

# Idaho's 2022 Integrated Report

**Final**



**State of Idaho**  
**Department of Environmental Quality**



April 2022

## Acknowledgments

The 2022 Integrated Report could not have been completed without the dedicated efforts of Idaho Department of Environmental Quality staff in the state and regional offices. The hard work and assistance of so many has resulted in a transparent, accessible, and comprehensive report on the current conditions of Idaho's surface waters.

Special thanks to Robert Esquivel for your work on the 2022 Integrated Report.

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### Prepared by

Thea Wickersham  
Idaho Department of Environmental Quality  
Surface and Wastewater Division  
1410 North Hilton St.  
Boise, Idaho 83706



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## Abbreviations, Acronyms, and Symbols

§ 305(b)	refers to section 305 subsection (b) of the Clean Water Act, or a report on the quality of all state waters required by this section
§ 303(d)	refers to section 303 subsection (d) of the Clean Water Act, or a list of impaired water bodies still requiring a total maximum daily load required by this section
§ 314	refers to section 314 of the Clean Water Act, or an assessment of status and trends of publicly owned lakes.
ATTAINS	Assessment and TMDL Tracking and Implementation System
AU	assessment unit
BAG	basin advisory group
BMP	best management practice
BURP	Beneficial Use Reconnaissance Program
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CWA	Clean Water Act
DEQ	Idaho Department of Environmental Quality
<i>E. coli</i>	<i>Escherichia coli</i>
EPA	US Environmental Protection Agency
GIS	geographic information system
HAB	harmful algal bloom
HUC	hydrologic unit code
IDAPA	refers to citations of Idaho administrative rules
IDFG	Idaho Department of Fish and Game
IDWR	Idaho Department of Water Resources
IFCAP	Idaho Fish Consumption Advisory Program
IPDES	Idaho Pollutant Discharge Elimination System
ISDA	Idaho State Department of Agriculture
MeHg	methylmercury
NARS	National Aquatic Resource Surveys
NHD	National Hydrography Dataset
QA	quality assurance
QC	quality control
TMDL	total maximum daily load
USC	United States Code
USGS	United States Geological Survey

WAG	watershed advisory group
WBAG	<i>Water Body Assessment Guidance</i>
WBID	water body identification number
WQ-27	water quality measure 27

## Executive Summary

Idaho's 2022 Integrated Report is submitted in compliance with the Clean Water Act (CWA) §§ 305(b), 314, and 303(d) and describes the Idaho Department of Environmental Quality's (DEQ's) ongoing efforts to monitor, assess, track, and restore the chemical, physical, and biological integrity of the state's surface waters.

The 2022 Integrated Report follows the same format as the 2018/2020 Integrated Report and includes the following materials:

- A downloadable PDF of the § 305(b) list (Appendix A).
- An interactive mapping application and downloadable map package that displays assessments results for Idaho's surface waters.
- Appendix K, "External Data Summary"

DEQ developed these materials to increase transparency, accessibility, and public awareness regarding the current conditions of Idaho's surface waters and the DEQ programs in place to protect them.

## 2022 Report Highlights

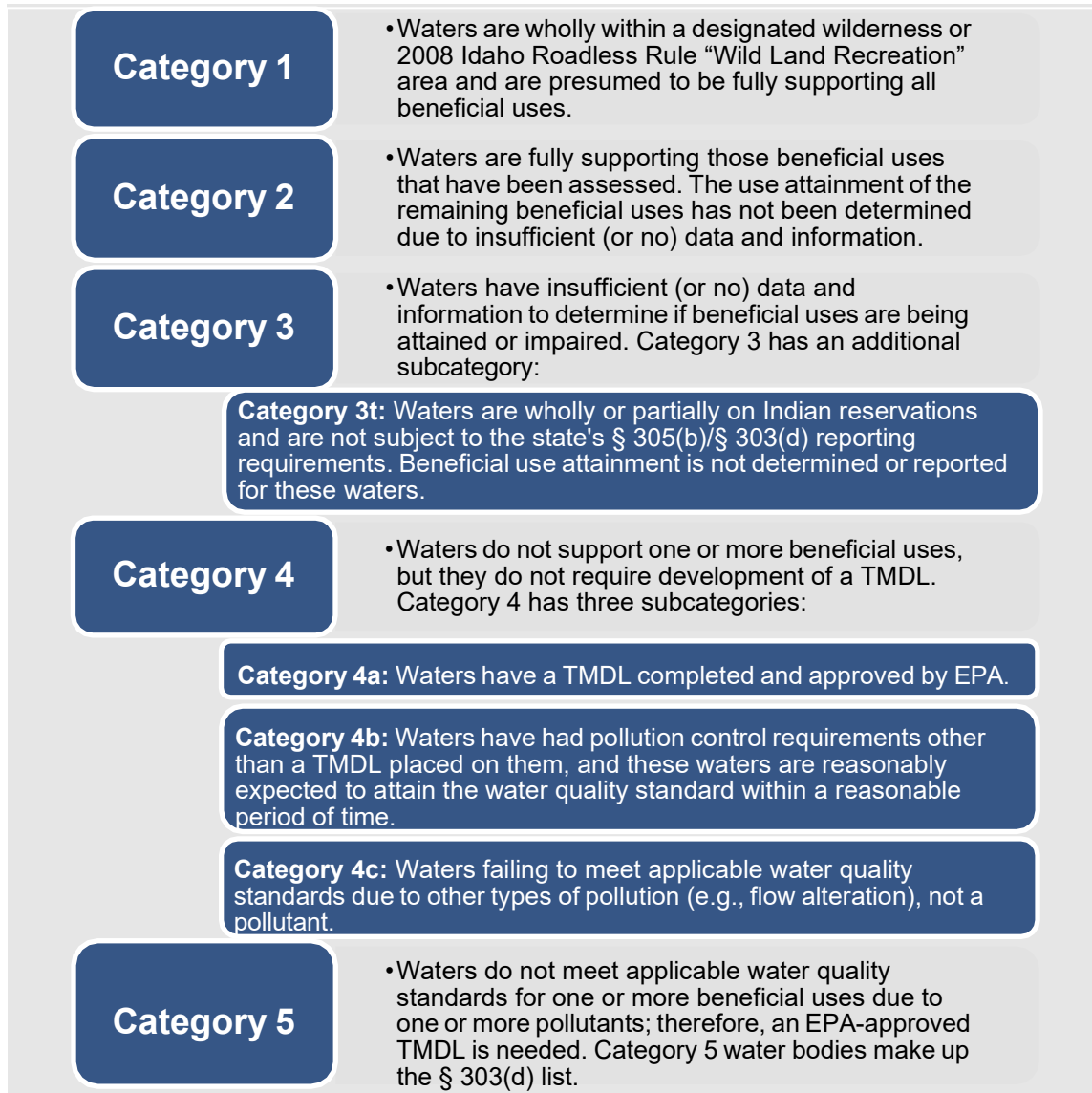
The 2022 Integrated Report provides background information on the state's water resources, including DEQ's water pollution control program and special concerns affecting water quality; an overview of DEQ's surface water monitoring and assessment program, including beneficial use attainment status results for all state surface waters and a discussion about public health issues; an overview of Idaho's ground water monitoring and assessment efforts; and a summary of public participation in developing the Integrated Report. The following highlights are discussed in more detail:

- Since the 2018/2020 Integrated Report, the number of stream miles in Category 3 (unassessed waters) has decreased from 27,115 miles to 26,320 miles.
- DEQ delisted (removed) 46 assessment unit-cause combinations from Categories 4 or 5 (impaired waters).
- Since the 2018/2020 Integrated Report, the US Environmental Protection Agency (EPA) has approved 51 new and revised total maximum daily loads (TMDLs) for waters in the following subbasins: Brownlee Reservoir, Clearwater River, Payette River, South Fork Clearwater River, upper Spokane River, Salmon Creek Falls, and the upper and lower Henrys Fork.

## Category Summaries

A primary objective of the 2022 Integrated Report is to describe the attainment status of Idaho's surface waters relative to their beneficial uses. To achieve this, all state waters are placed into at least one of five primary reporting categories based on the amount of information known about their water quality, whether or not their beneficial uses are








supported, and the types of impairments preventing beneficial use support. Category descriptions for the 2022 Integrated Report are presented in Figure A.



**Figure A. Five categories of the Integrated Report.**







Idaho's waters are subdivided into assessment units (AUs). An AU is a group of similar stream segments within a water body unit with similar hydrology (e.g., Strahler stream order), land-use practices, ownership, or land management. DEQ assigns each AU to one or more reporting categories based on its water body assessment outcome. An AU may be impaired by multiple causes, and in some cases, may be listed in multiple impairment categories (i.e., Categories 4 and 5). Therefore, Category 4 and 5 listings are commonly referred to as AU-cause combinations. Five-part categorization results for Idaho's streams and rivers (referred to as streams) and lakes and reservoirs (referred to as lakes) are presented in Table A and Table B, respectively.

**Table A. Five-part categorization results for Idaho's streams. Percentage of total stream miles is out of 92,056 stream miles. Percentages total more than 100% because some miles are listed in both Categories 4 and 5.**

Category	Miles	Number of AUs	AU-Cause Combinations	Percentage of stream miles
Category 1	4,077	323	-	4.4% 
Category 2	25,552	1,336	-	27.8% 
Category 3	26,320	1,296	-	28.6% 
Category 4a	25,521	-	2,409	27.7% 
Category 4b	51	-	4	0.1% 
Category 4c	6,906	-	542	7.5% 
Category 5	12,761	-	911	13.9% 

0% 10% 20%

**Table B. Five-part categorization results for Idaho's lakes. Percentage of total lake acres is out of 432,390 lake acres. Percentages total more than 100% because some acres are listed in both Categories 4 and 5.**

Category	Acres	Number of AUs	AU-Cause Combinations	Percentage of total lake acres
Category 1	4,349	159	-	1.0% 
Category 2	21,824	39	-	5.0% 
Category 3	175,729	361	-	40.6% 
Category 4a	182,838	-	67	42.3% 
Category 4b	0	-	0	0.0%
Category 4c	85,699	-	10	19.8% 
Category 5	177,366	-	37	41.0% 

0% 10% 20% 30% 40%

AUs are considered to be fully supporting their beneficial uses if they are in Categories 1 or 2, not assessed if they are in Category 3, and not supporting their beneficial uses if they are in Categories 4 and/or 5. The overall support status of Idaho's streams and lakes are presented in Table C and Table D, respectively.

**Table C. Support status of Idaho's streams (percentages based on 92,056 stream miles).**

Support Status	Miles (percent of total)
Fully supporting (Categories 1 or 2)	29,628 (32%)
Not assessed (Category 3)	26,320 (29%)
Not supporting (Categories 4 and/or 5)	36,093 (39%)

**Table D. Support status of Idaho's lakes (percentages based on 432,390 lake acres).**

<b>Support Status</b>	<b>Acres (percent of total)</b>
Fully supporting (Categories 1 or 2)	26,173 (6%)
Not assessed (Category 3)	175,729 (41%)
Not supporting (Categories 4 and/or 5)	230,488 (53%) <sup>a</sup>

a. Lake support status is based on acreage. The percentage (by area) of lakes not supporting beneficial uses is relatively high because a few large lakes dominate the acreage listed in Categories 4 and 5.

## Section 303(d) Summary

CWA § 303(d) requires all states to list and prioritize water bodies that are impaired and need a TMDL. For the 2022 Integrated Report, DEQ added 213 new AU-cause combinations to the § 303(d) list (i.e., Category 5) and delisted 31 AU-cause combinations from the § 303(d) list, bringing the total number of AU-cause combinations on the § 303(d) list to 948. A summary of updates to the § 303(d) list is provided in Table E.

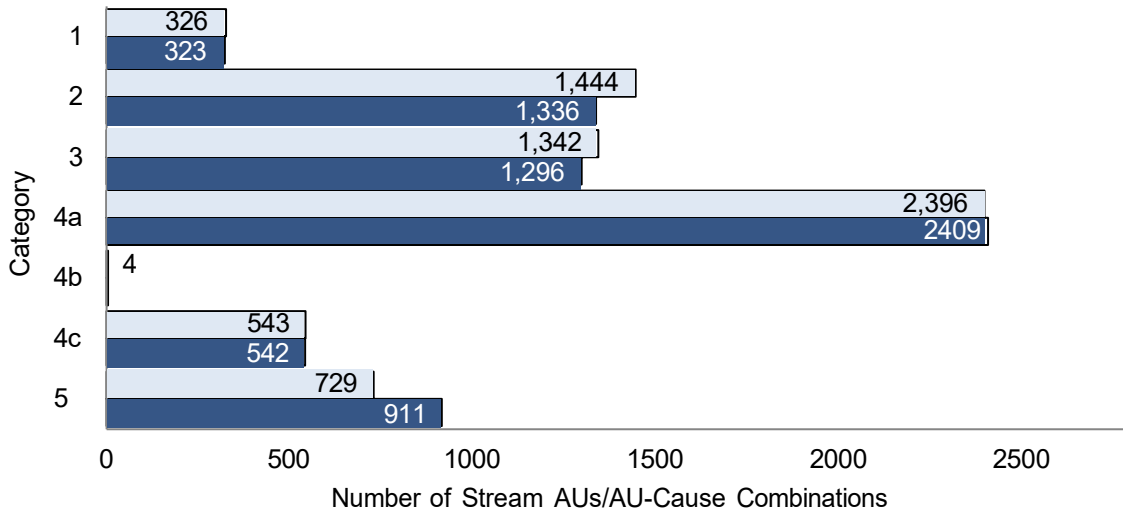
**Table E. Summary of Category 5 updates in the 2022 Integrated Report.**

<b>Explanation</b>	<b>Category 5 AU-Cause Combinations</b>
<b>New Category 5 listings</b>	<b>213</b>
• Based on new and readily available data	211
• Replaces a previous cause due to the identification of an impairment or to create consistency of terminology	2
<b>Category 5 delistings</b>	<b>31</b>
• To create consistency in terminology, duplicative listing, or replaces a previous cause due to identification of impairment	8
• Data indicate standard has been attained	4
• EPA approval of a completed TMDL	19

## 2018/2020–2022 Integrated Report Comparisons

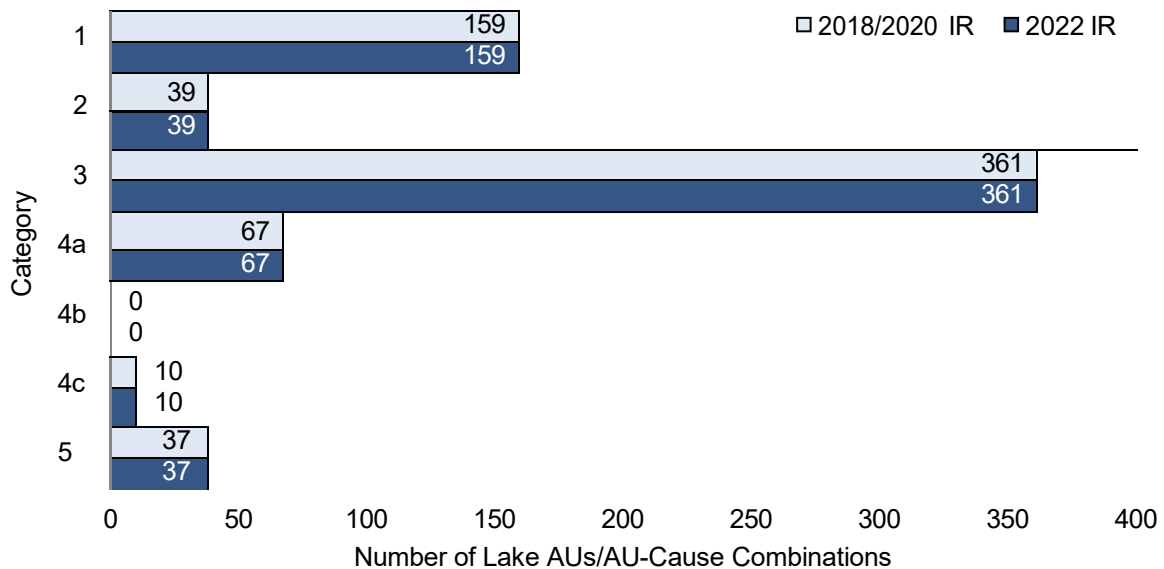
Compared to the 2018/2020 Integrated Report, the extent of stream miles fully supporting beneficial uses (Categories 1 and 2) has decreased from 31,937 miles to 29,628 miles, the extent of stream miles not assessed (Category 3) has decreased from 27,115 miles to 26,320 miles, and the extent of stream miles not supporting beneficial uses (Categories 4 and/or 5) has increased from 33,007 miles to 36,093 miles. DEQ is also reporting a decrease in the number of stream AUs in Categories 1, 2, and 3, and an increase in the number of AU-cause combinations in Categories 4a and 5 (Figure B).





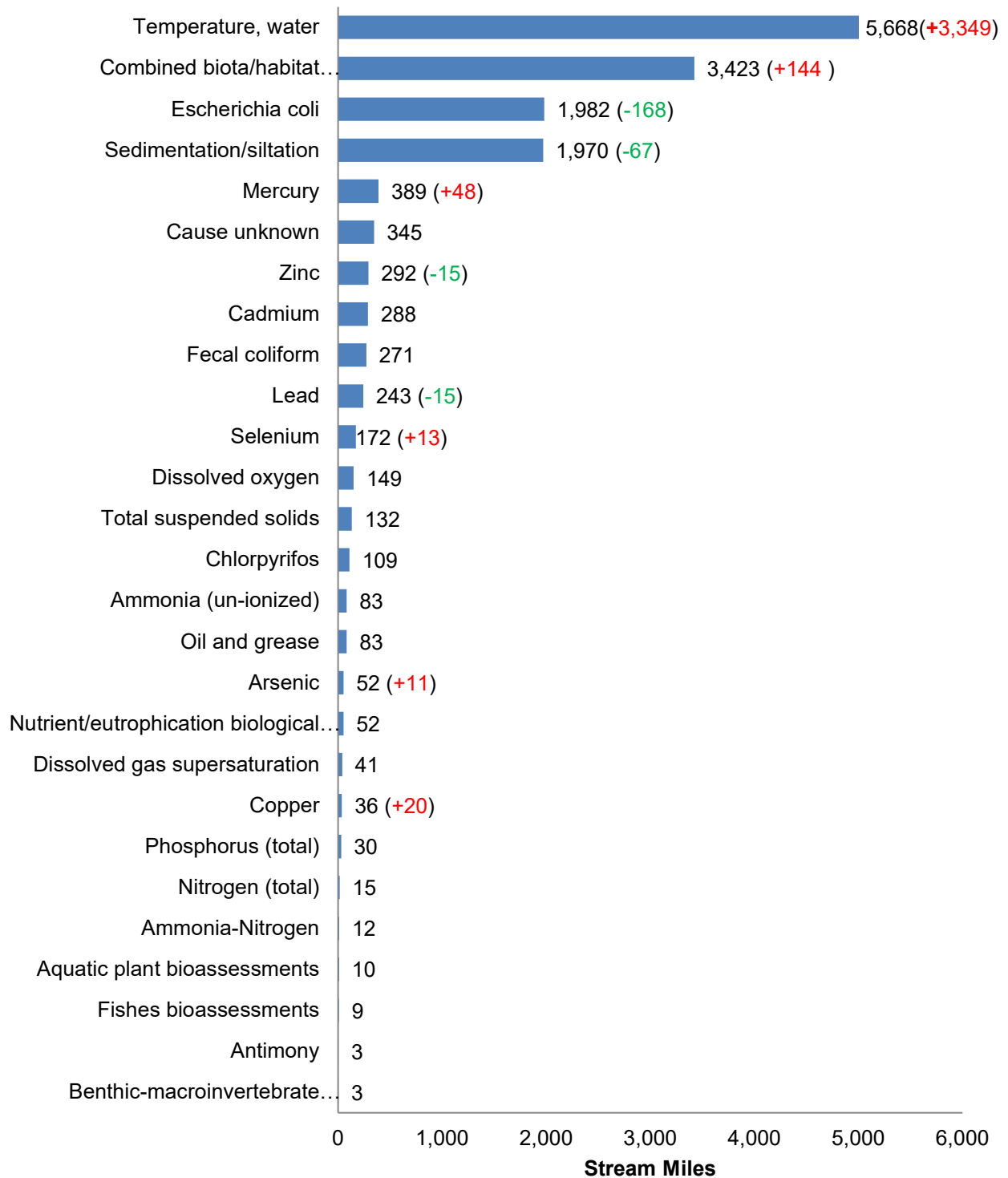
**Figure B. Number of stream AUs (or AU-cause combinations) in Categories 1–5 of the 2018/2020 and 2022 Integrated Reports.**

The extent of lake acres fully supporting beneficial uses, not assessed, and not supporting beneficial uses has remained the same since the 2018/2020 Integrated Report. DEQ is also reporting no change in the number of lake AUs/AU-cause combinations in Categories 1–5 (Figure C).

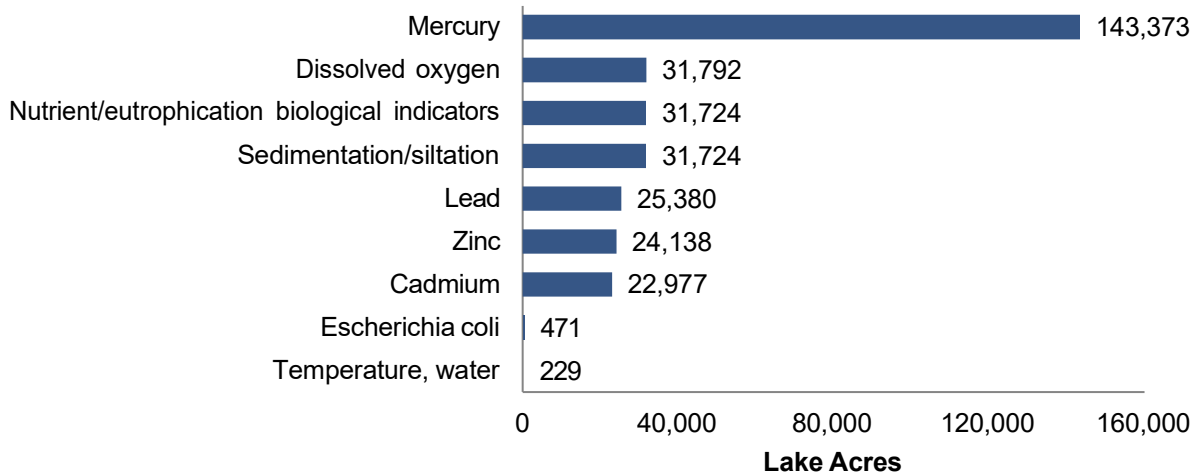


**Figure C. Number of lake AUs (or AU-cause combinations) in Categories 1–5 of the 2018/2020 and 2022 Integrated Reports.**

Idaho's surface waters can be placed on the § 303(d) list for a variety of causes. A summary of § 303(d) causes for Idaho's streams and lakes is provided in Figure D and Figure E, respectively. These figures also show whether the total extent of these causes has increased or decreased since the 2018/2020 Integrated Report.



