hereford Reservoir #1	2C	3.7 Miles	2009	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
							Non-Game Fish	SEDIMENTATION/SILTATION	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

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Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
Crow Creek	WYSP101900090107_03	South Platte	From Morrie Avenue to a point 0.7 miles downstream	2C	0.7 Miles	2009	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
							Non-Game Fish	SEDIMENTATION/SILTATION	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
Crow Creek	WYSP101900090107_04	South Platte	From Morrie Avenue upstream to Happy Jack Road	2AB	3.4 Miles	2009	Aquatic Life other than Fish	SEDIMENTATION/SILTATION	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
							Cold Water Fishery	SEDIMENTATION/SILTATION	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
Fish Creek	WYSR170401030101_01	Snake	Entirety of Fish Creek	2AB	18.6 Miles	2020	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Flat Creek	WYSR170401030205_01	Snake	High School Road downstream to the confluence with the Snake River	2AB	8 Miles	1999	Aquatic Life other than Fish	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
							Cold Water Fishery	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	DISCHARGES FROM MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)
							Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Flat Creek	WYSR170401030205_02	Snake	High School Road to the confluence with Cache Creek	2AB	3.4 Miles	2020	Aquatic Life other than Fish	PHYSICAL SUBSTRATE HABITAT ALTERATIONS	SOURCE UNKNOWN
Crow Creek	WYSR170401050102_01	Snake	From the Wyoming/Utah border downstream to the confluence with the Salt River	2AB	15.6 Miles	2014	Aquatic Life other than Fish	SELENIUM	MINE TAILINGS
							Cold Water Fishery	SELENIUM	MINE TAILINGS

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Water-body Name	AUID	Basin	Location Description	Class	Miles / Acres	Cycle First Listed	Impaired Use	Cause of Impairment	Source
North Tongue River	WYTR100901010101_01	Tongue	From Road 171 upstream to the confluence with Pole Creek	1	11.1 Miles	2003	Recreation	FECAL COLIFORM	GRAZING IN RIPARIAN OR SHORELINE ZONES
Columbus Creek	WYTR100901010106_01	Tongue	From the confluence with the Tongue River to a point 3.1 miles upstream	2AB	3.1 Miles	2001	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Smith Creek	WYTR100901010106_02	Tongue	From the confluence with the Tongue River to a point 5.8 miles upstream	2AB	5.8 Miles	2001	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Little Tongue River	WYTR100901010107_02	Tongue	From the confluence with the Tongue River upstream to the confluence with Frisbee Ditch	2AB	4.8 Miles	2006	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Fivemile Creek	WYTR100901010108_01	Tongue	From the confluence with the Tongue River upstream to the confluence with Hanover Ditch	3B	2.1 Miles	2001	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Tongue River	WYTR100901010108_02	Tongue	From Wolf Creek Road upstream to the confluence with Smith Creek		7.5 Miles	2018	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Wolf Creek	WYTR100901010110_01	Tongue	From the confluence with the Tongue River upstream to the confluence with East Wolf Creek	2AB	10.6 Miles	2008	Recreation	FECAL COLIFORM	SOURCE UNKNOWN
Tongue River	WYTR100901010111_01	Tongue	From Monarch Road upstream to Wolf Creek Road	2AB	13.5 Miles	2009	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN

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Tongue River	WYTR100901010111_02	Tongue	From the confluence with Goose Creek to Monarch Road	2AB	4.7 Miles	2018	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Little Goose Creek	WYTR100901010207_03	Tongue	From the confluence with Kruse Creek to the confluence with Jackson Creek	2AB	3 Miles	2018	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Little Goose Creek	WYTR100901010208_04	Tongue	From Woodland Park Road to a point 5.3 miles upstream	2AB	5.3 Miles	2018	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Tongue River	WYTR100901010301_01	Tongue	From the confluence with Goose Creek downstream to the Montana border	2AB	22.1 Miles	2001	Cold Water Fishery	TEMPERATURE	SOURCE UNKNOWN
Prairie Dog Creek	WYTR100901010400_01	Tongue	From I-90 to a point 47.2 miles downstream	2AB	47.2 Miles	2010	Cold Water Fishery	TEMPERATURE	SOURCE UNKNOWN
							Drinking Water	MANGANESE	NATURAL SOURCES
									SOURCE UNKNOWN
Meade Creek	WYTR100901010401_01	Tongue	From the confluence with Prairie Dog Creek upstream 1.1 miles to the confluence with an unnamed tributary	2AB	1.1 Miles	2010	Drinking Water	MANGANESE	NATURAL SOURCES
									SOURCE UNKNOWN
Prairie Dog Creek	WYTR100901010401_02	Tongue	From I-90 to a point 4.0 Miles upstream	2AB	4 Miles	2018	Recreation	ESCHERICHIA COLI (E. COLI)	SOURCE UNKNOWN
Prairie Dog Creek	WYTR100901010402_01	Tongue	From the confluence with the Tongue	2AB	6.7 Miles	2010	Cold Water Fishery	TEMPERATURE	SOURCE UNKNOWN

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			River to a point 6.7 miles upstream				Drinking Water	MANGANESE	NATURAL SOURCES