**Figure D. Extent of Category 5 impairment causes for stream AUs. Numbers in parenthesis indicate change in stream miles since the 2018/2020 Integrated Report.**



**Figure E. Extent of Category 5 impairment causes for lake AUs. Category 5 causes of impairment in Idaho's lakes have remained the same since the 2018/2020 Integrated Report.**

The leading § 303(d) causes of impairment in Idaho's streams are temperature, combined biota/habitat bioassessments, *Escherichia coli* (*E. coli*), and sedimentation/siltation. Since the 2018/2020 Integrated Report, the extent of stream miles on the § 303(d) list for temperature has more than doubled to 5,668 miles. This increase can be attributed to (1) the large amount of temperature data that DEQ received during the public call for data, whereby many streams failed the state's temperature criteria or, if applicable, the 1997 federally promulgated bull trout temperature criterion (40 CFR 131.33) and (2) assessment outcomes described in the *Lochsa River Subbasin Stream Temperature Natural Conditions Assessment* report (Appendix C). The extent of stream miles on the § 303(d) list for sedimentation/siltation and *E. coli* impairments have decreased since the 2018/2020 cycle, mainly due to the development and approval of TMDLs and to new data demonstrating attainment of water quality standards.

CWA §303(d) causes of impairment in Idaho's lakes have remained the same since the 2018/2020 Integrated Report. Until DEQ develops standardized methods for monitoring and assessing lakes and reservoirs, causes associated with lake impairments will change only when DEQ participates in larger lake monitoring projects or acquires new data from outside entities. The impairments listed in Figure E were largely identified in multipartner studies.

# 1 Introduction

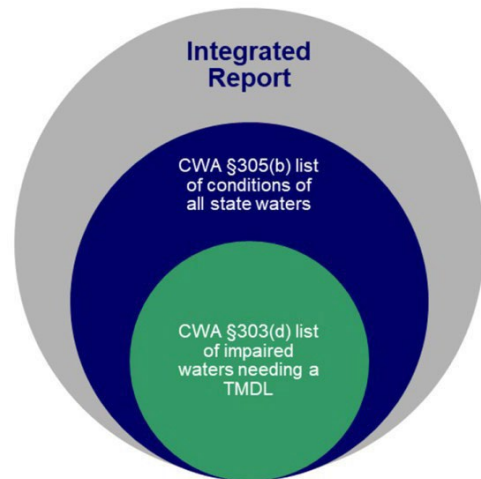
The federal Clean Water Act (CWA) requires each state to submit a biennial report on the quality of its surface waters, and to identify and prioritize those waters that are impaired and need a total maximum daily load (TMDL). As the state agency responsible for implementing the CWA in Idaho, the Idaho Department of Environmental Quality (DEQ) is fulfilling these reporting requirements by submitting the biennial Integrated Report.

The 2022 Integrated Report was developed in compliance with the CWA §§ 305(b), 314, and 303(d), and incorporates DEQ data and other readily available data collected between January 1, 2016 and December 31, 2020. The report provides background information on the state's water resources, including DEQ's water pollution control program and special concerns affecting water quality; an overview of DEQ's surface water monitoring and assessment program, including attainment status results for all state surface waters and a discussion about public health issues; an overview of Idaho's ground water monitoring and assessment efforts; and a summary of public participation in developing the Integrated Report.

## 1.1 Purpose of the Integrated Report

The 2022 Integrated Report serves the following purposes:

- It satisfies reporting requirements of the CWA by documenting the current conditions of all state waters (§ 305(b)), including an assessment of status and trends of publicly owned lakes (§ 314), and listing and prioritizing those waters that are impaired and need a TMDL (§ 303(d)) (Figure 1).
- It informs the public about the status of Idaho's surface waters, enabling interested parties to provide any relevant data or comment on the report's findings.
- It provides a unique opportunity for the public to understand how DEQ is maintaining, improving, and protecting Idaho's waters.

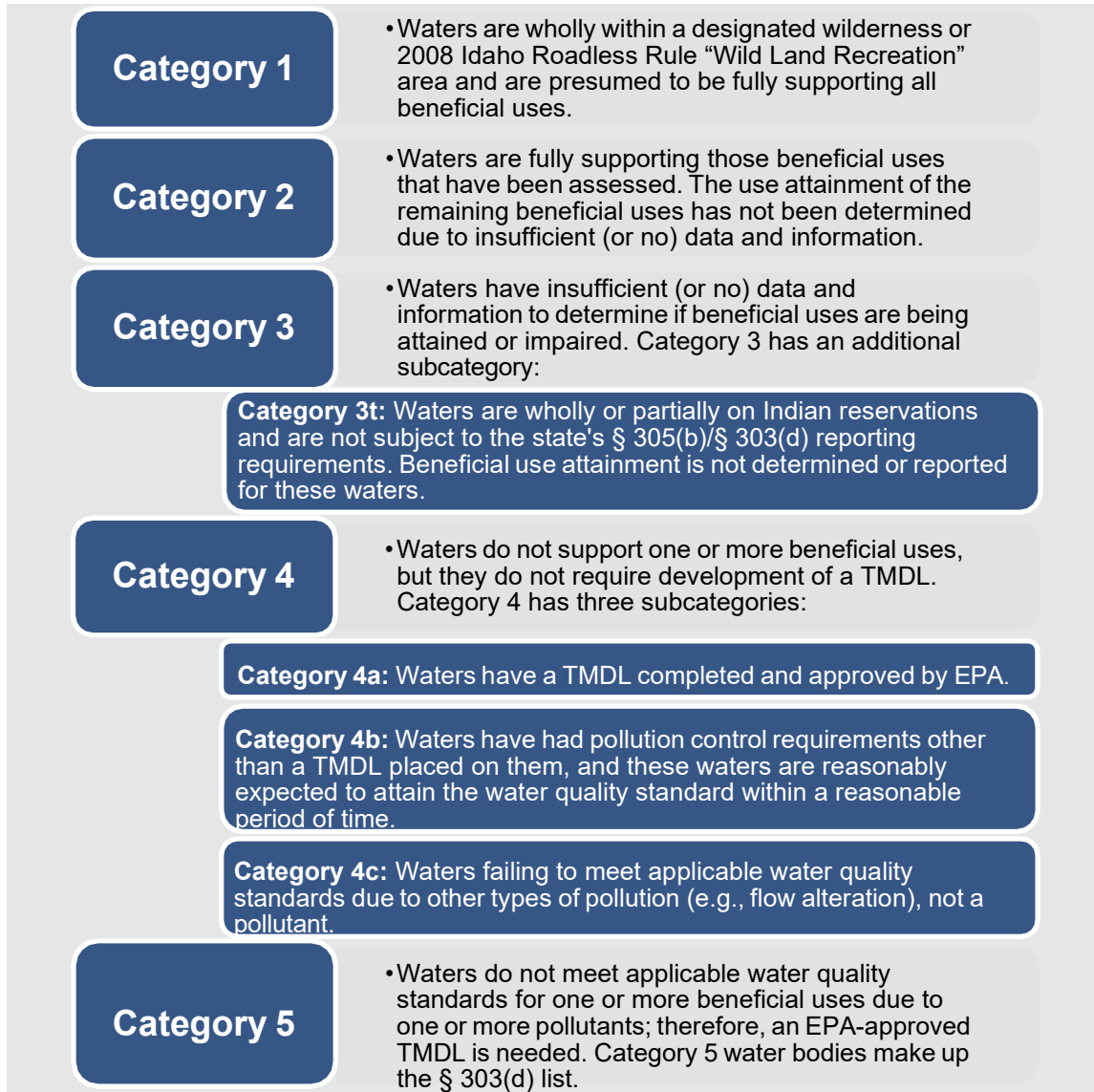


**Figure 1. Components of the Integrated Report. Impaired waters on the § 303(d) list are a subset of waters from the § 305(b) list.**

## 1.2 Integrated Report Categories

A primary objective of the 2022 Integrated Report is to describe the attainment status of Idaho's surface waters relative to their beneficial uses. To achieve this, all state waters are

placed into at least one of five primary reporting categories based on the amount of information known about their water quality, whether or not their beneficial uses are supported, and the types of impairments preventing beneficial use support. Category descriptions for the 2022 Integrated Report are presented in Figure 2.



**Figure 2. Categories for the 2022 Integrated Report.**

For assessment and reporting purposes, DEQ subdivides Idaho's waters into assessment units (AUs). An AU is a group of similar stream segments within a water body unit with similar hydrology (e.g., Strahler stream order), land-use practices, ownership, or land management. DEQ assigns each AU to one or more reporting categories based on its water body assessment outcome. An AU may be impaired by multiple causes, and in some cases, may be listed in multiple impairment categories (i.e., Categories 4 and 5). Therefore, Category 4 and 5 listings are commonly referred to as AU-cause combinations.

## 2 Background Information

Idaho is home to some of the largest natural areas in the country, with abundant natural resources and numerous scenic locations. The state's diverse landscape includes snow-capped mountain ranges, volcanic plains, farmlands, world-class rapids (Figure 3), vast lakes, and steep canyons. Land use in Idaho can be broadly categorized into barren/urban/suburban (5%), agricultural (15%), forest (39%), and rangeland (41%) (Idaho Legislative Services Office 2020). Highly concentrated and expanding urban and industrial centers, along with shrinking agricultural and undeveloped areas, characterize Idaho's current land use trends. Because of Idaho's increasing population and variable land uses, the state's streams, rivers, lakes, and ground water are affected to varying degrees by point and nonpoint sources of pollution.



Figure 3. Black Canyon of the Bear River in southeastern Idaho.

### 2.1 Scope of Waters in the Integrated Report

Idaho has more than 96,000 miles of rivers and streams (referred to as streams) and 469,000 acres of lakes and reservoirs (referred to as lakes), making water one of the state's most important natural resources. These streams and lakes, along with their associated wetlands, provide great natural beauty to the state and supply the water necessary for aquatic life, recreation, wildlife habitat, industry, agriculture, and domestic use. DEQ reports on the quality of approximately 92,056 miles of streams and 432,390 acres of lakes in the Integrated Report. Waters located within the boundaries of Indian reservations are not subject to the state's § 305(b)/§ 303(d) reporting requirements and are not assessed or reported in the Integrated Report. A summary of the state's water resources is presented in Table 1. Idaho's water resources are grouped into six basins and 86 subbasins (Figure 4).

**Table 1. Summary of Idaho's water resources**

Item	Value	Scale	Source <sup>a</sup>
State population (estimate 2020)	1,839,106	n/a	US Census Bureau
Number of basins	6	1:100,000	NHD
Number of subbasins (4th-level HUCs) <sup>b</sup>	86	1:100,000	NHD
Total number of assessment units	5,908	n/a	ATTAINS
• Number of state assessment units	5,676	n/a	ATTAINS
• Number of tribal assessment units	232	n/a	ATTAINS
Total number of stream miles <sup>c</sup>	92,056	n/a	ATTAINS
• Number of perennial stream miles	50,921	1:100,000	ID305B Streams
• Number of intermittent stream miles	42,165	1:100,000	ID305B Streams
• Number of other stream miles	3,560	1:100,000	ID305B Streams
Total number of lake acres <sup>d</sup>	432,390	n/a	ATTAINS
Acres of wetlands	712,270	1:100,000	USGS
Total number of stream miles on Indian reservations	3,399	n/a	ATTAINS
Total number of lake acres on Indian reservations	36,502	n/a	ATTAINS

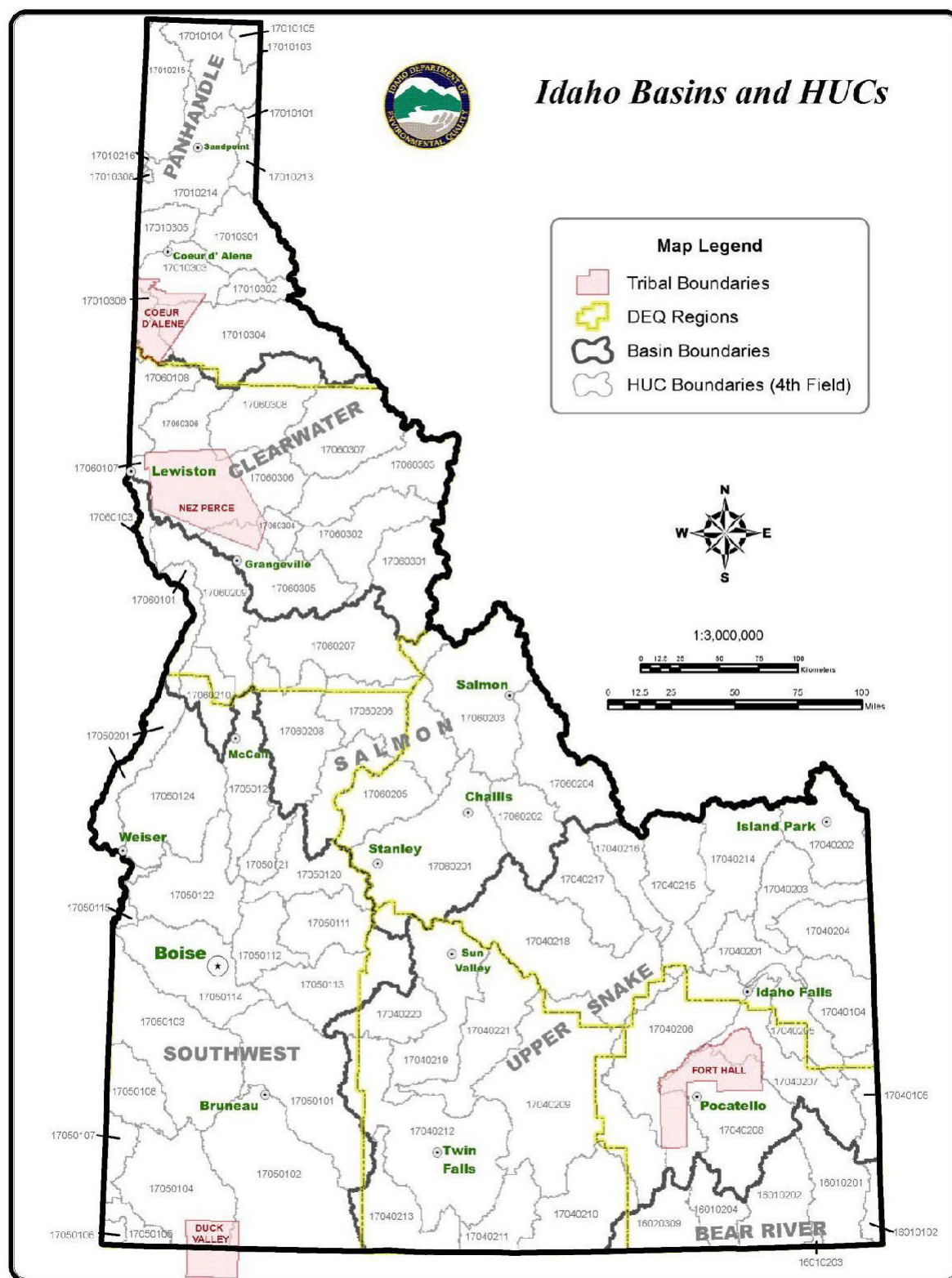
a. National hydrography dataset (NHD); EPA's Assessment, TMDL Tracking and Implementation System (ATTAINS); US Geological Survey (USGS); DEQ's § 305(b) GIS layer for streams (ID305B Streams).

b. Fourth-level hydrologic unit codes (HUCs) refer to the numbered and named watersheds arising from a national standardization of watershed delineation by the USGS. Originally termed a cataloging unit, 4th-level HUCs are commonly referred to as subbasins.

c. Total number of stream miles whose quality is reported on for CWA § 305(b)/§ 303(d) requirements. The number of perennial, intermittent, and other stream miles exceeds the total number of stream miles because artificial paths and connectors that network or connect the hydrograph between rivers, lakes, swamps, and marshes create additional miles, as do portions of the artificial paths that were originally mapped as polygons in NHD data sets. Additionally, mileage from streams wholly or partially on Indian reservations was excluded from the total number of stream miles because tribal waters are not subject to the state's § 305(b)/§ 303(d) reporting requirements.

d. Total number of lake acres whose quality is reported on for CWA § 305(b)/§ 303(d) requirements. Acreage from lakes wholly or partially on Indian reservations was excluded from the total number of lake acres because tribal waters are not subject to the state's § 305(b)/§ 303(d) reporting requirements.







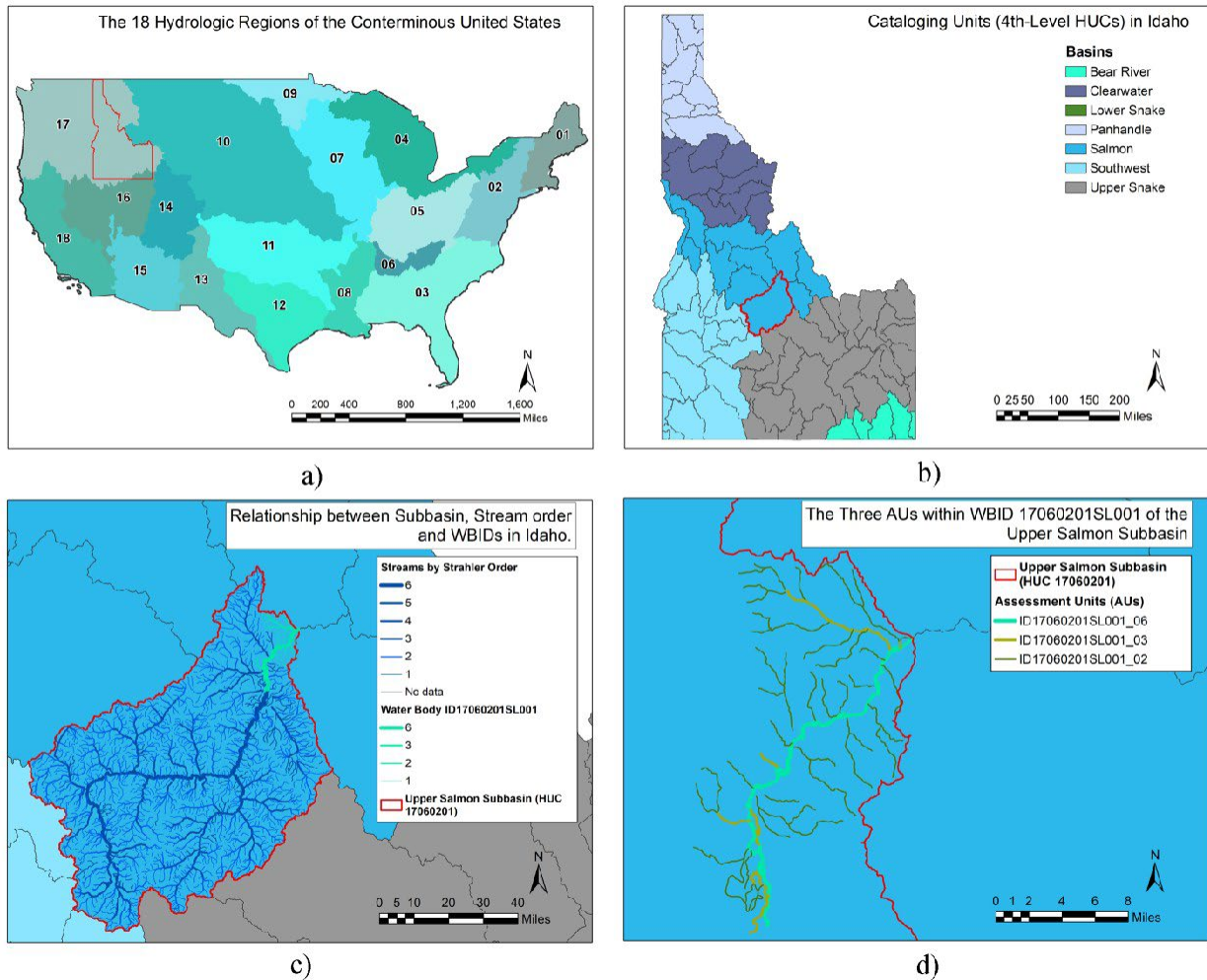
### 2.1.1 Assessment Units

Surface water in Idaho is divided into 2,641 water body units, which are codified in sections 109–160 in Idaho's "Water Quality Standards" (IDAPA 58.01.02) based on subbasins (i.e., 4th-level hydrologic unit codes [HUCs]). Idaho's water body identification system is a georeferenced network of the state's water bodies and is based on a combination of two hydrography scales: 1:100,000 and 1:250,000. Idaho's water bodies were coded to the 1:250,000-scale hydrography and named based on the 1:100,000-scale hydrography. Some water bodies have been combined or split based on land use considerations since the original codification in 2000. Canals (unless they follow a natural channel), stock ponds, and tailing ponds are generally not coded in the system. The numbering system is based on US Geological Survey (USGS) hydrologic units, which divides the nation into successively smaller nested units with unique identifiers, or HUCs, and creates a national standard for water resources planning and data management.

The USGS hydrologic units system includes four levels: the largest are called regions (1st-level); there are 21 regions in the nation, with 18 in the contiguous United States (Figure 5a). Regions are further divided into 221 subregions (2nd-level), 378 accounting units (3rd-level), and 2,264 cataloging units (4th-level)—the smallest element in the hydrologic units system. Although all levels are identified by HUCs—codes that range from two to eight digits—Idaho commonly uses the term HUC to refer to the eight-digit code of a cataloging unit (i.e., the 4th-level HUC), or the area of land it represents (i.e., subbasin). Unless otherwise specified, HUC in this document refers to the eight-digit cataloging unit (4th-level HUC). Idaho has six basins containing 86 HUCs (Figure 5b), two of which (17010103 [Yaak] and 17060107 [Lower Snake]) do not contain water and are not listed in IDAPA 58.01.02.

Idaho's water body numbering is based on HUCs. Within each HUC, waters are subdivided into water body units, which are then numbered using water body identification numbers (WBIDs) found in IDAPA 58.01.02, with numbers beginning at the pour point (i.e., the lowest point and outlet for the HUC) (Figure 5c). Water body units identified in the standard include all named and unnamed tributaries to the named and bounded water body unit. All waters are part of a water body unit.

For assessment and reporting purposes, DEQ further subdivides water body units into AUs (Figure 5d), typically by Strahler stream order, although other factors including land-use practices, land management, and ownership are considered. When subdividing water body units into AUs, DEQ used geographic information systems (GIS) data to identify land use designations and considered local knowledge when evaluating land uses. GIS data was based on the National Land Cover Database, which includes information regarding developed land, forested areas, and agricultural uses. If additional information is available to warrant an AU being further divided, DEQ may split the AU. AUs may be split due to land use changes or geographical or ecological differences.



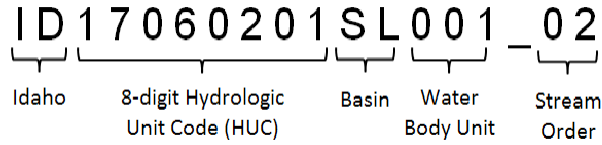
**Figure 5. Relationship between HUCs, water body units, and AUs: (a) USGS hydrologic regions in the nation; (b) 86 4th-level HUCs in Idaho (the highlighted HUC is 17060201—Upper Salmon River subbasin in central Idaho); (c) HUC 17060201, Upper Salmon River subbasin, with water body unit 001 highlighted in green; and (d) water body unit 001 subdivided into three different AUs.**

Using AUs to describe waters of Idaho offers many benefits, primarily that all waters of the state are defined consistently, which is a fundamental requirement of § 305(b) reporting. Because AUs are subdivisions of WBIDs, they have direct ties to IDAPA 58.01.02, so that beneficial uses defined in the standards are clearly tied to water bodies on the landscape. However, unlike their larger parent water body units, which are fixed in the standards, AUs allow for more specificity in assessments and can be more readily changed—split or aggregated—to better tailor assessments to known water quality conditions.

Idaho currently has 5,908 AUs. Of these, 5,676 are considered state AUs and are subject to CWA § 305(b)/§ 303(d) state reporting requirements. The remaining 232 AUs are considered tribal AUs and are not subject to the state's § 305(b)/§ 303(d) reporting requirements (section 2.1.2).

### 2.1.1.1 Referencing Assessment Units in the Integrated Report

AUs are referenced by an alphanumeric code and a written description. Each unique AU identification code begins with “ID” for Idaho, followed by the eight-digit HUC, a two-letter abbreviation for the administrative basin, a three-digit number to identify the specific water body unit, an underscore, and the stream order (Figure 6).



**Figure 6. Example of an AU number.**

The two-letter abbreviation used for the administrative basin relates to the basin designator used in IDAPA 58.01.02. Similarly, the three-digit number used for the specific water body unit relates to the WBID in the standards (e.g., S-1 in IDAPA 58.01.02 becomes SL001 for the AU). Lastly, AU splits are indicated after the stream order with a lowercase letter (e.g., ID17050114SW005\_06a). Table 2 provides a crosswalk between the basin designator for water body units identified in IDAPA 58.01.02 with those used for AUs.

**Table 2. Idaho basin designators for water body units in IDAPA 58.01.02 and AUs.**

Idaho Basin	Water Body Unit Designator	AU Designator
Bear River	B	BR
Clearwater	C	CL
Panhandle	P	PN
Salmon	S	SL
Southwest	SW	SW
Upper Snake	US	SK

### 2.1.2 Tribal Waters Policy

DEQ implemented its tribal waters policy in the 2018/2020 Integrated Report (DEQ 2020) and does not assess or report on the quality of surface waters located within Indian reservations (referred to as tribal waters). To implement this policy, DEQ split AUs at the US Environmental Protection Agency (EPA)-recognized reservation boundaries<sup>1</sup>, removed the support status of beneficial uses from waters within the reservations, and maintained the support status of beneficial uses in state waters that were adjacent to the reservations and on waters that formed the boundary between reservations and Idaho lands.

<sup>1</sup> Splitting AUs and labeling waters as tribal waters is not intended to and does not constitute a determination, waiver, admission, or statement by the State of Idaho regarding the boundaries of any tribal reservation or regarding the authority of the State of Idaho with respect to any water resource affected by this policy.

Tribal AUs are now labeled with a "T" (e.g., ID17010303PN010\_02T), placed in Category 3t, and displayed as purple on DEQ's static maps to differentiate them from the support status determinations of state waters (Figure 7). Beneficial Use Reconnaissance Program (BURP) sites that were located within reservation boundaries and used to make support status determinations on state waters will remain on DEQ's maps, and DEQ will no longer monitor BURP sites on Indian reservations.

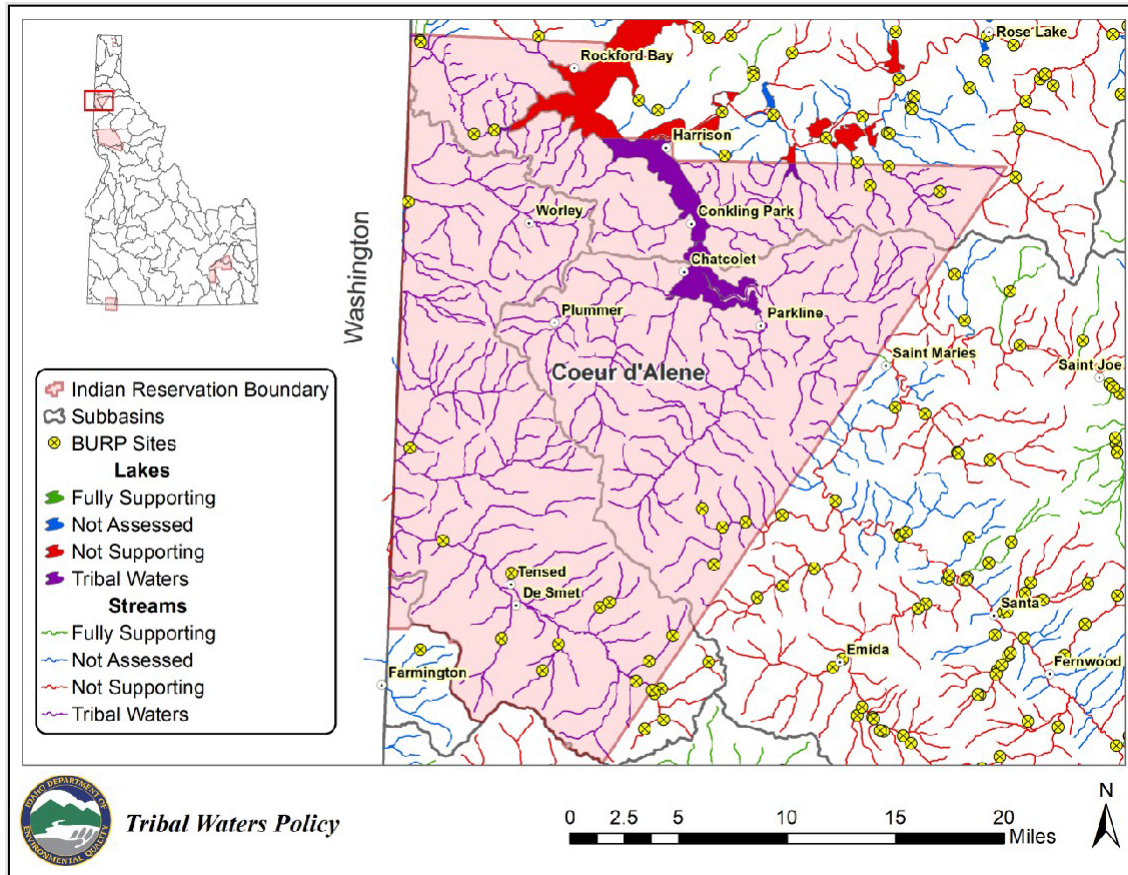


Figure 7. Map indicating tribal waters in Idaho's 2022 Integrated Report.

## 2.2 Water Pollution Control Program

DEQ's Surface and Wastewater Division is responsible for ensuring that the state's surface water resources meet state water quality standards. Within the division, the Surface Water Bureau is responsible for ensuring Idaho's streams, lakes, and wetlands support their beneficial uses and meet state water quality standards. The following subprograms and policies help support this goal.

### 2.2.1 Water Quality Standards Program

Water quality standards are the benchmarks DEQ uses to gauge protection of Idaho's surface waters. Idaho's Water Quality Standards Program is a joint effort between DEQ and EPA. DEQ is responsible for developing and enforcing water quality standards that protect beneficial uses.



EPA develops regulations, policies, and guidance—including recommended water quality criteria—to help Idaho implement the program and to ensure that Idaho's adopted standards are consistent with CWA requirements. EPA has the authority to review and approve or disapprove state standards and, when necessary, to promulgate federal water quality rules. For more information, visit Idaho's [Water Quality Standards](#).

### 2.2.2 Antidegradation Policy

Federal regulations require all states to develop antidegradation policies to protect the existing and designated beneficial uses of their surface waters (40 CFR 131.12). Idaho's antidegradation policy, contained in IDAPA 58.01.02.051, establishes three tiers of water quality protection (Figure 8). Under Idaho rule, the level of protection (i.e., tier) is determined on a water body-by-water body basis and is tied to assessment outcomes in the most recent federally approved Integrated Report. Idaho's antidegradation policy applies to all activities that are subject to Idaho Pollutant Discharge Elimination System (IPDES) permits or CWA § 401 water quality certifications. For more information about Idaho's antidegradation policy and implementation procedures, visit [Water Quality Standards](#) or refer to *Idaho Antidegradation Implementation Procedures* (DEQ 2012a).

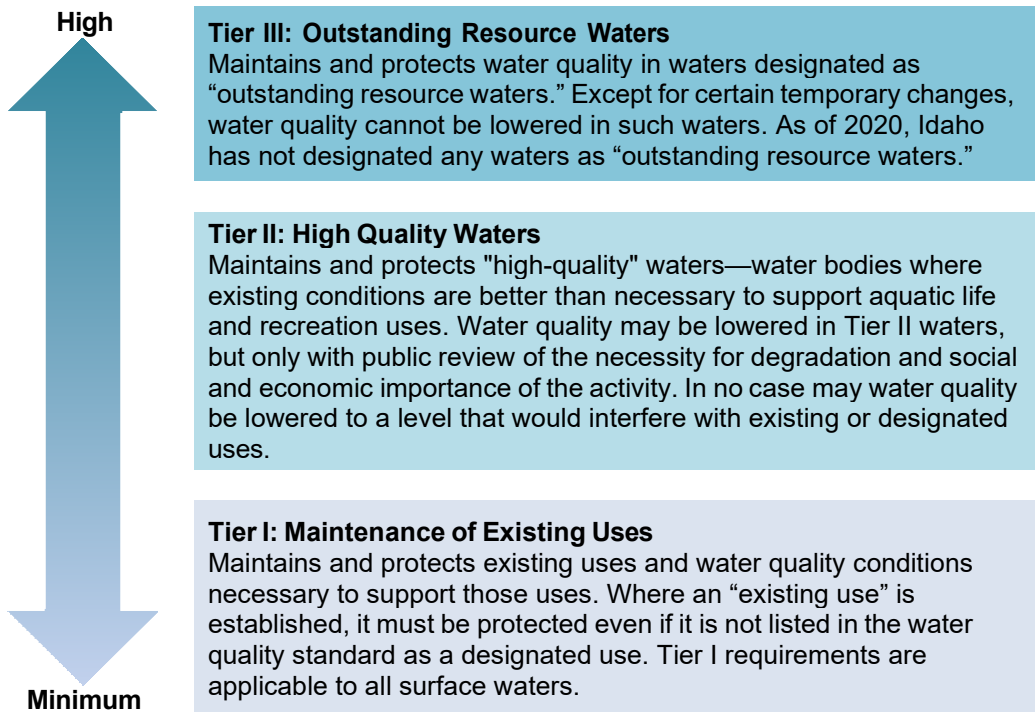


Figure 8. Three tiers of water quality protection identified in Idaho's antidegradation policy.

### 2.2.3 Point Source Control Program

According to the CWA, a point source is any discernible, confined, and discrete conveyance from which pollutants are or may be discharged into waters of the United States. Idaho controls point source pollution through its § 401 Water Quality Certification Program and through the IPDES Program. These DEQ programs ensure that federally permitted and licensed projects, as

well as municipal, industrial, and commercial activities that discharge from a point source, comply with state water quality standards and any other water quality requirements of state law. DEQ is responsible for issuing the following types of permits and certifications:

- **IPDES Permits:** The IPDES Program administers the discharge of pollutants into waters of the United States in Idaho. These discharges include municipal, industrial, storm water, pretreatment controls for certain discharges to publicly owned treatment works, and the sewage sludge (biosolids) management program. IPDES permits are written to comply with state water quality standards and limit the amount of pollution that point sources may discharge into Idaho's surface waters.
- **§ 401 Certifications for § 404 Dredge and Fill Permits:** The CWA requires a permit to conduct water-related construction activities, such as fills for development, water resource projects, and infrastructure development. The US Army Corps of Engineers is responsible for issuing dredge and fill permits in Idaho.
- **§ 401 Certifications for Hydroelectric Power Plants:** State certification is required before the Federal Energy Regulatory Commission may license or relicense nonfederal hydroelectric dams.

For more information about these programs, visit [Permit Options](#).

## 2.2.4 Nonpoint Source Management Program

Nonpoint sources do not have a clear definition in the CWA; rather, they are defined by exclusion (i.e., anything not considered a point source). Nonpoint sources of pollution include, among other things, the cumulative effect of excess fertilizers and pesticides from agricultural and residential lands, atmospheric deposition, and various land use practices including urban development, agriculture, and forestry.

DEQ developed Idaho's initial nonpoint source program in 1989 through the coordinated efforts of representatives from numerous organizations that had an interest in managing nonpoint source water pollution. The following memoranda of understanding guides DEQ's cooperative approach toward nonpoint source management efforts:

- [\*Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho\*](#)—Outlines the roles and responsibilities of the parties in implementing the nonpoint source water quality provisions of the federal CWA for the State of Idaho.
- Appendix to the Memorandum of Understanding Implementing the Nonpoint Source Water Quality Program in the State of Idaho Specifying Implementation of the Agricultural Pollution Abatement Plan, 1991—Identifies roles and responsibilities for implementing the [\*Idaho Agricultural Pollution Abatement Plan\*](#), updated in 2015.

The goal of DEQ's Nonpoint Source Management Program is to prevent and eliminate nonpoint source pollution in all state water bodies. The program focuses predominantly on implementing water quality activities prescribed in TMDLs through the implementation of the federal § 319 grant program and state agricultural best management practice (State Ag BMP) grant program.

These activities are designed to protect and restore beneficial uses and to prevent significant threats to water quality from present and future activities.

DEQ's Nonpoint Source Management Program awards federal § 319 and State Ag BMP grants annually to fund water quality improvement projects that address nonpoint source pollution. For the 5-year period from July 1, 2017 to June 30, 2021, DEQ received grant applications requesting over \$23.1 million, and awarded over \$10.6 million for water quality improvement projects to control nonpoint source pollution. Annually, DEQ awards an average of over \$1.4 million in federal § 319 grants and just under \$670,000 in State Ag BMP grants.

A summary of annual grant requests and awards for the federal § 319 and State Ag BMP programs is presented in Table 3.

**Table 3. Summary of funding requests and awards for Idaho federal § 319 and state agricultural BMP program by state fiscal years 2018–2022.**

State Fiscal Year <sup>a</sup>	Requested (\$)		Funded (\$)		Totals (\$)	
	Federal § 319	State Ag BMP	Federal § 319	State Ag BMP	Requested	Funded
2018	4,373,484	623,612	1,387,379	500,000	4,997,096	1,887,379
2019	3,963,085	1,816,278	1,349,222	790,000	5,779,363	2,139,222
2020	2,311,423	693,702	1,253,994	500,000	3,005,125	1,753,994
2021	3,845,092	616,228	1,602,747	279,000	4,461,320	1,881,747
2022	3,739,564	1,148,354	1,725,289	1,279,000	4,887,918	3,004,289

a. Idaho's state fiscal year is from July 1 through June 30.

## 2.2.5 TMDL Program

CWA § 303(d) requires all states to identify and prioritize water bodies that do not meet state water quality standards. For those water bodies on the § 303(d) list, Idaho must develop water quality improvement plans, called TMDLs, that specify the pollutant load reductions needed in order for those water bodies to achieve water quality standards. TMDLs are typically developed on a subbasin level, which means that water bodies and pollutants within a subbasin are generally addressed in a single document. For more information, visit Idaho's [TMDLs Program](#) to view a table of completed subbasin assessments, TMDLs, implementation plans, and 5-year reviews.

## 2.3 Special State Concerns

The following section addresses special concerns and significant issues affecting Idaho's water quality programs.

### 2.3.1 Cyanobacteria Harmful Algal Blooms

Cyanobacteria harmful algal blooms (HABs) are a water quality concern in Idaho. Although the exact cause of any particular HAB is usually unknown, temperature, calm flow conditions, and excess nutrients can contribute to bloom formation. HABs are dominated by a handful of

cyanobacteria species. These cyanobacteria can produce neurotoxins that affect the brain and nervous system, hepatotoxins that affect the liver and kidneys, and other undesirable conditions such as foul taste and odor and murky water (Figure 9). DEQ developed a HAB response plan in cooperation with the Idaho Department of Health and Welfare and health districts, and coordinates monitoring and response efforts with local water resource management agencies. For more information, see DEQ's [HAB response plan](#).



**Figure 9. Harmful algal bloom at Hayden Lake.**

## **3 Surface Water Monitoring and Assessment**

As the agency responsible for protecting Idaho's surface water, DEQ continually monitors and assesses the quality of the state's streams and lakes. This information is used to report on the status of Idaho's waters and to make decisions regarding water quality management.

### **3.1 Monitoring Program**

The *Surface Water Ambient Monitoring Plan* (DEQ 2012b) outlines DEQ's approach to collecting and integrating ambient water quality data from a variety of monitoring programs, including BURP, National Aquatic Resource Surveys (NARS), and special studies. DEQ's monitoring crews collect water temperature data, biological samples (e.g., macroinvertebrates, fish, and bacteria), chemical measures, and habitat data from Idaho's surface waters (Figure 10). In addition to its own data collection efforts, DEQ solicits and considers data from other agencies, organizations, and interest groups. Together, these data are used to determine whether Idaho's surface waters meet state water quality standards and support beneficial uses. For more



information, see DEQ's [BURP monitoring efforts](#) or refer to the *Beneficial Use Reconnaissance Program Field Manual for Streams* (DEQ 2017b).



Figure 10. DEQ field crew collecting BURP data.

## 3.2 Assessment Program

DEQ relies on scientific findings and policy decisions in making water quality determinations, as outlined in the *Water Body Assessment Guidance* (WBAG) (DEQ 2016). This guidance document, which focuses on biology as a measure of aquatic life and water quality status, is the foundation of DEQ's ambient monitoring and assessment program. The WBAG describes the methods used to consistently evaluate data and determine beneficial use support of Idaho's waters and addresses many reporting requirements and state and federal rules, regulations, and policies.

### 3.2.1 Beneficial Uses

Beneficial uses are any of the various uses that may be made of lakes and streams in Idaho. These uses include, but are not limited to, aesthetics, aquatic life, agricultural water supply, domestic water supply, industrial water supply, recreation, and wildlife habitat. The beneficial use depends upon actual use, the ability of the water to support a nonexistent use either now or in the future, and the basic goal of the CWA that all waters support aquatic life and recreation where attainable. *Support* of a beneficial use is defined in IDAPA 58.01.02.010.42.

Idaho's water quality standards define the water quality goals for a water body, or portion thereof, in part by designating the use or uses to be made of that water body. Idaho also has existing and presumed use protections for its undesignated waters. A *designated* use is a beneficial use assigned to a specific water body unit in the standard. The CWA requires Idaho to protect *existing* uses, which are uses that are/were actually attained in a water body on or after November 28, 1975, whether or not they are designated. Idaho presumes most waters will

support cold water aquatic life and either primary or secondary contact recreation; therefore, DEQ protects all undesignated waters for those uses (i.e., *presumed* use protection). The degree of protection is the same for designated uses, existing uses, and presumed uses. For more information about Idaho's beneficial uses and beneficial use protections, refer to section 3 of the WBAG.

### **3.2.2 External Data**

Data are the foundation to DEQ's assessment process. Although the WBAG was primarily designed to assess BURP data, DEQ also considers data from other existing and readily available sources. Such data may be from other agencies, institutions, interest groups, or individuals, and they may relate to the existence, support status, or associated criteria of beneficial uses in a water body. DEQ ranks the quality of external data it receives into one of three tiers: Tier 1, Tier 2, and Tier 3. A summary of the tier descriptions is provided in Table 4.

DEQ also pursues several avenues for notifying the public of its intent to seek external and readily available water quality data. These avenues include a statewide news release to the media, posting announcements to DEQ's website and social media, and direct mailing notices to interested agencies, organizations, and individuals. For the 2022 Integrated Report, DEQ conducted a 60-day call for data from December 4, 2020, to February 4, 2021. Data received during this period were tiered for quality and relevance, and only Tier 1 and Tier 2 data were analyzed for the 2022 Integrated Report.

A summary of the data received and queried, and the AUs associated with the data is presented in Appendix K.

For more information about DEQ's call for data process and data tiering policy, refer to section 4.2.1 of the WBAG (DEQ 2016).

**Table 4. Description, examples, and incorporation of data tiers.**

<b>Tier</b>	<b>Scientific Rigor</b>	<b>Relevance</b>	<b>Example</b>	<b>How Used</b>
1	<ul style="list-style-type: none"> <li>Quantitative</li> <li>Parameters measured</li> <li>Established monitoring plan with quality assurance (QA) and defined protocols</li> <li>Appropriate supervised training for samplers</li> <li>Samples processed in EPA-certified lab following standard methods or by professional taxonomist</li> <li>Organisms identified by a professional taxonomist</li> </ul>	<ul style="list-style-type: none"> <li>Data relates to either water quality standards, especially numeric, beneficial uses, or causes of impairment</li> <li>Data ≤5 years old</li> <li>Data relates to a named water body (GIS location, latitude and longitude, or map location provided) and are representative</li> </ul>	<ul style="list-style-type: none"> <li>PhD or master's thesis</li> <li>Published or printed studies or reports</li> <li>Published predictive models</li> <li>EPA NARS</li> <li>BURP data</li> <li>Use attainability analyses</li> <li>Rapid Bioassessment Protocols</li> </ul>	<ul style="list-style-type: none"> <li>§ 303(d) listing or delisting</li> <li>§ 305(b) reports</li> <li>Subbasin assessments</li> <li>TMDLs</li> <li>Planning for future monitoring</li> </ul>
2	<ul style="list-style-type: none"> <li>Qualitative or semiquantitative</li> <li>May have a monitoring plan</li> <li>No QA/quality control (QC) provided for within monitoring plan</li> <li>Protocols may or may not be defined</li> <li>Parameters rated</li> <li>Field staff may not be trained; lab may not be certified</li> <li>Taxonomist may not be a professional</li> </ul>	<ul style="list-style-type: none"> <li>Data may relate to a watershed</li> <li>Not water body-specific</li> <li>Data &gt;5 years old</li> <li>Data may relate to other agency guidelines or objectives</li> </ul>	<ul style="list-style-type: none"> <li>Environmental assessments</li> <li>Proper functioning condition assessments</li> <li>Most citizen monitoring</li> <li>Models with documentation</li> <li>Agency planning documents</li> </ul>	<ul style="list-style-type: none"> <li>§ 305(b) reports</li> <li>Subbasin assessments or TMDLs when data adds to overall assessment quality</li> <li>Planning for future monitoring</li> </ul>
3	<ul style="list-style-type: none"> <li>May be qualitative in nature</li> <li>Parameters evaluated</li> <li>Field staff have little to no training</li> <li>No documented monitoring plan</li> <li>No QA/QC</li> <li>Anecdotal in nature</li> </ul>	<ul style="list-style-type: none"> <li>Not specific to water quality standards or beneficial uses</li> <li>Location not specific</li> <li>Data ≥10 years old</li> </ul>	<ul style="list-style-type: none"> <li>Nonspecific reports or studies</li> <li>Newspaper articles</li> <li>Simple models without any documentation</li> </ul>	<ul style="list-style-type: none"> <li>Planning for future monitoring</li> <li>Hold for further investigations</li> </ul>

Source: DEQ 2016

### 3.2.3 Interpreting Idaho's Water Quality Standards

DEQ's WBAG includes specific language detailing how narrative and numeric water quality standards are interpreted in assessments for the Integrated Report.

DEQ largely relies on BURP monitoring data and biological assessments to evaluate compliance of state narrative water quality standards and support status of aquatic life uses in the absence of specific chemical water quality data. Narrative standards are written such that the waters of the state shall be free from pollutants impairing beneficial uses. Biological assessments directly measure the support of the aquatic life beneficial uses that the narrative standards were written to protect, so that a *full support* decision based on the WBAG largely satisfies compliance with these narrative standards. However, a nonsupport decision based on the same data may not identify the specific cause of impairment.

Numeric standards are somewhat different, and a detailed discussion of the state's approach to assessing compliance with these standards is provided in section 5 of the WBAG.

### **3.2.3.1 Criteria Exceedance**

Due to the natural variability in water quality, variability in translation to a biological response, and possible measurement errors, DEQ does not interpret numeric criteria for dissolved oxygen, pH, turbidity, and temperature as a sharp line between impairment and nonimpairment. Rather, impairment may occur along a continuum. Because these criteria are developed conservatively, and imprecisely reflect natural variability, DEQ believes minor excursions of the criteria are acceptable if direct biological indicators (i.e., multimetric index scores) meet criteria specified in the WBAG. In IDAPA 58.01.02.054.03, a zone is established allowing up to a 10% criteria exceedance for dissolved oxygen, pH, turbidity, and temperature, for which the assessor has some flexibility to consider other evidence (i.e., biological data) in determining whether to list the AU-cause combination in Category 5. Figure 7 of the WBAG provides an overview of this DEQ policy.

While the policy described above deals solely with frequency, DEQ does recognize that the magnitude and duration of any criteria exceedance is important to the biological response. Magnitude, duration, and frequency are typically not independent of one another. An evaluation of impairment based solely on frequency, while it can have its limitations, is a practical gauge of criteria exceedance and one that is supported by EPA policy.

Failure to meet a numeric or narrative water quality criterion is reason to list an AU in Category 5 of the Integrated Report. If the AU failed to meet specific numeric criteria, then the impairment is related to those criteria. Tier 1 data must be available to inform the assessor about the cause or causes of impairment to a beneficial use.

### **3.2.3.2 Bioassessment**

DEQ relies heavily on biological indicators to gauge narrative and numeric criteria. An average of the multimetric index scores can range from 1 to 3 (DEQ 2016, section 6). An average score of less than 2 indicates that a water body is not supporting its aquatic life beneficial use. Since it is impractical to collect data to evaluate every possible numeric and narrative criteria, the assessor, in many instances, will not know the exact cause of an impairment—merely that a biological impairment exists. Such a determination places a water body in Category 5 with the cause as *combined biota/habitat bioassessments*.

EPA's 2002 clarification memo for the Integrated Report states:

When existing and readily available data and information (biological, chemical or physical) are sufficient to determine that a pollutant has caused, is suspected of causing, or is projected to cause the impairment, the AU should be listed in Category 5 (EPA 2002).

The memo further clarifies that “Only when the state determines that the existing data and information (biological, chemical or physical) are **insufficient** to support an attainment determination, can an AU be listed in Category 3” (EPA 2002). DEQ discourages assessors from

making educated guesses on causes, because changing a cause after initial listing can be costly in terms of time and resources. It is reasonable and prudent to leave the cause as *combined biota/habitat bioassessments* until a more specific cause can be accurately determined in the subbasin assessment phase of the TMDL.

### **3.2.4 Waters Other than Perennial Streams**

DEQs multimetric index scores apply primarily to perennial flowing water bodies. Intermittent waters may have important ecological functions, but they cannot sustain the same biological communities as perennial waters and cannot be assessed using the WBAG. Although the fundamental assessment approach should also be applicable to lakes, reservoirs, springs, lake outlets, inundated streams, and wetlands, DEQ must further investigate these types of water bodies to develop scientifically sound bioassessment processes and to establish appropriate reference conditions.

Narrative and numeric criteria still apply to intermittent streams, reservoirs, springs, lake outlets, and inundated streams, and these waters are still assessed when relevant narrative and numeric criteria data are available. For intermittent streams (i.e., streams with zero flow for at least 1 week during most years), numeric criteria apply only during periods of *optimum* flow. For recreation beneficial uses, optimal flow is set by rule equal to or greater than 5 cubic feet per second (cfs); for aquatic life uses, optimal flow is equal to or greater than 1 cfs (IDAPA 58.01.02.010.54 and .02.070.06). For more information, refer to section 2 of the WBAG.

## **3.3 Surface Water Assessment Results**







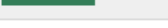
DEQ's surface water assessment results are presented in this section and includes the five-part categorization of all state surface waters, § 303(d) reporting requirements, statewide summaries of beneficial use support and § 303(d) causes of impairment, and § 314 reporting requirements. The results presented in this Integrated Report were compiled by DEQ using EPA's ATTAINS database, a cloud-based application that helps states enter and track water quality assessment information.

Assessment results can also be accessed via the [2022 Integrated Report Interactive Mapper](#).

### **3.3.1 Five-Part Categorization of Surface Waters**








Five-part categorization results for stream AUs and lake AUs are summarized in Table 5 and Table 6, respectively. To access a complete list of AUs in each category, including AU-cause combinations in Categories 4 and 5, see Appendix A. Detailed category descriptions are provided in the following sections.

**Table 5. Five-part categorization results for Idaho's streams. Percentage of total stream miles is out of 92,056 miles. The percentages total more than 100% because some miles are listed in both Categories 4 and 5.**

Category	Miles	Number of AUs	AU-Cause Combinations	Percentage of stream miles
Category 1	4,077	323	-	4.4% 
Category 2	25,552	1,336	-	27.8% 
Category 3	26,320	1,296	-	28.6% 
Category 4a	25,521	-	2,409	27.7% 
Category 4b	51	-	4	0.1% 
Category 4c	6,906	-	542	7.5% 
Category 5	12,761	-	911	13.9% 

0% 10% 20%

**Table 6. Five-part categorization results for Idaho's lakes. Percentage of total lake acres is out of 432,390 acres. The percentages total more than 100% because some acres are listed in both Categories 4 and 5.**

Category	Acres	Number of AUs	AU-Cause Combinations	Percentage of total lake acres
Category 1	4,349	159	-	1.0% 
Category 2	21,824	39	-	5.0% 
Category 3	175,729	361	-	40.6% 
Category 4a	182,838	-	67	42.3% 
Category 4b	0	-	0	0.0% 
Category 4c	85,699	-	10	19.8% 
Category 5	177,366	-	37	41.0% 

0% 10% 20% 30% 40%

### 3.3.1.1 Category 1

*Waters are wholly within a federally designated wilderness or 2008 Idaho Roadless Rule "Wild Land Recreation" area and are presumed to be fully supporting all beneficial uses.*

AUs in Category 1 meet strict land use requirements, are deemed absent of pollution sources, and are presumed to be fully supporting all beneficial uses. DEQ uses the most restrictive and protective theme of the 2008 Idaho Roadless Rule (i.e., the "Wild Land Recreation" theme) (36 CFR 294, subpart C), alongside federally designated wilderness areas, to place waters into Category 1. This definition assumes that waters wholly (100%) within one or both of these land management classifications meets DEQ's *natural conditions* water quality standard (IDAPA 58.01.02.054.04) and are expected to exhibit no measurable change from the physical, chemical, biological, or radiological conditions existing in a water body without human sources

of pollution within the watershed (IDAPA 58.01.02.010.63). However, if readily available data or information demonstrates impairment to a beneficial use, DEQ will assess the water body accordingly.

Statewide, 482 out of 5,676 state AUs are in Category 1; totaling 4,077 stream miles and 4,349 lake acres. Most of these AUs are found in the Selway-Bitterroot and Frank Church-River of No Return Wildernesses.

### **3.3.1.2 Category 2**

*Waters are fully supporting those beneficial uses that have been assessed. The use attainment of the remaining beneficial uses has not been determined due to insufficient (or no) data and information.*

AUs in Category 2 had existing and readily available Tier 1 data that indicated full support of one or more beneficial uses.

Statewide, 1,375 out of 5,676 state AUs are in Category 2; totaling 25,552 stream miles and 21,824 lake acres.

### **3.3.1.3 Category 3**

*Waters have insufficient (or no) data and information to determine if beneficial uses are being attained or impaired.*

DEQ may conclude that readily available data and information are insufficient based on the following reasons:

- Existing and readily available data and information were collected using unacceptable QA/QC procedures.
- The quality of existing and readily available data and information, regardless of quantity thresholds, is inadequate to provide an accurate assessment.
- Existing and readily available data and information are not representative of current conditions for the water body. This rationale might include a determination that (1) significant land use changes have occurred in the watershed, changing the hydrology and nonpoint source loading, (2) point source discharges have been removed, (3) new discharges are now operating, or (4) the locations of sampling stations did not reflect the character of the water body segment.

AUs will remain in Category 3 until DEQ can obtain sufficient data and information to determine whether beneficial uses are supported. However, an AU may remain in Category 3 indefinitely under any of the following circumstances: the stream had no flow when visited by DEQ (i.e., intermittent stream); access to the monitoring site was denied; or the monitoring site was inaccessible. When any of these circumstances are encountered, DEQ will make every attempt to revisit the AU to collect sufficient data and information to support a beneficial use attainment determination.



Statewide, 1,657 out of 5,676 state AUs are in Category 3; totaling 26,320 stream miles and 175,728 lake acres. Of the 1,296 stream AUs in Category 3, 248 AUs were evaluated to have zero flow based on 393 BURP sites. These AUs will likely remain in Category 3 until an assessment protocol for intermittent waters is developed. Appendix B provides a complete list of AUs evaluated to have zero flow.

#### **3.3.1.4 Category 4**

*Waters do not support one or more beneficial uses, but they do not require development of a TMDL.*

Category 4 listings are commonly referred to as AU-cause combinations, since a particular AU may have multiple causes of impairment. Each AU-cause combination in Category 4 is assigned into one of three subcategories: Category 4a, Category 4b, or Category 4c. A single AU may be in multiple subcategories of Category 4 if there are multiple causes of impairment that do not require the development of a TMDL.

##### **Category 4a—Waters have a TMDL completed and approved by EPA.**

DEQ places an AU-cause combination in Category 4a when a TMDL is developed by DEQ and approved by EPA. Once a TMDL is implemented, DEQ expects the AU to fully attain the water quality standard for the pollutant specified in the TMDL (e.g., sediment). If the AU has other impairments, it may also be included in other categories of the Integrated Report.

An implementation plan is developed by DEQ once EPA has approved a TMDL. An implementation plan details the actions needed to achieve the TMDL-specified load reductions, outlines a schedule for those actions, and specifies monitoring needed to show progress toward meeting water quality standards. Additional information is found in the [TMDL implementation plans](#).

Statewide, 2,474 AU-cause combinations are listed in Category 4a; totaling 25,536 stream miles and 182,838 lake acre.

##### **Category 4b—Waters have had pollution control requirements other than a TMDL placed on them, and these waters are reasonably expected to attain the water quality standard within a reasonable period of time.**

DEQ places an AU-cause combination in Category 4b when other pollution abatement measures—required by local, state, or federal authority—are effective enough to achieve applicable water quality standards within a reasonable time (pursuant to 40 CFR 130.7(b)(1)). When adequate pollution control requirements are established on an impaired water body, this action obviates the need for a TMDL.

For an AU-cause combination to be considered in Category 4b, six elements must be addressed in the Category 4b rationale:

1. Identification of stream segment and statement of problem causing the impairment



2. Description of pollution controls and demonstration of how they will achieve water quality standards
3. An estimate or projection of the time when water quality standards will be met
4. Schedule for implementing pollution controls
5. Monitoring plan for tracking effectiveness of the pollution controls
6. Commitment to revise pollution controls as necessary

For each integrated reporting cycle, DEQ and EPA will review each AU-cause combination in Category 4b to ensure that all of the proposed pollution control requirements are being met. If circumstances have changed and the requirements of the original Category 4b rationale are no longer being met, DEQ may place the AU-cause combination back into Category 5.

Statewide, four AU-cause combinations are in Category 4b; totaling 51 stream miles. All four AU-cause combinations are addressed in the *Bear Valley Creek 4b Justification* (DEQ and USFS 2010).

**Category 4c—Waters failing to meet applicable water quality standards due to other types of pollution (e.g., flow alteration), not a pollutant.**

DEQ places an AU-cause combination in Category 4c when the impairment is caused by *pollution* (i.e., flow alteration or habitat alteration), not a *pollutant*. Water bodies placed in Category 4c do not require the development of a TMDL.

*Pollutants* are defined in CWA § 502(6), Idaho Code § 39-3602(24), and IDAPA 58.01.02.010.79. On Idaho's § 303(d) list, these definitions include impairments such as sediment, nutrients, toxics, and temperature—if they impair a beneficial use.

*Pollution* is a broad concept that encompasses human-caused changes to the environment that alter the functioning of natural processes and produce undesirable environmental or health effects. Pollution includes human-induced alteration of the physical, biological, chemical, and radiological integrity of water and other media. Flow and habitat alterations are considered pollution and not specific pollutants according to EPA (CWA § 502(6) and § 502(19); EPA 2001), so DEQ does not develop TMDLs for flow alteration or habitat alteration.

Water bodies affected by these forms of pollution are not overlooked or ignored; they are identified in Category 4c of the Integrated Report. Flow and habitat alterations may often contribute to pollutants in a water body that are suitable for TMDLs. For example, excess sediment may impair a beneficial use and violate state water quality standards on a water body that may also be affected by altered water flow (or habitat alteration). If the impairment is partly caused by excess sediment, the water body will also be placed on the § 303(d) list of impaired waters (i.e., Category 5).

Statewide, 552 AU-cause combinations are listed in Category 4c; totaling 6,906 stream miles and 85,699 lake acres.

### 3.3.1.5 Category 5

*Waters do not meet applicable water quality standards for one or more beneficial uses due to one or more pollutants; therefore, an EPA-approved TMDL is needed. Category 5 water bodies make up the § 303(d) list.*

Category 5 listings are also commonly referred to as AU-cause combinations. Category 5 is a streamlined § 303(d) list and excludes waters that have an EPA-approved TMDL (Category 4a), waters addressed by other pollution control measures (Category 4b), and waters impaired by pollution (Category 4c). DEQ uses the following criteria for listing a water body in Category 5:

- The water body was listed as impaired in the 2018/2020 Integrated Report **or**
- Tier 1 data indicate an impairment by a pollutant, **and**
- Developing and implementing a TMDL is possible.

Statewide, 948 AU-cause combinations are listed in Category 5; totaling 12,746 stream miles and 177,366 lake acres. More information about the 2022 § 303(d) list (i.e., Category 5 waters) is provided in section 3.3.2.

### 3.3.2 Section 303(d) List

For the 2022 Integrated Report, DEQ added 213 new AU-cause combinations to the § 303(d) list (i.e., Category 5) and delisted 31 AU-cause combinations from the § 303(d) list, bringing the total number of AU-cause combinations on the § 303(d) list to 948. To access a complete list of AU-cause combinations on the § 303(d) list, refer to Appendix A.

#### 3.3.2.1 Waters Added to the § 303(d) List

DEQ added 213 new AU-cause combinations to the § 303(d) list in the 2022 Integrated Report: 211 were added based on new and readily available data and 2 were added to refine previous causes of impairment (e.g., replacing combined biota/habitat bioassessments for temperature) (Table 7).

**Table 7. Summary of waters added to Category 5 in the 2022 Integrated Report.**

Explanation	Category 5 AU-Cause Combinations
New Category 5 listings	<b>213</b>
<ul style="list-style-type: none"> <li>• Based on new and readily available data</li> </ul>	211
<ul style="list-style-type: none"> <li>• Replaces a previous cause due to identification of impairment or to create consistency of terminology</li> </ul>	2

Fifty-three of the 213 new § 303(d) listings were located in the Lochsa River subbasin based on assessment methods and outcomes described in the *Lochsa River Subbasin Stream Temperature Natural Conditions* report (Appendix C). This project and report was jointly developed by DEQ and EPA Region 10 to assess water temperature conditions in the Lochsa River subbasin for inclusion in the 2022 Integrated Report.

### 3.3.2.2 AU-Cause Combinations Delisted from the § 303(d) List

AU-cause combinations that were listed in Category 5 of previous Integrated Reports must be accounted for in subsequent Integrated Reports. However, the fact that an AU-cause combination was previously listed in Category 5 does not necessarily mean it must remain in Category 5 until a TMDL is established. DEQ may have new data and information showing (1) an applicable water quality standard is being met, (2) the impairment was caused by *pollution* and not a *pollutant*, therefore delisting the AU-cause combination from Category 5 and listing it in Category 4c, or (3) the original Category 5 listing was erroneous.

For DEQ to delist an AU-cause combination from Category 5, DEQ must demonstrate *good cause* for not including the AU-cause combination in Category 5 of the Integrated Report (pursuant to 40 CFR 130.7(b)(6)(iv)). Good causes include, but are not limited to, the following (EPA 2005):

1. More recent and accurate data demonstrate that the applicable water quality standard(s) is being met.
2. More sophisticated water quality modeling demonstrates that the applicable water quality standard(s) is being met.
3. Flaws in the original analysis led to the water body being incorrectly listed.
4. Conditions have changed (e.g., new control equipment or elimination of discharges).
5. A TMDL or other pollution control requirements required by state, local, or federal authority will result in attainment of water quality standards for a specific pollutant(s) within a reasonable time.
6. Other relevant information supports the decision not to include the AU-cause in Category 5 of the Integrated Report (e.g., refining a cause of impairment, such as delisting combined biota/habitat bioassessments and adding temperature to the list).

DEQ delisted 46 AU-cause combinations in the 2022 Integrated Report: 31 from Category 5, 14 from Category 4a, and 1 from Category 4c. Some of the Category 5 delistings will be replaced with new Category 5 listings due to the identification of specific causes of impairment. For example, a *cause unknown* or *combined biota/habitat bioassessments* cause of impairment is replaced by a different cause, such as *total phosphorus*, when total phosphorous is identified as a limiting nutrient and the source of the originally identified impairment during TMDL development. Similarly, AU-cause combinations will be delisted from Category 5 when they are determined to be duplicative. This scenario occurs when several cause combinations are associated with an AU—such as *cause unknown* or *combined biota/habitat bioassessments*, as well as an impairment such as *temperature*—but it has been determined that only the latter is needed to describe the cause of impairment. A detailed report of all delistings is provided in Appendix D and a summary of Category 5 delistings is provided in Table 8.

**Table 8. Summary of waters delisted from Category 5 in the 2022 Integrated Report.**

Explanation	Category 5 AU-Cause Combinations
Category 5 delistings	31
<ul style="list-style-type: none"> <li>To create consistency in terminology, duplicative listing, or replaces a previous cause due to identification of impairment</li> </ul>	8
<ul style="list-style-type: none"> <li>Data indicate standard has been attained</li> </ul>	4
<ul style="list-style-type: none"> <li>EPA approval of a completed TMDL</li> </ul>	19

### 3.3.2.3 *Prioritization and TMDL Schedule*

DEQ has been working under a *Settlement Agreement* (DEQ 2002) that established a schedule through 2007 for developing TMDLs based on HUC, AU, and pollutant. In prioritizing, DEQ considered the severity of the pollutant and the uses of the waters, the availability and quality of data, and the department's resources. Although the schedule developed in the settlement agreement was not completed by 2007, DEQ still remains under obligation to develop TMDLs for those waters remaining on the settlement agreement. Currently, 111 AU-cause combinations remain on the settlement agreement. DEQ has maintained these waters as a higher priority than waters placed on the § 303(d) list postagreement.

Within the settlement agreement list, DEQ is prioritizing their completion (i.e., high, medium, low) based on a set of criteria that takes into account human health and aquatic resource risk, the severity and type of pollutants, and the availability of data and resources. Twenty of the 111 AU-cause combinations on the settlement agreement are entirely within the Nez Perce Reservation. DEQ is not assigning priority to these 20 AU-cause combinations and is not responsible for developing TMDLs for waters on Indian reservations. Appendix E provides those waters still remaining on the settlement agreement.

For waters on the § 303(d) list and outside of the settlement agreement, DEQ assigned a high, medium, or low priority ranking to the HUC for TMDL completion based on several factors: severity of the pollutant, uses to be made of such waters, severity of concern, complexity of analysis, availability of resources, funding, consultation with the Basin and Watershed Advisory Groups, and executive or legislative direction. Appendix F provides the CWA § 303(d) priority rankings.

CWA regulations make it clear that a TMDL does not need to be developed for waters where pollution control abatement measures—required by local, state, or federal authority—are stringent enough to implement any applicable water quality standard (40 CFR 130.7(b)(1)); in these cases, waters can be placed into Category 4b. Idaho rule also allows DEQ to place a water body in Category 4b when other pollution control requirements are expected to achieve full support of uses and compliance with water quality standards within a reasonable period of time (IDAPA 58.01.02.055.02). The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requires cleanups to meet any standard, requirement, criteria, or limitation that is legally applicable, including those developed under the CWA or any more stringent state law (42 USC § 9621 (d)(2)(A)). Unlike a TMDL, which is a plan and not enforceable, CERCLA authorities provide enforceable mechanisms to compel cleanup of the

pollutant and identified sources. When the source of the pollutant is a CERCLA site, a TMDL will have little impact or relevance to the implementation of CERCLA authorities. In cases where other pollutant control requirements are applicable, DEQ may assign a Category 5 water body a medium or low priority for TMDL development.

#### **3.3.2.4 DEQ's WQ-27 Priority List Development**

To implement EPA's *Clean Water Act 303(d) Program Vision Priorities*, states are expected to provide EPA with the necessary information to quantify water quality measure 27 (WQ-27) (EPA 2015). WQ-27 is a metric that tracks state progress in developing EPA-approved TMDLs or alternative restoration approaches for impaired waters that a state has designated as a priority. States are expected to (1) develop a list of state priority areas for TMDL development or alternative approaches and (2) set annual goals specifying which watersheds will have TMDLs or alternative restoration approaches developed for each federal fiscal year from 2016 through 2022. EPA then tracks state progress in meeting goals for state-defined priority areas.

DEQ's WQ-27 priority list was submitted to EPA in February 2017 and was provided in the 2016 Integrated Report, Appendix O (DEQ 2018). The WQ-27 priority list is provided in Appendix G and includes an additional column with progress updates.

#### **3.3.2.5 Approved, Pending, and Draft TMDLs**

EPA approved 19 new and 32 revised AU-pollutant TMDLs between July 15, 2020, and April 1, 2022. These new TMDLs addressed waters in the following subbasins: Brownlee Reservoir, Clearwater River, Payette River, South Fork Clearwater River, upper Spokane River, Salmon Creek Falls, and upper and lower Henrys Fork. Some of these TMDLs revised the methodology of previously approved TMDLs and did not result in any new AU category changes. TMDLs that are actively being developed by DEQ are summarized in Table 9.

**Table 9. TMDLs in development, by region.**

TMDL	HUC	Region
Bruneau River Subbasin	17050102	Boise
Middle Snake-Succor Creek Subbasin	17050103	Boise
Boise-Mores Creek Subbasin	17050112	Boise
Lower Boise River Subbasin	17050114	Boise
Payette River Subbasin	17050122	Boise
Lower Clark Fork River Subbasin	17010213	Coeur d'Alene
Boyer Slough (Pend Oreille Lake Subbasin)	17010214	Coeur d'Alene
South Fork Coeur d'Alene River Subbasin	17010302	Coeur d'Alene
Willow Creek Subbasin	17040205	Idaho Falls
Beaver-Camas Subbasin	17040214	Idaho Falls
Medicine Lodge Creek Subbasin	17040215	Idaho Falls
Little Lost River Subbasin	17040217	Idaho Falls
Upper Salmon River Subbasin	17060201	Idaho Falls
Pahsimeroi River Subbasin	17060202	Idaho Falls
Middle Salmon River-Panther Creek Subbasin	17060203	Idaho Falls
Lemhi River Subbasin	17060204	Idaho Falls
Lochsa River Subbasin	17060303	Lewiston
South Fork Clearwater River Subbasin	17060305	Lewiston
Orofino Creek (Clearwater River Subbasin)	17060306	Lewiston
Soda Creek (Bear Lake Subbasin)	16010201	Pocatello
Raft River Subbasin	17040210	Twin Falls
Goose Creek Subbasin	17040211	Twin Falls
Upper Snake-Rock Subbasin	17040212	Twin Falls
Little Wood River Subbasin	17040221	Twin Falls

### 3.3.3 Statewide Summaries

The overall support status of Idaho's streams and lakes is presented in Table 10 and Table 11, respectively. Maps summarizing the support status of all Idaho surface waters are located in Appendix H.

**Table 10. Support status of Idaho's streams (percentages based on 92,056 total stream miles statewide).**

Support Status	Miles (percent of total)
Fully supporting (Categories 1 or 2)	29,628 (32%)
Not assessed (Category 3)	26,320 (29%)
Not supporting (Categories 4 and/or 5)	36,093 (39%)

**Table 11. Support status of Idaho's lakes (percentages based on 432,390 total lake acres statewide).**

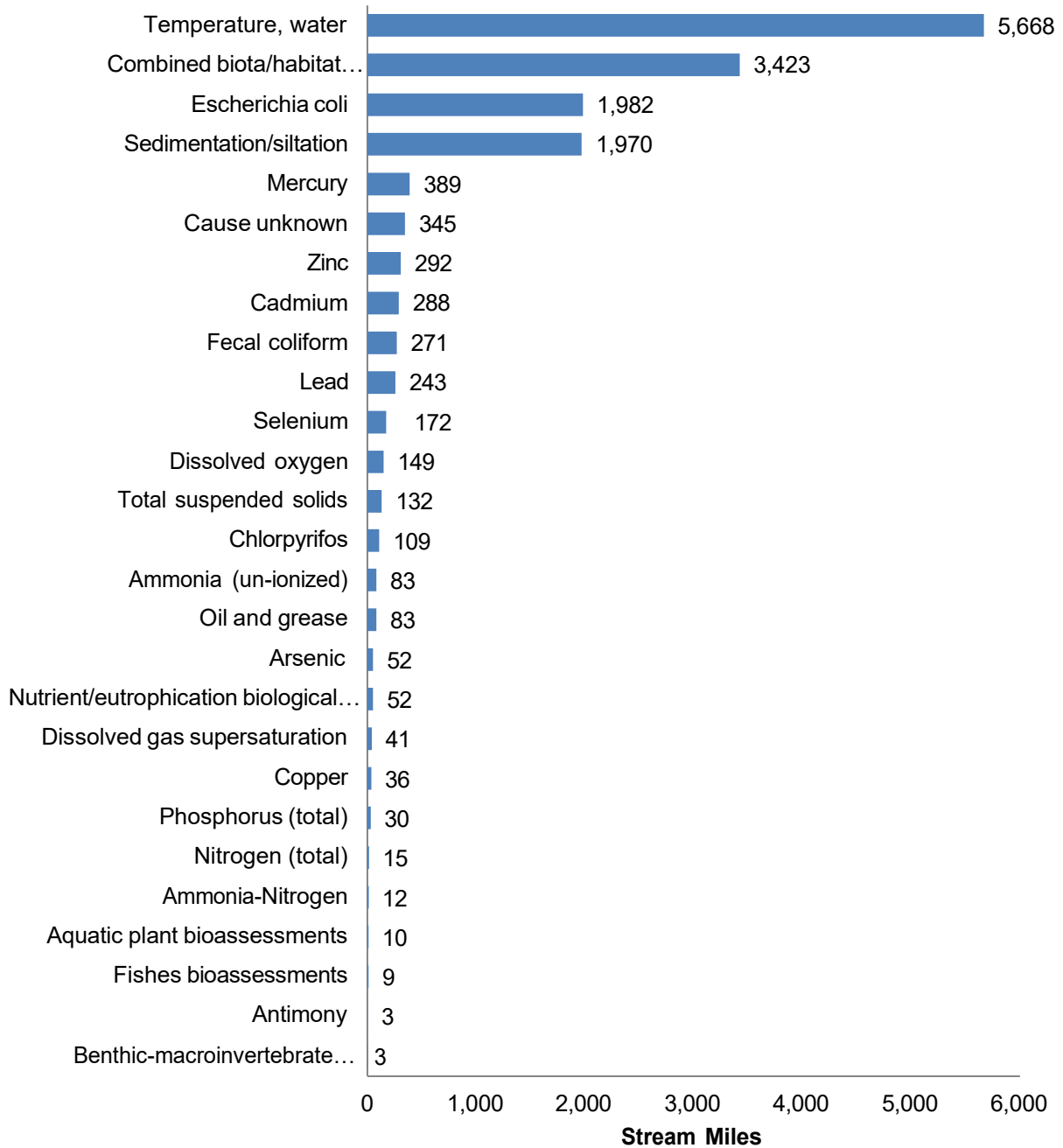
Support Status	Acres (percent of total)
Fully supporting (Categories 1 or 2)	26,173 (6%)
Not assessed (Category 3)	175,729 (41%)
Not supporting (Categories 4 and/or 5)	230,488 (53%) <sup>a</sup>

a. Lake support status is based on acreage. The percentage (by area) of lakes not supporting beneficial uses is relatively high because a few large lakes dominate the acreage listed in Categories 4 and 5.

Idaho's surface waters can be placed on the § 303(d) list for a variety of causes. A summary of § 303(d) causes for streams and lakes is provided in Figure 11 and Figure 12, respectively.

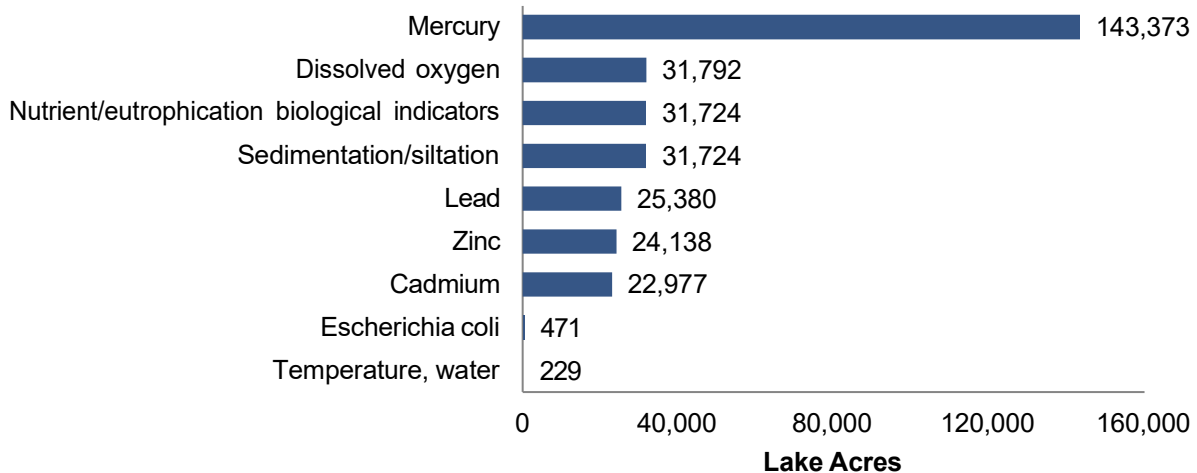
The leading § 303(d) causes of impairment in Idaho's streams are temperature, combined biota/habitat bioassessments, *Escherichia coli* (*E. coli*), and sedimentation/siltation. Since the 2018/2020 Integrated Report, the extent of stream miles on the § 303(d) list for temperature has more than doubled to 5,668 miles. This increase can be attributed to (1) the large amount of temperature data that DEQ received during the public call for data, whereby many streams failed the state's temperature criteria or, if applicable, the 1997 federally promulgated bull trout temperature criteria (40 CFR 131.33) and (2) assessment outcomes described in the *Lochsa River Subbasin Stream Temperature Natural Conditions Assessment* report (Appendix C). The extent of stream miles on the § 303(d) list for sedimentation/siltation, Zinc, Lead, and *E. coli* impairments have decreased since the 2018/2020 cycle, mainly due to the development and approval of TMDLs and to new data demonstrating attainment of water quality standards.

Section 303(d) causes of impairment in Idaho's lakes have remained the same since the 2018/2020 Integrated Report. Until DEQ develops standardized methods for monitoring and assessing lakes and reservoirs, causes associated with lake impairments will change only when DEQ participates in larger lake monitoring projects or acquires new data from outside entities. The impairments listed in Figure 12 were largely identified in multipartner studies.



**Figure 11. Extent of streams impaired by § 303(d) causes.**





**Figure 12. Extent of lakes impaired by § 303(d) causes.**

### 3.3.4 Section 314—Clean Lakes Program

With limited resources and no established protocol for determining biological integrity in lakes, DEQ is only capable of reporting on the physical and chemical parameters as they relate to Idaho's water quality standards criteria. DEQ did participate in EPA's 2017 *National Lakes and Reservoir Assessment*. This assessment is designed to provide information on the extent of lakes that support healthy biological condition and recreation, estimate of how widespread major stressors are that impact lake quality, and provide insight as to whether lakes nationwide are improving. Results from this effort were not available for the 2022 Integrated Report.

### 3.3.5 Wetlands Program

Idaho has approximately 712,270 acres of mapped wetlands according to USGS maps and a list of priority wetlands maintained by EPA, Idaho Fish and Game, and the Conservation Data Center. While wetlands are protected by the CWA, DEQ does not have specific water quality standards, guidance, or policies for assessing wetland ecosystems. DEQ did participate in EPA's 2016 *National Wetland Condition Assessment*, which examined the chemical, physical and biological integrity of the nation's wetlands through a set of commonly used and widely accepted indicators, but results from this effort were not available for the 2022 Integrated Report.

## 3.4 Public Health Issues

Idaho's water quality has serious implications for public health. Not only do citizens rely on clean surface and ground water for their drinking water supply, but they also recreate in and on the state's surface waters and consume the fish that inhabit Idaho's waters.

### 3.4.1 Drinking Water and Source Water Assessment

DEQ's Drinking Water Program and Source Water Program work together to protect public health by ensuring drinking water from public water systems in Idaho is safe and to assess and protect the source of Idahoans' drinking water (i.e., source water).

Source water assessments are the cornerstone for source water protection. These assessments summarize the likelihood of individual drinking water sources becoming contaminated (usually a short-term *contamination event*) and serve as a foundation for public water systems to prepare source water protection plans and implement protection measures. Local communities can use the information gathered through the assessment process to create a broader source water protection program to address current problems and prevent future threats to the quality of their drinking water supplies. The information acquired from assessments also assists DEQ in overseeing public water systems.

For more information, visit DEQ's [Drinking Water Program](#). To access source water assessments, visit the [Source Water Program](#).

### 3.4.2 Methylmercury Fish Tissue Criterion for Protection of Human Health

Because monitoring and assessing mercury in Idaho's waters can present unique challenges, the following sections discuss topics in Idaho's *Implementation Guidance for the Idaho Mercury Water Quality Criteria* (DEQ 2005). This 2005 guidance was written when the state did not have an aquatic life criterion and relied solely on the human health criterion to protect aquatic life. The value of 0.3 milligrams of methylmercury (MeHg) per kilogram of fish tissue (wet weight) is the level set to protect the general public from adverse effects during a lifetime of exposure.

Almost all human mercury exposure comes from eating fish, rather than ingesting water, due to the high degree to which fish bioaccumulate MeHg. Through a relative source contribution, the criterion may also account for some exposure from sources other than eating fish harvested from local waters, such as eating store-bought fish that comes from marine waters. When levels of MeHg in fish tissue from any water body exceed the criterion, the potential for lifetime exposure exists above what is considered safe, and the water is listed as impaired for recreational use, which presumes the opportunity to catch and safely eat any fish present.

Because of the data DEQ has collected on total mercury in the water column and fish tissue MeHg in concurrent samples, DEQ believes the MeHg human health criterion also protects aquatic life; therefore, aquatic life use will be assumed to be impaired when recreation is impaired. "Aquatic life uses are also protected by fish tissue values, because the resulting MeHg concentrations in the water column have typically been shown to be 2–3 orders of magnitude lower than aquatic life criteria" (EPA and LDEQ 2001; FTN 2002; Parsons 2003 as quoted in DEQ 2005). DEQ's approach to using only fish tissue "assumes that changes in fish tissue concentrations are proportional to changes in aquatic concentrations for a given area. That is, it assumes the rate of bioaccumulation is characteristic of the area, even though this rate is site-specific" (DEQ 2005).

Although the state has a total mercury aquatic life chronic criterion for mercury (0.012 micrograms per liter) (DEQ 2017a), DEQ does not generally collect and analyze water samples for mercury or any other toxic constituent because of limited resources. DEQ's interpretation of the toxics narrative criterion for mercury is to rely upon the MeHg fish tissue criterion for protecting human health and aquatic life. Where water column data are available, DEQ will compare the data to the total mercury aquatic life chronic criterion as well.

The 2022 Integrated Report contains two new mercury listings based on violations of the aquatic life chronic criterion and the methylmercury fish tissue criterion: East Fork South Fork Salmon River - 4th-order section (ID17060208SL023\_04) and Kootenai River - Shorty's Island to the Id/Canadian border (ID17010104PN001\_08). To view a map of mercury-impaired AUs, see Appendix I.

### **3.4.2.1 Fish Consumption Advisories**

Although fish consumption advisories for mercury and Idaho's human health criterion are both based on the same toxicological data, they have little else in common. Fish consumption advisories inform people, usually more sensitive individuals such as children and pregnant women, how much fish with known mercury content is safe to eat. These advisories are usually water body and fish species specific; they may even specify the size of fish since contaminant levels typically increase with fish size (age). In contrast, Idaho's water quality criterion sets a level of contamination that is safe based on a fish consumption rate characteristic of the overall adult population eating a variety of fish from different trophic levels and likely different water bodies.

An Idaho Fish Consumption Advisory Program (IFCAP) advisory does not necessarily indicate that most of the general public would be exposed to unsafe levels of MeHg or that Idaho's fish tissue human health criterion is necessarily exceeded. The IFCAP fish consumption advisories advise the public on safe amounts of *specific kinds of fish* to consume (e.g., walleye or trout), given measured concentrations for a particular water body. Because of this specificity, as well as targeting only certain segments of the general population, an advisory can be issued even when the average concentration of MeHg in fish is still below the level of Idaho's fish tissue criterion. IFCAP provides a [fish advisory guide](#) describing safe consumption of fish caught in Idaho waters.

### **3.4.2.2 Calculation of Trophic Level Weighted Average**

The human health criterion is based on chronic mercury exposure over a lifetime; the criterion was not formulated to protect against acute exposures. In practice, acute exposure is not a big concern because fish tissue mercury levels build up slowly over time, and a threshold dose requires repeated meals of fish. Some variation in exposure to mercury is expected over a lifetime. If variations above criteria are not large or prolonged, they will average out over time to a level below the criterion, and the intended level of protection and safety will be achieved.

Because MeHg tissue levels do vary over time—and from species to species and fish to fish—calculating a value for comparison to the criterion is a matter of much averaging. Idaho's

criterion for MeHg takes into account that bioaccumulation varies by trophic level (i.e., a fish's place in the food chain) and species of fish, due to differing dietary habits. When data for a water body represent fish from multiple trophic levels, the water quality standards (IDAPA 58.01.02.210.01) require that results be weighted by trophic level-specific consumption rates.

Water body-specific fish consumption data are preferred and when available should be used to adjust these weightings to provide a better estimate of average possible human exposure to mercury from that water body. In the absence of location-specific consumption data, trophic level weighting is based on the default consumption rates specified in Idaho water quality standards (IDAPA 58.01.02.210.01), which are based on EPA recommendations. Within a trophic level, simple averaging is used to combine results for multiple species to represent the trophic level.

Regardless of the specificity of fish consumption data, the final result is a single average MeHg value for a water body incorporating different locations, trophic levels, species, and individual fish.

DEQ lists a water body as impaired based on this weighted average fish tissue mercury concentration for a water body. The average combines results for all edible species for which data are available. DEQ prefers data from a composite of at least 10 fish per species. However, if data are only available for one edible species, that is sufficient to make a listing decision for a water body.

### ***3.4.2.3 Evaluation of Water Column Data for Comparison to Human Health Criteria***

Although it is uncommon to have multiple measurements of a toxic substance for comparison to Idaho's criteria for protection of human health, the situation does arise, as it did in 2014 with an unusually rich data set for arsenic from the Blackbird Mine site. As with the MeHg fish tissue criterion, the challenge was averaging multiple measurements. To address this challenge and the more typical case of a single data point, DEQ developed a memo, "Evaluation of Water Column Chemistry Data for Compliance with Human Health Criteria" (Essig 2014).

While the human health criteria are based on lifetime exposure, obtaining data on lifetime exposure is impracticable, and waiting a lifetime for an answer is unreasonable. The memo lays out the need to use a single data point for comparison to criteria, if that is all that is available. It also specifies using a harmonic mean as the best estimate of long-term exposure when multiple data points do exist. In 2016, this approach was incorporated into Idaho's water quality standards at IDAPA 58.01.02.210.03.d.ii.

## **4 Ground Water Monitoring and Assessment**

DEQ is responsible for protecting the quality of ground water in Idaho but does not undertake this task alone. DEQ monitors and protects ground water in Idaho through partnerships with the Idaho State Department of Agriculture (ISDA), Idaho Department of Water Resources

(IDWR), and many other state, local, and private agencies, organizations, businesses, and individuals. The roles of DEQ, ISDA, IDWR, the Idaho Soil and Water Conservation Commission, and the Idaho public health districts are delineated in the [Idaho Ground Water Protection Interagency Cooperative Agreement](#).

The IDWR Statewide Ground Water Quality Monitoring Program is designed to assess the current condition of Idaho's ground water quality, identify potential problem areas, and detect trends in ground water quality. In addition, DEQ conducts regional and local ground water quality monitoring when the statewide program or other government agencies detect potential problem areas. DEQ also initiates its own evaluations and conducts regional and local monitoring in conjunction with other agencies. DEQ chairs the Idaho Ground Water Monitoring Technical Committee that includes membership from other Idaho state agencies, public health districts, Idaho's universities, and federal agencies.

Idaho's ground water quality monitoring program results show that significant levels of ground water degradation have occurred in specific areas across the state. This degradation negatively impacts water quality and potentially threatens domestic water supplies, aquaculture, agriculture, mining, industry, and other ground water beneficial uses. With input from other agencies, DEQ established a statewide priority list of areas of significantly degraded ground water. This list is based on levels of nitrate and is used to prioritize the development and implementation of management strategies to improve ground water in specific degraded areas.

For more information about DEQ's Ground Water Program, visit [Source Water](#) and IDWR's [Statewide Ground Water Quality Monitoring Program](#).

## 5 Public Participation in Developing the Integrated Report

The public comment period for the draft 2022 Integrated Report was February 18 through March 22, 2022.

### 5.1 Scope of Public Comment

The format of the Integrated Report is established by EPA, so DEQ is not seeking comment on this aspect of the report. However, DEQ does have some discretion regarding how it categorizes waters<sup>2</sup>. In this regard, DEQ solicits public comment on the status of all waters of the state. Specific comments—such as those regarding the placement of a water body in a certain category or an omission from a category—are the most helpful. Data- and site-specific comments were welcomed and evaluated prior to final submission of the 2022 Integrated Report to EPA. This final version of the 2022 Integrated Report includes DEQ's responses to public comments (Appendix J).

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<sup>2</sup> The exception is when waters are being moved from Category 5 to another category.

## 5.2 Basin and Watershed Advisory Groups Consultation

In accordance with Idaho Code §§ 39-3606 and 39-3609, the Basin Advisory Groups (BAGs) and Watershed Advisory Groups (WAGs) must be involved in identifying support status and impaired water bodies and setting priorities for TMDL development. Before public comment, DEQ consulted with active BAGs and WAGs regarding new § 303(d) listings, proposed delistings from Categories 4 and 5, and revised priorities for TMDL development for those water bodies within the applicable watershed or basin. The BAGs and WAGs also had an opportunity to comment during the public comment period.

Idaho Code § 39-3614 and § 39-3616 describe the established duties of the BAGs and WAGs, respectively.

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## **Appendix A. Clean Water Act § 305(b) and § 303(d) Lists**

The CWA § 305(b) list and § 303(d) list for the 2022 Integrated Report were compiled by DEQ using EPA's ATTAINS database.

<https://www2.deq.idaho.gov/admin/LEIA/api/document/download/16769>

## Appendix B. List of Assessment Units Evaluated to have Zero Flow

Based on data from 393 BURP sites, 248 AUs have been evaluated to be dry. When a BURP crew visits a site that cannot be sampled, they record the reason selected from a list (Table 2, DEQ 2017a). To determine the list of AUs evaluated to have zero flow, DEQ selected AUs where all BURP sites were evaluated as either *dry*, *denied access*, or *inaccessible*. The list is further narrowed by those AUs with at least one BURP site reported as *dry*. Table B1 lists the AUs evaluated to have zero flow and the number of dry BURP sites found in each AU. AUs highlighted in gray contained additional BURP sites that were either *inaccessible* and/or *denied access*.

**Table B1. AUs evaluated with zero flow.<sup>a</sup>**

Assessment Unit Number	Assessment Unit Name	Number of Dry BURP Sites
ID16010102BR003_02	Thomas Fork - Idaho/Wyoming border to mouth	1
ID16010201BR013_02	Lower Paris Creek	1
ID16010201BR017_02	Dry Canyon Creek - source to mouth	2
ID16010201BR018_02a	Mud Lake - Dingle Swamp system	1
ID16010201BR022_02	Georgetown Creek - source to mouth	1
ID16010202BR001_03	Spring Creek - source to Idaho/Utah border	1
ID16010202BR020_02e	Weston Creek	1
ID16010204BR001_02	Malad River - Little Malad River to Idaho/Utah border	1
ID16010204BR010_02	Wright Creek - source to Daniels Reservoir	1
ID16010204BR011_02	Dairy Creek - source to mouth	2
ID16010204BR013_02	Samaria Creek - source to mouth	2
ID16020309BR001_03b	Deep Creek - Rock Creek to Idaho/Utah border	4
ID16020309BR002_02	Deep Creek - source to Rock Creek	1
ID16020309BR003_03	Rock Creek - source to mouth	1
ID17010104PN022_02	Tributaries to Deep Creek - below McArthur Lake	1
ID17010213PN007_02	West Fork Blue Creek - source to Idaho/Montana border	2
ID17010213PN008_02	Gold Creek - source to Idaho/Montana border	1
ID17010214PN001_02	Pend Oreille River - tribs, Priest River to Albeni Falls Dam	1
ID17010214PN008_02	Blanchard Lake Stream Order 01 & 02 Tribs	1
ID17010214PN009_02	01 & 02 Tribs to Spirit Lake	1
ID17010214PN011_02	Jewell Lake	1
ID17010214PN013_02a	Westmond Creek and Tributaries	1
ID17010214PN061_02	Unnamed tributary to Pend Oreille River	1
ID17010303PN001_02e	Unnamed Tribs to Powderhorn & Bell Bay	2
ID17010303PN008_02	01 & 02 tribs to Anderson Lake	1
ID17010303PN010_02	Medicine Lake - Stream order 1 & 2	1

Assessment Unit Number	Assessment Unit Name	Number of Dry BURP Sites
ID17010303PN013_02	Robinson Creek - source to mouth	2
ID17010303PN016_02	Unnamed Tribs to CDA River between NF CDA River and Cataldo	1
ID17010303PN017_02	Skeel and Cataldo Creeks - source to mouth	1
ID17010304PN007_02a	Soldier Creek	1
ID17010304PN041_02e	Ruby Creek and tributaries	1
ID17010304PN068_02	Street Creek - source to mouth	1
ID17010305PN013_02	Twin Lakes	2
ID17040202SK011_02	Robinson Creek - Idaho/Wyoming border	1
ID17040203SK009_02	Falls River - Idaho/Wyoming border to Boone Creek	1
ID17040204SK001_03	South Fork Teton River - Teton River Forks to Henrys Fork	2
ID17040204SK005_02	Moody Creek - confluence of North and South Fork Moody Creek	2
ID17040205SK002_02	01 & 02 Tribs to Ririe Reservoir	1
ID17040205SK022_02	Little Valley Creek - source to mouth	1
ID17040206SK011_02	Clifton Creek - source to mouth	1
ID17040206SK022_02a	Snake River - ephemeral streams between RM 750 and RM 773	3
ID17040206SK022_03	Snake River	3
ID17040206SK025_03	Little Hole Draw - source to American Falls Reservoir	1
ID17040207SK002_02	Blackfoot River - Blackfoot Reservoir Dam to Fort Hall Main	3
ID17040207SK009_02	Blackfoot Reservoir 1st and 2nd order tributaries	2
ID17040207SK024_02	Wooley Valley - source to mouth	1
ID17040208SK001_02b	Trail Creek	2
ID17040209SK000_02	Unclassified Waters	10
ID17040209SK003_02A	Intermittent streams of Marsh Creek - source to mouth	1
ID17040209SK006_02	Snake River - Rock Creek to Raft River	2
ID17040209SK008_02	Rock Creek	1
ID17040210SK001_02	Raft River - Heglar Canyon Creek to mouth	2
ID17040210SK001_03	Raft River - Heglar Canyon Creek to mouth	1
ID17040210SK002_03	Raft River - Cassia Creek to Heglar Canyon Creek	1
ID17040210SK004_03	Conner Creek - source to mouth	1
ID17040210SK005_02	Cassia Creek - Clyde Creek to Conner Creek	3
ID17040210SK008_02	Raft River - Cottonwood Creek to Cassia Creek	2
ID17040210SK009_02	Cottonwood Creek - source to mouth	1
ID17040210SK010_02	Raft River	4
ID17040210SK010_03	Raft River	1
ID17040210SK013_02	Raft River - Idaho/Utah border to Edwards Creek	1
ID17040210SK014_02	Junction Creek - source to Idaho/Utah border	1
ID17040210SK016_03	Clear Creek - Idaho/Utah border to mouth	1
ID17040210SK016_04	Clear Creek - Idaho/Utah border to mouth	2
ID17040210SK018_02	Meadow Creek - source to mouth	3
ID17040210SK023_02	Heglar Canyon Creek - source to mouth	1
ID17040210SK023_03	Heglar Canyon Creek - source to mouth	1

Assessment Unit Number	Assessment Unit Name	Number of Dry BURP Sites
ID17040210SK023_04	Heglar Canyon Creek - source to mouth	1
ID17040211SK000_02	Unclassified Waters	4
ID17040211SK000_03	Unclassified Waters	3
ID17040211SK002_02	Lower Goose Creek	2
ID17040211SK010_02	Blue Hill Creek and tribs. to Goose Creek	2
ID17040211SK014_02	Land-Willow-Smith Creek complex	1
ID17040211SK014_03	Land/Willow/Smith Creek complex	3
ID17040212SK000_03	Unclassified Waters	4
ID17040212SK004_02	Tuana Gulch - source to mouth	3
ID17040212SK009_02	Deep Creek - source to High Line Canal	3
ID17040212SK037_02	Cottonwood Creek - source to mouth	1
ID17040212SK039_02	Deer Creek - source to mouth	1
ID17040212SK041_03	Dry Creek - source to mouth	2
ID17040213SK000_03	Unclassified Waters	1
ID17040213SK002_02	Devil Creek - 1st and 2nd order tribs.	4
ID17040213SK003_02	Salmon Falls Creek - Salmon Falls Creek Dam to Devil Creek	2
ID17040213SK007_02	Whiskey Slough, Salmon Falls Creek Reservoir tributaries	2
ID17040213SK009_02	Salmon Falls Creek - Idaho/Nevada border to Salmon Falls Creek	1
ID17040213SK011_02	Shoshone Creek - Hot Creek to Idaho/Nevada border	5
ID17040213SK011_03	Shoshone Creek - Hot Creek to Idaho/Nevada border	1
ID17040214SK005_03	Dry Creek - source to mouth	1
ID17040214SK014_02	Beaver Creek - Dry Creek to canal	2
ID17040215SK002_02	Medicine Lodge Creek - Indian Creek to playas	1
ID17040215SK022_02	Chandler Canyon complex	2
ID17040215SK022_03	Chandler Canyon complex	1
ID17040216SK004_03	Unnamed Tributary - source to mouth; includes Timber Canyon	1
ID17040216SK006_02	Scott Canyon Creek - source to mouth	1
ID17040216SK007_03	Mud Creek - Willow Creek to Scott Canyon Creek	2
ID17040216SK011_02	Mud Creek - source to Unnamed Tributary (T12N, R11W, Sec. 29)	1
ID17040216SK011_03	Mud Creek - source to Unnamed Tributary (T12N, R11W, Sec. 29)	4
ID17040216SK012_03	Unnamed Tributary - source to mouth (T12N, R11W, Sec. 29)	1
ID17040216SK013_02	Meadow Canyon Creek - source to mouth	1
ID17040217SK004_03	North Creek - source to mouth	1
ID17040217SK010_02	Little Lost River - confluence of Summit and Sawmill Creeks	1
ID17040217SK020_02	Dry Creek - Dry Creek Canal to mouth	1
ID17040217SK028_03	Hurst Creek - source to mouth	1
ID17040218SK002_03	Big Lost River - Spring Creek to Big Lost River Sinks (playas)	1
ID17040218SK002_04	Big Lost River - Spring Creek to Big Lost River Sinks (playas)	1
ID17040218SK006_02	Lower Pass Creek - source to mouth	1
ID17040218SK011_02	Big Lost River - McKay Reservoir Dam to Beck and Evan Ditch	3
ID17040218SK012_02	Unnamed Tributaries to McKay Reservoir	1

Assessment Unit Number	Assessment Unit Name	Number of Dry BURP Sites
ID17040218SK017_02	Lone Cedar Creek - source to mouth	1
ID17040218SK020_02	Willow Creek - source to mouth	1
ID17040218SK021_02	Arentson Gulch and Unnamed Tributaries - source to mouth	1
ID17040218SK048_02	Spring Creek - source to mouth	1
ID17040218SK059_05	Dry Fork Creek - source to mouth	1
ID17040218SK061_03	Hammond Spring Creek complex	1
ID17040219SK000_02	Unclassified Waters	11
ID17040219SK000_03	Unclassified Waters	1
ID17040219SK002_02	Big Wood River - Magic Reservoir Dam to mouth	1
ID17040219SK002_03	Big Wood River - Magic Reservoir Dam to mouth	1
ID17040219SK010_02	East Fork Wood River - Hyndman Creek to mouth	1
ID17040219SK013_02	Trail Creek - Corral Creek to mouth	1
ID17040219SK015_02	Lake Creek - source to mouth	1
ID17040219SK025_02a	Greenhorn Creek - USFS boundary to mouth	1
ID17040219SK029_03	Thorn Creek - source to mouth	2
ID17040219SK030_04	Black Canyon Creek - source to mouth	2
ID17040220SK001_02	Camas Creek - Elk Creek to Magic Reservoir	3
ID17040220SK007_02	Camas Creek - Solider Creek to Elk Creek	2
ID17040220SK008_02	Deer Creek - Big Deer Creek to mouth	1
ID17040220SK008_03	Deer Creek - Big Deer Creek to mouth	3
ID17040220SK009_02	Deer Creek - source to and including Big Deer Creek	1
ID17040220SK010_02	Powell Creek - source to mouth	5
ID17040220SK013_02	Camas Creek - Corral Creek to Soldier Creek	2
ID17040220SK013_03	Camas Creek - Corral Creek to Soldier Creek	2
ID17040220SK023_03	Unnamed Tributaries to Mormon Reservoir	1
ID17040221SK001_02	Little Wood River - Richfield (T04S, R19E, Sec. 25) to mouth	1
ID17040221SK006_02	Fish Creek - Fish Creek Reservoir Dam to mouth	1
ID17040221SK010_02	Little Wood River - Little Wood River Reservoir Dam to Carey	1
ID17040221SK010_05a	Little Wood River	1
ID17040221SK011_02	Little Fish Creek - source to mouth	1
ID17050101SW001_03	Dry Creek - 3rd order	1
ID17050101SW007_02	Pot Hole Creek - 1st and 2nd order	3
ID17050101SW009_02	Rosevear Gulch - 1st and 2nd order	2
ID17050101SW009_03	Rosevear Gulch - 3rd order	1
ID17050101SW021_05	Canyon Creek - 5th order (Squaw Creek to CJ Strike)	1
ID17050101SW023_02	Canyon Creek - 1st and 2nd order above Fraiser Reservoir	1
ID17050101SW026_02	Squaw Creek - 1st and 2nd order	1
ID17050101SW026_04	Squaw Creek - 4th order (Mud Springs to Canyon Creek)	2
ID17050102SW002_02	Deadman Gulch and Black Rocks - 1st and 2nd order	1
ID17050102SW002_03	Deadman Gulch and Black Rocks - 3rd order	1
ID17050102SW003_02	Little Jacks Creek - 1st and 2nd order	1

<b>Assessment Unit Number</b>	<b>Assessment Unit Name</b>	<b>Number of Dry BURP Sites</b>
ID17050102SW003_03	Little Jacks Creek and O X Prong - 3rd order	1
ID17050102SW004_02	Big Jacks Creek - 1st and 2nd order	2
ID17050102SW008_02	Sugar Creek - 1st and 2nd order tributaries	1
ID17050102SW008_03	Sugar Creek - 3rd order	3
ID17050102SW009_02	Loveridge and Seventyone Gulches - 1st and 2nd order	1
ID17050102SW011_03	Big Draw	1
ID17050102SW014_02	Sheep Creek - 1st and 2nd order	1
ID17050102SW020_03	Deep Creek and Triplet Canyon - 3rd order	1
ID17050102SW026_02	Unnamed draw in Inside Desert - 1st and 2nd order	2
ID17050102SW026_03	Unnamed draw in Inside Desert - 3rd order	1
ID17050102SW028_02	Clover Creek (East Fork Bruneau River) - 1st and 2nd order	1
ID17050102SW028_03	Clover Creek (East Fork Bruneau River) - 3rd order	1
ID17050102SW035_02	Buck Flat Draw - 1st and 2nd order	2
ID17050102SW035_04	Buck Flat Draw - 4th order	1
ID17050103SW006_03	Snake River - 3rd order unnamed tributaries near Sinker Cr.	1
ID17050103SW010_02	West Rabbit Creek - 1st and 2nd order	1
ID17050103SW010_03	West Rabbit Creek - 3rd order	2
ID17050103SW013_02	Fossil Creek - 1st and 2nd order	2
ID17050103SW013_03	Fossil Creek - 3rd order	1
ID17050103SW017_02	Bates Creek - 1st and 2nd order	1
ID17050103SW018_02	Hart and Little Hart Creeks - 1st and 2nd order	1
ID17050103SW018_03	Hart Creek - 3rd order	2
ID17050103SW022_02	McKeeth Wash - 1st and 2nd order	1
ID17050103SW022_03	McKeeth Wash - 3rd order	2
ID17050103SW023_02	Vinson Wash - 1st and 2nd order	1
ID17050104SW003_04	Piute Creek - 4th order	1
ID17050104SW004_04	Juniper Creek - 4th order	3
ID17050104SW005_02	Juniper Creek - 1st and 2nd order	2
ID17050104SW006_02	Thacker and Ross Sloughs - 1st and 2nd order	1
ID17050104SW007_05	Blue Creek - Shoofly Creek to Owyhee River	1
ID17050104SW010_02	Payne Creek - 1st and 2nd order	1
ID17050104SW010_03	Payne Creek - 3rd order	1
ID17050104SW011_02	Squaw Creek - 1st and 2nd order	2
ID17050104SW012_02	Little Blue Creek - 1st and 2nd order	1
ID17050104SW013_02	Blue Creek - 1st and 2nd order above Blue Creek Reservoir	1
ID17050104SW022_03	Yatahoney Creek - 3rd order	1
ID17050104SW026_03	Deep Creek - 3rd order rangeland tributaries	1
ID17050104SW029_02	Camas Creek - 1st and 2nd order	1
ID17050105SW002_02	Spring Creek - 1st and 2nd order	1
ID17050105SW004_02	Homer Wells Reservoir - 1st and 2nd order	1
ID17050105SW005_03	Coyote Flat - 3rd order	1



<b>Assessment Unit Number</b>	<b>Assessment Unit Name</b>	<b>Number of Dry BURP Sites</b>
ID17050106SW001_02	Little Owyhee River - 1st and 2nd order tributaries	1
ID17050107SW001_02	Dukes Creek and Bald Mountain Canyon - 1st and 2nd order	1
ID17050107SW013_02	Cherry Creek - 1st and 2nd order	1
ID17050107SW014_02	Soldier, Stove and Sheep Creeks - 1st and 2nd order	1
ID17050108SW016_02	Deer Creek - entire drainage	1
ID17050112SW002_02	1st and 2nd order tributaries to Arrowrock Reservoir	1
ID17050114SW014_02	Big Gulch and Little Gulch Creeks, and Woods Gulch	2
ID17050114SW015_02	Willow Creek - 1st and 2nd order	2
ID17050114SW016_02	Tributaries to West Hartley Gulch and Sand Hollow Creek	1
ID17050122SW019_03	Indian Creek - 3rd order (Rattlesnake to Little Willow)	1
ID17050122SW021_03	Little Willow Creek above Paddock Valley Res. - 3rd order	1
ID17050124SW010_02	Mill Creek - entire drainage	1
ID17050124SW013_02	Bacon Creek - entire drainage	1
ID17050124SW026_02	Spring and Camp Creeks - 1st and 2nd order	1
ID17050124SW029_03	Sage Creek - 3rd order (Fairchild Reservoir outlet to mouth)	1
ID17050201SW002_02	Tributaries to Snake River - 1st and 2nd order	1
ID17060101SL015_02	Kirby Creek - source to mouth	1
ID17060101SL016_02	Corral Creek - source to mouth	1
ID17060101SL017_02	Klopton Creek - source to mouth	1
ID17060108CL008b_02	Silver Creek - T43, R5W, Sec. 29 to Idaho/Washington border	2
ID17060108CL023_02	Meadow Creek - East Fork Meadow Creek to mouth	1
ID17060108CL033b_02	Cedar Creek - T43N, R05W, Sec. 28 to Idaho/Washington border	2
ID17060109CL002_02	North Fork Pine Creek - source to Idaho/Washington border	1
ID17060201SL002_02	Morgan Creek - West Creek to mouth	1
ID17060201SL007_02	Challis Creek - Darling Creek to mouth	1
ID17060201SL014_02	Salmon River - Garden Creek to Pennal Gulch	1
ID17060201SL014_03	Salmon River - Garden Creek to Pennal Gulch	1
ID17060201SL014_04	Salmon River - Garden Creek to Pennal Gulch	1
ID17060201SL027_02	Salmon River - Thompson Creek to Squaw Creek	2
ID17060201SL027_03	Salmon River - Thompson Creek to Squaw Creek	1
ID17060201SL063_02	Salmon River - Redfish Lake Creek to Valley Creek	1
ID17060201SL072_02	Salmon River - Fisher Creek to Decker Creek	1
ID17060201SL101_02	Sullivan Creek - source to mouth	1
ID17060201SL116_02	Pine Creek - source to mouth	1
ID17060201SL117_02	McDonald Creek - source to mouth	1
ID17060201SL124_02	Road Creek - Corral Basin Creek to mouth	1
ID17060201SL129_02	Spar Canyon Creek - source to mouth	1
ID17060201SL129_03	Spar Canyon Creek - source to mouth	1
ID17060201SL130_02	Bradshaw Gulch - source to mouth	1
ID17060201SL131_02	Warm Spring Creek - Hole-in-Rock Creek to mouth	1
ID17060201SL131_03	Warm Spring Creek - Hole-in-Rock Creek to mouth	1

<b>Assessment Unit Number</b>	<b>Assessment Unit Name</b>	<b>Number of Dry BURP Sites</b>
ID17060201SL134_02	Hole-in-Rock Creek - source to mouth	1
ID17060201SL135_02	Pennal Gulch - source to mouth	1
ID17060202SL001_02	Pahsimeroi River - Patterson Creek to mouth	1
ID17060202SL012_03	Unnamed Tributary - source to mouth (T12N, R23E, Sec. 22)	1
ID17060202SL013_03	Doublespring Creek - Christian Gulch to mouth	1
ID17060202SL015_03	Doublespring Creek - source to Christian Gulch	1
ID17060204SL032a_03	Little Timber Creek - diversion (T15N, R25E, Sec. 13)	1
ID17060204SL040_02	Texas Creek - source to Meadow Lake Creek	1
ID17060204SL044_02	Divide Creek - source to mouth	1
ID17060204SL049_02	Powderhorn Gulch - source to mouth	1
ID17060204SL053_02	Peterson Creek - source to mouth	1
ID17060209SL011_02	Salmon River - tributaries; Little Salmon R. to Slate Creek	1
ID17060209SL047_02	Whitebird Creek - confluence of N&SF Whitebird Cr to mouth	1
ID17060209SL063_02	Eagle Creek - source to mouth	1
ID17060306CL033_02	Big Creek - source to mouth	1
ID17060306CL044_02	Potlatch River - Big Bear Creek to mouth	1
ID17060308CL012_02	Little North Fork Clearwater River - Spotted Louis to Foehl Creek	1

a. AUs highlighted in gray contained additional BURP sites that were either inaccessible and/or denied access.

## **Appendix C. Lochsa River Subbasin Temperature Natural Conditions Assessments**

<https://www2.deq.idaho.gov/admin/LEIA/api/document/download/16770>

## **Appendix D. Assessment Unit-Cause Combinations Delisted in the 2022 Integrated Report**

The delistings report for the 2022 Integrated Report was compiled by DEQ using EPA's ATTAINS database. DEQ delisted (removed) 46 AU-cause combinations from the state's list of impaired waters (i.e., waters in Categories 4 or 5).

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Bear River

16010201 Bear Lake	
ID16010201BR020_02e	Montpelier Creek - headwaters to Whiskey Creek 4.11 Miles
<b>ESCHERICHIA COLI (E. COLI)</b>	
07/30/2021 (JC): DEQ is proposing to delist E.coli as a cause of impairment to this AU. Five E. coli samples were collected from Montpelier Creek between 9/04/2018 and 10/1/2018 and resulted in a geometric mean of 20.5 MPN/100 mL, which is below the 126 MPN/100 mL criterion and indicates full support of Secondary Contact Recreation (Idaho's WBAG III, section 7.2). Therefore, E.coli is being delisted from Category 5 and the AU will move to Category 2—Fully supporting.	
ID16010201BR020_03b	Montpelier Creek 4.4 Miles
<b>ESCHERICHIA COLI (E. COLI)</b>	
07/30/2021 (JC): DEQ is proposing to delist E.coli as a cause of impairment to this AU. Five E. coli samples were collected from Montpelier Creek between 9/04/2018 and 10/1/2018 and resulted in a geometric mean of 43.9 MPN/100 mL, which is below the 126 MPN/100 mL criterion and indicates full support of Secondary Contact Recreation (Idaho's WBAG III, section 7.2). Therefore, E.coli is being delisted from Category 5 and the AU will move to Category 2—Fully supporting.	

### Clearwater

17060303 Lochsa	
ID17060303CL001_02	Glade Creek - Lochsa River 1st and 2nd order tributaries 14.19 Miles
<b>TEMPERATURE</b>	
9/28/2021 (JW): Temperature was delisted as a cause of impairment for the 2022 IR because DEQ determined applicable temperature criteria values were exceeded but IDAPA 58.01.02.10.63 natural background conditions were present, and therefore applicable criteria values were not exceeded due to human activities. This AU was previously listed in IR Category 4a (approved temperature TMDL), but was assessed as fully supporting aquatic life uses for the 2022 IR. See the 'Lochsa River Subbasin Stream Temperature Natural Conditions Assessment' included as an appendix in Idaho's 2022 IR for details.	
ID17060303CL061_02	Deadman Creek - source to East Fork Deadman Creek 8.67 Miles
<b>TEMPERATURE</b>	
9/28/2021 (JW): Temperature was delisted as a cause of impairment for the 2022 IR because DEQ determined applicable temperature criteria values were exceeded but IDAPA 58.01.02.10.63 natural background conditions were present, and therefore applicable criteria values were not exceeded due to human activities. This AU was previously listed in IR Category 4a (approved temperature TMDL), but aquatic life uses were categorized as not assessed for the 2022 IR. See the 'Lochsa River Subbasin Stream Temperature Natural Conditions Assessment' included as an appendix in Idaho's 2022 IR for details.	

17060305 South Fork Clearwater	
ID17060305CL003_04	Cottonwood Creek - source to Cottonwood Creek waterfall 5.4 Miles
<b>ESCHERICHIA COLI (E. COLI)</b>	
03/29/2021 (RE): Escherechia coli load allocations are provided in Section 5.2 of the South Fork Clearwater River Escherechia coli TMDL, which was approved by EPA on January 14, 2021.	
<b>AMMONIA, UN-IONIZED</b>	
6/14/21 (JW): This AU was listed as impaired for ammonia based on information presented in the 2000 Cottonwood Creek ammonia TMDL. Between October 2019 and March 2021, DEQ collected concurrent ammonia, pH, and temperature measurements within this AU 48 times across 2 different sites. No monitoring results exceeded Idaho's ammonia criteria. Monitoring methods and results are available at: <a href="https://osf.io/gmvh4/">https://osf.io/gmvh4/</a> and in the Cottonwood Creek Ammonia TMDL review document. Based on these results, DEQ will delist ammonia as a cause of impairment. Cold Water Aquatic Life use remains impaired by other pollutants.	

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Clearwater

ID17060305CL006_03	Stockney Creek - source to mouth	6.44 Miles
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#### ESCHERICHIA COLI (E. COLI)

03/29/2021 (RE): Escherechia coli load allocations are provided in Section 5.2 of the South Fork Clearwater River Escherechia coli TMDL, which was approved by EPA on January 14, 2021.

ID17060305CL007_03	Shebang Creek - source to mouth	7.72 Miles
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#### ESCHERICHIA COLI (E. COLI)

03/29/2021 (RE): Escherechia coli load allocations are provided in Section 5.2 of the South Fork Clearwater River Escherechia coli TMDL, which was approved by EPA on January 14, 2021.

ID17060305CL081_02	Sally Ann Creek - source to and inc. Wall Creek	17.73 Miles
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#### ESCHERICHIA COLI (E. COLI)

03/29/2021 (RE): Escherechia coli load allocations are provided in Section 5.2 of the South Fork Clearwater River Escherechia coli TMDL, which was approved by EPA on January 14, 2021.

### Panhandle

#### 17010214 Pend Oreille Lake

ID17010214PN041_02	Upper Pack River - tributaries above Hellroaring Cr.	55.15 Miles
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#### SEDIMENTATION/SILTATION

05/18/2021 (Assessment by T. Higen DEQ-CRO): DEQ is delisting sedimentation/siltation for this AU based on several lines of evidence. 2019 BURP scores indicate that the aquatic life beneficial uses in AU ID17010214PN041\_02 – Upper Pack River are no longer impaired by sedimentation/siltation. 2019 BURP sites (n = 4) received passing scores of 2 and higher and had multiple salmonid young-of-year, indicating that the aquatic life uses are fully supported. 2019 BURP data also demonstrated that streams within this AU had (1) low percentage of fine substrates (average percentage of 9.1% compared to a previous average of 25.4% fines) and substrates that were dominated by cobbles and boulders, (2) low embeddedness (average of 13.8% embeddedness in 2019, a reduction from 16.8% in prior years), and (3) bank stability that improved from 98.2 % stable and covered to 100% stable and covered. Several projects were also completed by the U.S. Forest Service to address sediment impairments in this AU and included the following: improved drainage at the Chimney Rock Trailhead parking to reduce sediment addition to the Pack River; converted Chimney Rock Trail 256 from a road to a trail by installing water bars and removing culverts, thereby improving drainage from Pack River to Chimney Creek; installed new bridges over Pack River and Thor Creek and at the Beehive Lakes Trailhead. USFS hydrology staff also agrees with the sedimentation/siltation delisting for this AU, with the exception of a portion of Lindsey Creek, which is on private land and goes dry during parts of the year; this portion of Lindsey Creek has now been separated into its own AU (ID17010214PN041\_02a) and will remain impaired for sedimentation/siltation, temperature, and total phosphorus.

Lastly, DEQ re-evaluated sediment loading to this AU using the same methodology and modeling techniques created for the 2008 Pend Oreille Tributaries Sediment TMDLs. The same sediment yield coefficients and Water Erosion Prediction Project (WEPP) road crossing parameters were evaluated with an updated vegetation layer derived from the 2016 National Land Cover dataset and a more accurate watershed acreage map that was representative of this specific AU. The original calculations for this AU in the 2008 TMDL included data from the Pack River (AU ID17010214PN041\_03) and treated all streams as perennial. This updated model only included streams in the Upper Pack River (AU ID17010214PN041\_02) and the intermittent streams were calculated with the assumption that flows only deliver sediment 9 out of the 12 months. Using the updated data and watershed acreage, the annual sediment yield in the Upper Pack River AU is 961 tons per year, down from the original estimation of 2,309 tons per year. This is a 1,348 (58%) tons per year reduction and well above the target reduction of 945 tons per year for this AU. Figures and tables of results can be found in an attached document in ATTAINS. Therefore, DEQ is delisting sedimentation/siltation from Category 4a and the AU will remain in Category 4a for temperature and total phosphorus.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Panhandle

#### 17010304 St. Joe

ID17010304PN041_02a	Sherlock Creek	2.23 Miles
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#### SEDIMENTATION/SILTATION

06/28/2021 (Assessment by T. Higen DEQ-CRO): The second order reach of Sherlock Creek is in Category 5 for sediment/siltation and Category 4a for temperature for the Cold Water Aquatic Life and Salmonid Spawning beneficial uses. Historically, Sherlock Creek was impacted by extensive suction dredge and placer mining leading to an unstable channel with a loss of riparian vegetation, loss of aquatic life micro and macro habitat, increased bedload and increased sedimentation of the stream substrates. Suction dredge and placer mining activities were eliminated in the upper St. Joe Subbasin when the river was designated as "Wild and Scenic" in the late 1970's. There is an existing TMDL for temperature in this AU but a TMDL for sediment has not yet been developed by DEQ. In 2007 the U.S. Forest Service partnered with the Restoration Partnership to complete an extensive restoration project in this AU to repair the damage from historical mining activities. The restoration included the removal of 100 tons of contaminated soils, the removal of 86 pieces of derelict mining equipment including bull dozers and a large dredge and the restoration of 12 acres of floodplain. The floodplain restoration included re-contouring of the original stream channel (4000 ft.) and revegetation of the riparian and associated wetlands with native plant species. The restoration successfully restored fish habitat, stabilized the bed and banks of the channel, re-established a healthy riparian area and reduced sediment delivery. More information on the restoration project can be found at [https://www.restorationpartnership.org/sherlock\\_creek\\_project.html](https://www.restorationpartnership.org/sherlock_creek_project.html). DEQ is delisting sedimentation/siltation for this AU based on several lines of evidence in addition to the USFS restoration efforts. Post restoration 2015 and 2019 BURP scores indicate that the Cold Water Aquatic Life and Salmonid Spawning beneficial uses in AU ID17010304PN041\_02a - Sherlock Creek are no longer impaired by sedimentation/siltation. 2015 and 2019 BURP scores show the stream banks are 98.5 % covered and stable, the substrates are dominated by large pebble and cobble with only 15.5% fines and average riffle embeddedness of 15%. The 2015 and 2019 BURP sites also received passing scores of 2 or higher for all indices, except for the 2015 macroinvertebrate index, which received a SMI2 of 1. However, the 2019 BURP Assessment on the same reach of the AU showed an improvement in both macroinvertebrate diversity and composition with a macroinvertebrate score of 3 and an overall BURP score of 2.33, which is supporting for the Cold Water Aquatic Life beneficial use. The 2015 and 2019 BURP Assessments observed multiple native sculpin (*Cottus spp.*) and native westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) of all size classes including numerous age-0 cutthroat trout less than 100 mm. The native salmonids and cottids are both indicators of good water quality and sediment-free substrates. Therefore, DEQ is delisting sedimentation/siltation from Category 5 and the AU will remain in Category 4a for temperature.

#### 17010305 Upper Spokane

ID17010305PN003_04	Spokane River - Post Falls Dam to Idaho/Washington border	5.67 Miles
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#### ZINC

5/5/2022 (TW): Zinc load allocations are provided in Section 5.2 of the Spokane River Metals (Lead and Zinc) TMDL, which was approved by EPA on April 1st, 2022

#### LEAD

5/5/2022 (TW): Lead load allocations are provided in Section 5.2 of the Spokane River Metals (Lead and Zinc) TMDL, which was approved by EPA on April 1st, 2022

ID17010305PN004_04	Spokane River - Coeur d'Alene Lake to Post Falls Dam	9.04 Miles
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#### LEAD

5/5/2022 (TW): Lead load allocations are provided in Section 5.2 of the Spokane River Metals (Lead and Zinc) TMDL, which was approved by EPA on April 1st, 2022

#### ZINC

5/5/2022 (TW): Zinc load allocations are provided in Section 5.2 of the Spokane River Metals (Lead and Zinc) TMDL, which was approved by EPA on April 1st, 2022

### Salmon



## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Salmon

17060203 Middle Salmon-Panther		
ID17060203SL014_03	Panther Creek - Porphyry Creek to Blackbird Creek	1.89 Miles

#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

1/26/2022 (RE/AB): This AU was first listed for combined biota/habitat bioassessments in the 2016 Integrated Report due to a failing BURP score in 2013. For the 2022 Integrated Report, DEQ received continuous temperature data from the US Forest Service for Panther Creek. Temperature data in 2016, 2018, and 2019 violated the 1997 federal bull trout temperature criterion that is applicable to Panther Creek (10 °C Maximum Weekly Maximum Temperature, CFR 131.33). Stream data collected from BURP site 2019SIDFA048 resulted in a passing overall index score. Several parameters that indicate potential sedimentation issues were in normal ranges; stream banks were estimated to be mostly covered and stable, percent fine sediment in the wetted width was low (7.75%), and particle embeddedness and size class heterogeneity were scored relatively high. On the other hand, canopy cover, disruptive pressures, and LOD—which are all related to riparian habitat—were all the lowest scoring metrics. These data show that sedimentation is not likely a cause of impairment in this AU and temperature is the primary cause of impairment. Therefore, DEQ is delisting combined biota/habitat bioassessments from Category 5 and listing Temperature as a cause of impairment to this AU (Category 5).

ID17060203SL024_03	Napias Creek - Arnett Creek to and including Moccasin Creek	5.51 Miles
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#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

1/26/2022 (RE/AB): This AU was first listed for combined biota/habitat bioassessments in the 2016 Integrated Report due to a failing BURP score in 2015. All parameters associated with sedimentation (percent fines, bank cover, embeddedness, Wolman score) were highly scored while all parameters related to riparian habitat were all poorly scored (canopy score=0, disruptive pressures=5, zone of influence = 5). Temperature appears to be the primary driver of impairment in this AU. In addition, for the 2022 Integrated Report, DEQ received continuous temperature data from the US Forest Service for Phelan Creek. Temperature data in 2016 violated the 1997 federal bull trout temperature criterion that is applicable to Phelan Creek (10 °C Maximum Weekly Maximum Temperature, CFR 131.33). Because DEQ has identified a more specific cause of impairment to the AU, the combined biota/habitat bioassessment cause is no longer warranted. Therefore, DEQ is delisting combined biota/habitat bioassessments from Category 5 and listing Temperature as a cause of impairment to this AU (Category 5).

17060206 Lower Middle Fork Salmon		
ID17060206SL024_03	West Fork Camas Creek - source to mouth	5.21 Miles

#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

1/26/2022 (RE/AB): This AU was first listed for combined biota/habitat bioassessments in the 2016 Integrated Report due to a failing BURP score in 2015. The most recent BURP site in this AU (2017SDEQA0009) received a site condition rating of 1.67, indicating CWAL is still not supported. Overall, the habitat condition from this site does not seem impaired (SHI2=2.00); however, the overall score was mostly driven down by poorly scored canopy (canopy score=4) and large woody debris (LOD score=1)—which are both related to riparian habitat. All parameters associated with sedimentation (percent fines, bank cover, embeddedness, Wolman score) were highly scored. For the 2022 Integrated Report, DEQ received continuous temperature data from the US Forest Service for West Fork Camas Creek. Temperature data from 2016 through 2020 violated the 1997 federal bull trout temperature criterion that is applicable to West Fork Camas Creek (10 °C Maximum Weekly Maximum Temperature, CFR 131.33). Because DEQ has identified a more specific cause of impairment to the AU, the combined biota/habitat bioassessment cause is no longer warranted. Therefore, DEQ is delisting combined biota/habitat bioassessments from Category 5 and listing Temperature as a cause of impairment to this AU (Category 5).

### Southwest

17050122 Payette		
ID17050122SW002_02	Tributaries to Black Canyon Reservoir	18.13 Miles

#### ESCHERICHIA COLI (E. COLI)

10/25/2021 (RE): Escherichia coli (E.coli) load allocations are provided in Section 5.4 of the 2021 Payette River Subbasin - Dry Buck Creek, Anderson Creek, and Sand Hollow E. coli TMDL, which was approved by EPA on October 22, 2021.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Southwest

ID17050122SW003_02a Dry Buck, Peterson & Fleming Creeks - 1st & 2nd order	29.38 Miles
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#### ESCHERICHIA COLI (E. COLI)

10/25/2021(RE): Escherichia coli (E.coli) load allocations are provided in Section 5.4 of the 2021 Payette River Subbasin - Dry Buck Creek, Anderson Creek, and Sand Hollow E. coli TMDL, which was approved by EPA on October 22, 2021.

ID17050122SW016_03 Sand Hollow - 3rd order	2.72 Miles
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#### ESCHERICHIA COLI (E. COLI)

10/25/2021(RE): Escherichia coli (E.coli) load allocations are provided in Section 5.4 of the 2021 Payette River Subbasin - Dry Buck Creek, Anderson Creek, and Sand Hollow E. coli TMDL, which was approved by EPA on October 22, 2021.

### 17050201 Brownlee Reservoir

ID17050201SW005_02 Jenkins Creek - entire watershed	22.95 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

ID17050201SW006_03 Scott Creek - 3rd order	14.39 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

ID17050201SW007_03 Warm Springs Creek - 3rd order	5.31 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

ID17050201SW008_02 Hog Creek - 1st & 2nd order	34.41 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

ID17050201SW008_03 Hog Creek - 3rd order section	2.89 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

ID17050201SW010_02 Rock Creek and Tributaries - 1st and 2nd order	63.02 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

ID17050201SW010_03 Rock, Little Rock and Henley Creeks - 3rd order sections	7.31 Miles
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#### ESCHERICHIA COLI (E. COLI)

07/19/2021 (RE): Escherichia coli load allocations are provided in Section 5.4 of the 2021 Brownlee Reservoir Subbasin - Weiser Flats Bacteria TMDL, which was approved by EPA on July 15, 2021.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Upper Snake

#### 17040104 Palisades

ID17040104SK008_02	Snake River - Palisades Reservoir Dam to Fall Creek	77.83 Miles
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##### SEDIMENTATION/SILTATION

1/18/2021 (AB): As part of the Palisades Subbasin Total Maximum Daily Load and Five-Year Review (2019), DEQ conducted stream bank erosion surveys and reviewed existing sediment and streambank data for this AU. From these data, it was determined that streambanks met the 80% streambank stability sediment target and the existing impairment in this AU is not likely the result of excessive sediment loading. Data collected from a McNeil core depth fine sediment sample that was taken in a different stream in this AU (Indian Creek) show the average depth fines (without 2.5-inch particles) was within normal ranges (26.6%). In-stream temperature logger data collected in 2020 show numerous violations of the Salmonid Spawning temperature criteria. Therefore, the sediment cause will be removed from this AU and Temperature will be added as a cause. This AU will remain in Category 5 for Combined Biota/Habitat Bioassessments and the newly added cause of Temperature.

#### 17040105 Salt

ID17040105SK003_02e	Bear Canyon	3.1 Miles
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##### ESCHERICHIA COLI (E. COLI)

07/30/2021 (JC): DEQ is proposing to delist E.coli as a cause of impairment to this AU. Five E. coli samples were collected from Bear Canyon Creek between 8/29/2018 and 9/18/2018 and resulted in a geometric mean of 75.3 MPN/100 mL, which is below the 126 MPN/100 mL criterion and indicates full support of Secondary Contact Recreation (Idaho's WBAG III, section 7.2). Therefore, E.coli is being delisted from Category 4a and the AU will move to Category 2—Fully supporting.

ID17040105SK008_04	Crow Creek - Deer Creek to border	10.44 Miles
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##### ESCHERICHIA COLI (E. COLI)

07/30/2021 (JC): DEQ is proposing to delist E.coli as a cause of impairment to this AU. Five E. coli samples were collected from Crow Creek between 8/30/2018 and 9/24/2018 and resulted in a geometric mean of 36.5 MPN/100 mL, which is below the 126 MPN/100 mL criterion and indicates full support of Secondary Contact Recreation (Idaho's WBAG III, section 7.2). Therefore, E.coli is being delisted from Category 4a and the support status of Secondary Contact Recreation will be changed to "Fully Supporting".

#### 17040202 Upper Henrys

ID17040202SK030_02	Twin Creek - USFS boundary to mouth	5 Miles
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##### COMBINED BIOTA/HABITAT BIOASSESSMENTS

03/29/2021 (RE): During the development of the Upper and Lower Henrys Forks Subbasins 2021 Sediment and Bacteria TMDLs (approved March 12, 2021), DEQ determined that sedimentation/siltation was the cause of impairment to the assessment unit (see section 2 in the 2021 TMDL for more information) and a TMDL was subsequently developed. Therefore, combined biota/habitat bioassessments is being delisted from Category 5 and sedimentation/siltation is being added to Category 4a.

ID17040202SK035_03	Timber Creek - source to mouth	3.37 Miles
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##### ESCHERICHIA COLI (E. COLI)

03/29/2021 (RE): Escherichia coli load allocations are provided in Section 5.2 of the Upper and Lower Henrys Fork Subbasins 2021 Sediment and Bacteria TMDLs, which was approved by EPA on March 12, 2021.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Upper Snake

#### 17040203 Lower Henrys

ID17040203SK013_04	Sand Creek - Pine Creek to mouth	9.96 Miles
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#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

03/29/2021 (RE): During the development of the Upper and Lower Henrys Forks Subbasins 2021 Sediment and Bacteria TMDLs (approved March 12, 2021), DEQ determined that sedimentation/siltation was the cause of impairment to the assessment unit (see section 2 in the 2021 TMDL for more information) and a TMDL was subsequently developed. Therefore, combined biota/habitat bioassessments is being delisted from Category 5 and sedimentation/siltation is being added to Category 4a.

#### 17040205 Willow

ID17040205SK008_04	Willow Creek - Mud Creek to Birch Creek	8.84 Miles
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#### NUTRIENT/EUTROPHICATION BIOLOGICAL INDICATORS

4/12/2021 (DS, RE): DEQ is proposing to delist Nutrient/Eutrophication Biological Indicators for this segment of Willow Creek. DEQ collected 8 nutrient samples from this AU every 2 weeks between June 1, 2016 – September 7, 2016. Overall, these data show that Total Nitrogen (TN, as nitrite + nitrate) targets from the TMDL were met, while Total Phosphorus (TP) targets were exceeded (2021 Willow Creek 5-year Review DRAFT). Total Nitrogen results ranged from 0.0005 – 0.009 mg/L, with an average of 0.0037 mg/L (SD=0.0027). These results were below the 0.3 mg/L TMDL target and below the Ecoregion III recommended threshold of 0.025 mg/L (EPA 822-B-00-016), and all calculated TN loads were below the TMDL target. In contrast, Total Phosphorus was consistently high (mean=0.053 mg/L, SD=0.013 mg/L) and every calculated TP load was above the target value. Additionally, the BLM, in coordination with the adjacent landowner and allotment permittee for the Loertscher Allotment, made cattle distribution improvements to reduce livestock use and impacts to water quality. The Permittee also conducted private land forage seeding and provided alternative water sources to reduce livestock impacts on approximately 2.5 miles of Willow Creek. These management practices could have led to the reduction in sediment-bound nitrogen entering Willow creek. Based on the available data and the restoration work that has been done within this AU, DEQ is delisting Nutrient/Eutrophication Biological Indicators from Category 4a and the AU will be placed in Category 4a for Total Phosphorus and will remain in Category 5 for

ID17040205SK010_02	Sellars Creek - source to mouth	16.77 Miles
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#### SEDIMENTATION/SILTATION

10/22/2021 (DS): This AU is listed in Category 4a for sediment/siltation and temperature. BURP data collected in 2014 indicate there has been improvement in both the macroinvertebrate assemblage and riparian habitat compared to BURP data collected in 2001. BURP sites 2014SPOCA008 (South Fork Sellars Creek) and 2014SPOCA007 (mainstem Sellars Creek) received high passing scores of 2.67 and 3.00, respectively, and had Cutthroat trout of multiple age classes, indicating Full Support of the cold water aquatic life and salmonid spawning beneficial uses. The fine sediment biotic index (FSBI) scores, which assess fine sediment (< 2 mm) impacts on macroinvertebrate communities, improved from measurements of 25 and 35 in 2001 to measurements of 65 and 60 in 2014. The highest FSBI recorded within the Willow Creek subbasin is 75 and the average is 23, so scores of 60 and 65 are high for this region. Additionally, the 2014 macroinvertebrate samples contained a number of sediment-intolerant species including *Brachycentrus americanus*, *Drunella coloradensis/flavilinea*, and *Epeorus longimanus*. Bank stability measurements also increased from measurements of 0% and 49.5% in 2001 to 94.5% and 93.5% in 2014, meeting the original TMDL target of 80% bank stability. Based on the available data, this AU is no longer impaired by sediment. DEQ is proposing to delist sedimentation/siltation for this segment of Sellars Creek and the AU will remain in Category 4a for temperature.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Upper Snake

ID17040205SK011_04	Willow Creek - Crane Creek to Mud Creek	8.4 Miles
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#### NUTRIENT/EUTROPHICATION BIOLOGICAL INDICATORS

4/12/2021 (AB): DEQ is proposing to delist Nutrient/Eutrophication Biological Indicators for this segment of Willow Creek. DEQ collected 8 nutrient samples from this AU every 2 weeks between June 01, 2016 – September 07, 2016. Overall, these data show that Total Nitrogen (TN, as nitrite + nitrate) targets from the TMDL were met, while Total Phosphorus (TP) targets were exceeded (2021 Willow Creek 5-year Review DRAFT). Total Nitrogen results ranged from 0.0038 – 0.0161 mg/L, with an average of 0.01 mg/L (SD=0.0044). These results were below the 0.3 mg/L TMDL target and below the Ecoregion III recommended threshold of 0.025 mg/L (EPA 822-B-00-016), and all calculated TN loads were far below TMDL targets. In contrast, Total Phosphorus was consistently high (mean=0.069 mg/L, SD=0.01 mg/L) and every calculated TP load was above the target value. Since 2006, the lessee of the Sheep Mountain Allotment installed an extensive water system including a well, storage tank, and multiple troughs to reduce livestock pressure on Willow Creek. These management practices could have led to the reduction in sediment-bound nitrogen entering Willow creek. Based on the available data and the restoration work that has been done within this AU, DEQ is delisting Nutrient/Eutrophication Biological Indicators from Category 4a and the AU will be placed in Category 4a for Total Phosphorus and will remain in Category 4a for Temperature and Sedimentation/Siltation.

ID17040205SK019_04	Grays Lake outlet - Brockman Creek to Homer Creek	12.49 Miles
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#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

1/26/2022 (DS/RE/AB): This AU was listed for cause unknown in the 2002 Integrated Report and was later changed to combined biota/habitat bioassessments in the 2008 Integrated Report. However, the 2004 Willow Creek Subbasin Assessment (SBA) and TMDLs document already identified temperature as the true cause of impairment to the AU, and the AU was included in Category 4a for the temperature impairment in the 2008 Integrated Report. Because DEQ identified and developed a TMDL for temperature in the 2004 TMDL document, the combined biota/habitat bioassessments cause is no longer warranted and should have been delisted in the 2008 Integrated Report. The most recent BURP site in this AU (2015SDEQA238) did not suggest any other causes of impairment. Parameters associated with sedimentation did not show obvious signs of impairment; while the estimated percent fine sediment in the wetted width was relatively high ( %28.57), embeddedness and modified Wolman received high scores. All riparian metrics, on the other hand, were all poorly scored (canopy score = 0, disruptive pressures = 3, and zone of influence = 5). Additionally, Solar pathfinder readings in this AU revealed lack of shade from riparian vegetation and continuous temperature logger data from 2016 show regular exceedances of both CWAL and SS criteria. These data suggest the cause of impairment is most likely driven by degraded riparian habitat and associated elevated stream temperatures. Therefore, DEQ is delisting combined biota/habitat bioassessments from Category 5 and the AU will remain in Category 4a for temperature.

### 17040207 Blackfoot

ID17040207SK007_02	Grizzly Creek - source to mouth	16.72 Miles
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#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

7/29/2021 (RE): This AU was first listed for 'cause unknown' in the 2002 Integrated Report and DEQ later determined that sedimentation/siltation was the specific cause of impairment to the AU (see the 2002 Blackfoot River TMDL document). The AU was then placed in Category 4a for the sedimentation/siltation impairment in the 2008 Integrated Report. This AU was never listed for combined biota/habitat bioassessments in the 2002 Integrated Report up to the 2016 Integrated Report and it is unknown why this parameter showed up in the 2018/2020 Integrated Report in Category 4c. This AU was not assessed for the 2018/2020 Integrated Report, and there is no parameter history that indicates DEQ entered combined biota/habitat bioassessments into EPA's ATTAINS database. DEQ believes this parameter was incorrectly associated with this AU as a result of the transition from EPA's Assessment Database (ADB) to the current ATTAINS database. Therefore, DEQ is removing Combined Biota/Habitat Bioassessments from Category 4c and this AU will remain in Category 4a for the sedimentation/siltation impairment.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Upper Snake

17040211		Goose
ID17040211SK006_02	Beaverdam Creek - source to mouth	55.89 Miles

#### DISSOLVED OXYGEN

7/13/2021 (RE, SP): DEQ is delisting temperature and dissolved oxygen (DO) as causes of impairments to this AU. After reviewing the original Goose Creek TMDL and EPA approval letter, DEQ has determined that there are no developed (or approved) temperature or DO TMDLs for this AU. Temperature and DO TMDLs were originally developed and approved for WQLSEG ID5278 – Beaverdam Creek (AU ID17040211SK006\_03 in the current AU naming system), but not for Left Hand Fork Beaverdam Creek or any other 1st - 2nd order tributaries to Beaverdam Creek (AU ID17040211SK006\_02). Additionally, DEQ has never identified this AU as being impaired by temperature or DO (see EPA approval letter) and there is currently no readily available data or information to determine if these parameters are causes of impairments to the AU. Therefore, DEQ is delisting temperature and DO from Category 4a and the AU will remain in Category 4a for total phosphorus, total suspended sediments, and Escherichia coli.

#### TEMPERATURE

7/13/2021 (RE, SP): DEQ is delisting temperature and dissolved oxygen (DO) as causes of impairments to this AU. After reviewing the original Goose Creek TMDL and EPA approval letter, DEQ has determined that there are no developed (or approved) temperature or DO TMDLs for this AU. Temperature and DO TMDLs were originally developed and approved for WQLSEG ID5278 – Beaverdam Creek (AU ID17040211SK006\_03 in the current AU naming system), but not for Left Hand Fork Beaverdam Creek or any other 1st - 2nd order tributaries to Beaverdam Creek (AU ID17040211SK006\_02). Additionally, DEQ has never identified this AU as being impaired by temperature or DO (see EPA approval letter) and there is currently no readily available data or information to determine if these parameters are causes of impairments to the AU. Therefore, DEQ is delisting temperature and DO from Category 4a and the AU will remain in Category 4a for total phosphorus, total suspended sediments, and Escherichia coli.

ID17040211SK009_02	Birch Creek - Idaho/Utah border to mouth	11.04 Miles
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#### ESCHERICHIA COLI (E. COLI)

3/18/2021 (SP): DEQ is delisting Escherichia coli (E.coli) as a cause of impairment to Assessment Unit (AU) ID17040211SK009\_02. After reviewing the original TMDL and Five-Year Review, DEQ found that this TMDL was originally developed for WQLSEG ID2448 – Birch Creek from headwaters to mouth (near the Town of Oakley), which translate to AU ID17040211SK012\_02, ID17040211SK012\_03, and ID17040211SK012\_04 in the current AU naming system. While AU ID17040211SK009\_02 is also associated to a Birch Creek, it is not the same Birch Creek identified in the TMDL. AU ID17040211SK009\_02 is in a different water body unit in IDAPA 58.01.02.150.13 (US-9 Birch Creek – Idaho/Utah border to mouth), which indicates that it is in a separate drainage than the Birch Creek AUs in the original TMDL. DEQ mistakenly associated this AU to the Birch Creek E.coli TMDL (10680) that was developed for the Birch Creek AUs in the water body unit US-12 Birch Creek source to mouth. The Secondary Contact Recreation (SCR) threshold concentration for E. coli is 576 MPN/100mL (Idaho's WBAG III, section 7.2). Results from an E. coli sample collected on 9/12/2019 showed 53 MPN/100mL, indicating the secondary contact recreation use is Fully Supporting. BURP site 2019STWFA022 also received a passing score (2.00) and had salmonids less than or equal to 100 millimeters, indicating that the Cold Water Aquatic Life and Salmonid Spawning uses are Fully Supporting. Therefore, DEQ is delisting E. coli from Category 4a and moving AU ID17040211SK009\_02 to Category 2 because it is fully supporting the Cold Water Aquatic Life and Secondary Contact Recreation uses.

## 2022 Integrated Report: Assessment Unit-Cause Combinations Delisted

### Upper Snake

ID17040211SK009_03	Birch Creek - Idaho/Utah border to mouth	2.28 Miles
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#### PHOSPHORUS, TOTAL

03/18/2021 (SP): DEQ is delisting Escherichia coli (E.coli) and total phosphorus (TP) as causes of impairments to Assessment Unit (AU) ID17040211SK009\_03. After reviewing the original TMDL and Five-Year Review, DEQ found that this TMDL was originally developed for WQLSEG ID2448 – Birch Creek from headwaters to mouth (near the Town of Oakley), which translate to AU ID17040211SK012\_02, ID17040211SK012\_03, and ID17040211SK012\_04 in the current AU naming system. While AU ID17040211SK009\_03 is also associated to a Birch Creek, it is not the same Birch Creek identified in the TMDL. AU ID17040211SK009\_03 is in a different water body unit in IDAPA 58.01.02.150.13 (US-9 Birch Creek – Idaho/Utah border to mouth), which indicates that it is in a separate drainage than the Birch Creek AUs in the original TMDL. DEQ mistakenly associated this AU to the Birch Creek E.coli and TP TMDL (10680) that was developed for the Birch Creek AUs in the water body unit US-12 Birch Creek source to mouth. There is currently no water quality data available to determine the use support for the Secondary Contact Recreation (SCR) beneficial use. Therefore, the use support for SCR will change to Not Assessed until DEQ can collect E.coli data during the recreational season for this AU. Additionally, there is no water quality data available to determine if TP is impairing or meeting criteria for the Cold Water Aquatic Life (COLD) and Salmonid Spawning (SS) beneficial use. However, DEQ does have BURP data from 1997-2017 that indicates this assessment unit is Fully Supporting the COLD and SS uses (2017 BURP score = 2.00, 2015 BURP score = 2.00, 1999 BURP score = 2.33, and 1997 BURP score = 2.50). Therefore, DEQ is delisting E. coli and TP from Category 4a and moving AU ID17040211SK009\_03 to Category 2 because it is fully supporting the Cold Water Aquatic Life and Salmonid Spawning beneficial uses.

#### ESCHERICHIA COLI (E. COLI)

03/18/2021 (SP): DEQ is delisting Escherichia coli (E.coli) and total phosphorus (TP) as causes of impairments to Assessment Unit (AU) ID17040211SK009\_03. After reviewing the original TMDL and Five-Year Review, DEQ found that this TMDL was originally developed for WQLSEG ID2448 – Birch Creek from headwaters to mouth (near the Town of Oakley), which translate to AU ID17040211SK012\_02, ID17040211SK012\_03, and ID17040211SK012\_04 in the current AU naming system. While AU ID17040211SK009\_03 is also associated to a Birch Creek, it is not the same Birch Creek identified in the TMDL. AU ID17040211SK009\_03 is in a different water body unit in IDAPA 58.01.02.150.13 (US-9 Birch Creek – Idaho/Utah border to mouth), which indicates that it is in a separate drainage than the Birch Creek AUs in the original TMDL. DEQ mistakenly associated this AU to the Birch Creek E.coli and TP TMDL (10680) that was developed for the Birch Creek AUs in the water body unit US-12 Birch Creek source to mouth. There is currently no water quality data available to determine the use support for the Secondary Contact Recreation (SCR) beneficial use. Therefore, the use support for SCR will change to Not Assessed until DEQ can collect E.coli data during the recreational season for this AU. Additionally, there is no water quality data available to determine if TP is impairing or meeting criteria for the Cold Water Aquatic Life (COLD) and Salmonid Spawning (SS) beneficial use. However, DEQ does have BURP data from 1997-2017 that indicates this assessment unit is Fully Supporting the COLD and SS uses (2017 BURP score = 2.00, 2015 BURP score = 2.00, 1999 BURP score = 2.33, and 1997 BURP score = 2.50). Therefore, DEQ is delisting E. coli and TP from Category 4a and moving AU ID17040211SK009\_03 to Category 2 because it is fully supporting the Cold Water Aquatic Life and Salmonid Spawning beneficial uses.

### 17040215 Medicine Lodge

ID17040215SK015_02	Horse Creek - source to mouth	8.42 Miles
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#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

7/28/2021 (RE): This AU was first listed for 'cause unknown' and sedimentation in the 2002 Integrated Report and later relisted for combined biota/habitat bioassessments, temperature (Category 4a), and sedimentation/siltation in the 2008 Integrated Report. Because DEQ has already identified temperature and sedimentation/siltation as specific causes of impairments to the AU, the combined biota/habitat bioassessment cause is no longer warranted and should have been delisted in the 2008 Integrated Report. Therefore, DEQ is delisting combined biota/habitat bioassessments from Category 5 and the AU will remain impaired by temperature (Category 4a) and sedimentation/siltation (Category 5).

ID17040215SK018_02	Deep Creek - source to mouth	77.08 Miles
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#### COMBINED BIOTA/HABITAT BIOASSESSMENTS

7/28/2021 (RE): This AU was first listed for 'cause unknown' in the 2002 Integrated Report and later relisted for combined biota/habitat bioassessments, temperature (Category 4a), and sedimentation/siltation in the 2008 Integrated Report. Because DEQ has already identified temperature and sedimentation/siltation as specific causes of impairments to the AU, the combined biota/habitat bioassessment cause is no longer warranted and should have been delisted in the 2008 Integrated Report. Therefore, DEQ is delisting combined biota/habitat bioassessments from Category 5 and the AU will remain impaired by temperature (Category 4a) and sedimentation/siltation (Category 5).

## **Appendix E. Waters Remaining on the 2002 TMDL Settlement Agreement**

Table E1 presents the waters remaining on the 2002 TMDL settlement agreement (DEQ 2002). DEQ is not responsible for developing TMDLs for waters wholly on tribal land (highlighted in gray in the table).



**Table E1. Waters remaining on the 2002 TMDL settlement agreement.<sup>a</sup>**

Assessment Unit	Water Body Name	Subbasin	Pollutant	Priority/Status
ID17010104PN004_02	Blue Joe Creek	Lower Kootenai	Cadmium	Low
ID17010104PN004_02	Blue Joe Creek	Lower Kootenai	Lead	Low
ID17010104PN004_02	Blue Joe Creek	Lower Kootenai	Zinc	Low
ID17010214PN001_08	Pend Oreille River - Priest River to Albeni Falls Dam	Pend Oreille Lake	Temperature (water)	Medium
ID17010214PN001_08	Pend Oreille River - Priest River to Albeni Falls Dam	Pend Oreille Lake	Dissolved Gas Supersaturation	Medium
ID17010301PN004_03	Prichard Creek - between Butte Gulch and Eagle Creek	Coeur d'Alene River (Upper/North Fork)	Metals	Low
ID17010301PN004_04	Prichard Creek below Eagle Creek	Coeur d'Alene River (Upper/North Fork)	Metals	Low
ID17010301PN005_02	Prichard Creek -headwaters and tributaries above Butte Gulch	Coeur d'Alene River (Upper/North Fork)	Metals	Low
ID17010301PN005_03	Prichard Creek - between Barton Gulch to Butte Gulch	Coeur d'Alene River (Upper/North Fork)	Metals	Low
ID17010302PN001_02	South Fork Coeur d'Alene River - Tributaries below Placer Cr	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN001_03	South Fork Coeur d' Alene River-btw Placer Cr. and Big Cr.	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN001_04	South Fork Coeur d'Alene River - btw Big Cr and Pine Cr	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN001_05	South Fork Coeur d'Alene River - btw Pine Cr and CdA River	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN002_04	Pine Creek - East Fork Pine Creek to South Fork CdA River	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN004_02	East Fork Pine Creek headwaters and tributaries	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN004_03	East Fork Pine Creek below Douglas Creek	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN006_02	Government Gulch	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN014_02	Canyon Creek - from Gorge Gulch to South Fork CdA R.	Coeur d'Alene River (South Fork)	Metals	Low

Assessment Unit	Water Body Name	Subbasin	Pollutant	Priority/Status
ID17010302PN015_02	Canyon Creek from headwaters to Gorge Gulch	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN016_02	Ninemile Creek and tribs except Ninemile Cr above East Fork	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN017_02	Ninemile Creek above East Fork Ninemile Creek	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN018_02	Moon Creek headwaters and tribs except West Fork Moon Cr	Coeur d'Alene River (South Fork)	Metals	Low
ID17010302PN018_03	Moon Creek btw West Fork Moon and South Fork CDA River	Coeur d'Alene River (South Fork)	Metals	Low
ID17010303PN007_06	Coeur d'Alene River - Latour to mouth	Coeur d'Alene Lake	Sedimentation/Siltation	Low
ID17010303PN007_06	Coeur d'Alene River - Latour Creek to mouth	Coeur d'Alene Lake	Metals	Low
ID17010303PN016_06	Coeur d'Alene River-South Fork Coeur d'Alene River to Latour	Coeur d'Alene Lake	Metals	Low
ID17040212SK010_03	Mud Creek	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK012_03	Cedar Draw	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK014_02	Cottonwood Creek	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK015_02	McMullen Creek	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK015_03	McMullen Creek	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK020_07	Snake-Milner to T Falls	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK022_03	Dry Creek	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK034_04	Clover Creek	Upper Snake-Rock	Temperature (water)	In development
ID17040212SK035_04	Pioneer Reservoir	Upper Snake-Rock	Temperature (water)	In development
ID17050102SW009_06	Bruneau	Bruneau	Temperature (water)	In development
ID17050102SW028_04	Clover Creek - E Fork Bruneau	Bruneau	Temperature (water)	In development
ID17050102SW028_05	Clover Creek - E Fork Bruneau	Bruneau	Temperature (water)	In development
ID17050102SW002_05	Jacks Creek	Bruneau	Temperature (water)	In development
ID17050114SW001_06	Boise River - Indian Creek to mouth	Lower Boise	Temperature (water)	High
ID17050114SW002_04	Indian Creek at Nampa	Lower Boise	Temperature (water)	High
ID17050114SW002_04	Indian Creek at Nampa	Lower Boise	Cause Unknown (Nutrients Suspected)	4b plan in development
ID17050114SW005_06	Boise River - River Mile 50 to Star Bridge	Lower Boise	Temperature (water)	High

Assessment Unit	Water Body Name	Subbasin	Pollutant	Priority/Status
ID17050114SW006_02	Mason Creek	Lower Boise	Cause Unknown (Nutrients Suspected)	4b plan in development
ID17050114SW010_03	Five Mile Creek	Lower Boise	Cause Unknown (Nutrients Suspected)	4b plan in development
ID17050114SW016_03	Sand Hollow Creek	Lower Boise	Cause Unknown (Nutrients Suspected)	4b plan in development
ID17050122SW001_06	Black Can Dam to mouth	Payette	Temperature (water)	High
ID17050201SW003_08	Snake River	Brownlee Reservoir	Mercury	High
ID17060203SL005_03	Big Deer Creek	Middle Salmon-Panther	Copper	High
ID17060303CL001_05	Lochsa River	Lochsa	Temperature (water)	Medium
ID17060303CL003_05	Lochsa River	Lochsa	Temperature (water)	Medium
ID17060303CL008_05	Lochsa River	Lochsa	Temperature (water)	Medium
ID17060303CL009_05	Lochsa River	Lochsa	Temperature (water)	Medium
ID17060303CL013_05	Lochsa River	Lochsa	Temperature (water)	Medium
ID17060303CL020_05	Lochsa River	Lochsa	Temperature (water)	Medium
ID17060306CL006_03	Sweetwater Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL006_03	Sweetwater Creek	Clearwater	Temperature (water)	Low
ID17060306CL006_03	Sweetwater Creek	Clearwater	Cause Unknown	Low
ID17060306CL006_03	Sweetwater Creek	Clearwater	Fecal Coliform	Low
ID17060306CL006_04	Sweetwater Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL006_04	Sweetwater Creek	Clearwater	Temperature (water)	Low
ID17060306CL006_04	Sweetwater Creek	Clearwater	Cause Unknown	Low
ID17060306CL006_04	Sweetwater Creek	Clearwater	Fecal Coliform	Low
ID17060306CL007_02	Webb Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL007_02	Webb Creek	Clearwater	Temperature (water)	Low
ID17060306CL007_02	Webb Creek	Clearwater	Cause Unknown	Low
ID17060306CL007_02	Webb Creek	Clearwater	Fecal Coliform	Low
ID17060306CL019_02T	Holes Creek	Clearwater	Ammonia (un-ionized)	NA
ID17060306CL019_02T	Holes Creek	Clearwater	Oil and Grease	NA
ID17060306CL019_02T	Holes Creek	Clearwater	Sedimentation/Siltation	NA
ID17060306CL019_02T	Holes Creek	Clearwater	Cause Unknown	NA

Assessment Unit	Water Body Name	Subbasin	Pollutant	Priority/Status
ID17060306CL020_03T	Long Hollow Creek	Clearwater	Sedimentation/Siltation	NA
ID17060306CL020_03T	Long Hollow Creek	Clearwater	Cause Unknown	NA
ID17060306CL020_03T	Long Hollow Creek	Clearwater	Fecal Coliform	NA
ID17060306CL023_02T	Sixmile Creek	Clearwater	Ammonia (un-ionized)	NA
ID17060306CL023_02T	Sixmile Creek	Clearwater	Oil and Grease	NA
ID17060306CL023_02T	Sixmile Creek	Clearwater	Sedimentation/Siltation	NA
ID17060306CL023_02T	Sixmile Creek	Clearwater	Temperature (water)	NA
ID17060306CL023_02T	Sixmile Creek	Clearwater	Cause Unknown	NA
ID17060306CL023_03T	Sixmile Creek	Clearwater	Ammonia (un-ionized)	NA
ID17060306CL023_03T	Sixmile Creek	Clearwater	Oil and Grease	NA
ID17060306CL023_03T	Sixmile Creek	Clearwater	Sedimentation/Siltation	NA
ID17060306CL023_03T	Sixmile Creek	Clearwater	Temperature (water)	NA
ID17060306CL023_03T	Sixmile Creek	Clearwater	Cause Unknown	NA
ID17060306CL024_02	Lawyer Creek	Clearwater	Ammonia (un-ionized)	Low
ID17060306CL024_02	Lawyer Creek	Clearwater	Oil and Grease	Low
ID17060306CL024_02	Lawyer Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL024_02	Lawyer Creek	Clearwater	Temperature (water)	Low
ID17060306CL024_02	Lawyer Creek	Clearwater	Cause Unknown	Low
ID17060306CL024_02	Lawyer Creek	Clearwater	Fecal Coliform	Low
ID17060306CL024_03	Lawyer Creek	Clearwater	Ammonia (un-ionized)	Low
ID17060306CL024_03	Lawyer Creek	Clearwater	Oil and Grease	Low
ID17060306CL024_03	Lawyer Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL024_03	Lawyer Creek	Clearwater	Temperature (water)	Low
ID17060306CL024_03	Lawyer Creek	Clearwater	Cause Unknown	Low
ID17060306CL025_02T	Sevenmile Creek	Clearwater	Sedimentation/Siltation	NA
ID17060306CL025_03T	Sevenmile Creek	Clearwater	Sedimentation/Siltation	NA
ID17060306CL041_02	Bedrock Creek	Clearwater	Ammonia (un-ionized)	Low
ID17060306CL041_02	Bedrock Creek	Clearwater	Oil and Grease	Low
ID17060306CL041_02	Bedrock Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL041_02	Bedrock Creek	Clearwater	Temperature (water)	Low

Assessment Unit	Water Body Name	Subbasin	Pollutant	Priority/Status
ID17060306CL041_02	Bedrock Creek	Clearwater	Cause Unknown	Low
ID17060306CL041_02	Bedrock Creek	Clearwater	Fecal Coliform	Low
ID17060306CL043_02	Pine Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL043_02	Pine Creek	Clearwater	Temperature (water)	Low
ID17060306CL043_02	Pine Creek	Clearwater	Cause Unknown	Low
ID17060306CL043_03	Pine Creek	Clearwater	Ammonia (un-ionized)	Low
ID17060306CL043_03	Pine Creek	Clearwater	Oil and Grease	Low
ID17060306CL043_03	Pine Creek	Clearwater	Sedimentation/Siltation	Low
ID17060306CL043_03	Pine Creek	Clearwater	Cause Unknown	Low
ID17060308CL001_06T	North Fork Clearwater River	Lower North Fork Clearwater	Dissolved Gas Supersaturation	NA

a. Waters on tribal lands are highlighted in gray. DEQ is not responsible for developing TMDLs for water on tribal lands.

NA = Not Applicable

## Appendix F. Clean Water Act § 303(d) Priority Ranking

Under CWA § 303(d) states are required to establish a priority ranking and TMDL development schedule for waters on the § 303(d) list. To achieve this, DEQ assigns a high, medium, or low priority ranking to the subbasin containing § 303(d)-listed waters (Table F1). Priority rankings are based on the severity of the pollutant, uses to be made of such waters, severity of concern, complexity of analysis, availability of resources, funding, consultation with the BAGs and WAGs, and executive or legislative direction.

**Table F1. Priority ranking and TMDL development schedule.**

DEQ Region	HUC	Subbasin	Priority	Year
Boise				
	17050102	Bruneau	High	2021
	17050103	Middle Snake River/Succor Creek	High	2021
	17050112	Boise River/Mores Creek	High	2021
	17050114	Lower Boise River	High	2021
	17050122	Payette River	High	2021
	17050201	Brownlee Reservoir	High	2021
	17050124	Weiser River	High	2024
	17050115	Middle Snake River/Payette	Medium	2024
	17050123	North Fork Payette River	Medium	2024
	17050101	C.J. Strike Reservoir	Medium	2025
	17050104	Upper Owyhee River	Low	2028
	17050111	North/Middle Forks Boise River	Low	2028
	17050113	South Fork Boise River	Low	2028
	17050120	South Fork Payette River	Low	2028
	17050121	Middle Fork Payette	Low	2028
	17060205	Upper Middle Fork Salmon River	Low	2028
	17060206	Lower Middle Fork Salmon	Low	2028
	17060208	South Fork Salmon River	Low	2028
	17050108	Jordan	Low	2030
Coeur d'Alene				
	17010305	Upper Spokane River	High	2022
	17010213	Lower Clark Fork River	High	2022
	17010302	South Fork Coeur d'Alene River	Medium	2022
	17010214	Pend Oreille Lake	Medium	2022
	17010304	St. Joe River	Medium	2022
	17010216	Pend Oreille River (below Albeni Falls Dam)	Low	2022
	17010215	Priest Lake	Low	2022
	17010301	North Fork Coeur d'Alene River	Low	2024
	17010303	Coeur d'Alene Lake	Low	2024
	17010104	Kootenai (incl. 17010101 and 17010104) and Moyie (17010105)	Low	2026

DEQ Region	HUC	Subbasin	Priority	Year
Idaho Falls				
	17040205	Willow Creek	High	2020
	17060203	Middle Salmon-Panther	High	2020
	17040214	Beaver Creek/Camas Creek	High	2022
	17040215	Medicine Lodge Creek	High	2022
	17040217	Little Lost River	High	2022
	17060202	Pahsimeroi River	High	2022
	17060204	Lemhi River	High	2022
	17040216	Birch	Medium	2024
	17060207	Middle Salmon-Chamberlain	Medium	2024
	17040104	Palisades Reservoir	Low	2026
	17040201	Idaho Falls	Low	2026
	17040202	Upper Henrys	Low	2026
	17040203	Lower Henrys	Low	2026
	17040204	Teton	Low	2026
	17040218	Big Lost River	Low	2026
	17060201	Upper Salmon	Low	2026
Lewiston				
	17060305	South Fork Clearwater	High	2021
	17060303	Lochsa River	Medium	2024
	17060304	Middle Fork Clearwater	Medium	2024
	17060307	Upper North Fork Clearwater River	Medium	2024
	17060308	Lower North Fork Clearwater	Medium	2024
	17060101	Hells Canyon	Low	2026
	17060103	Lower Snake – Asotin	Low	2026
	17060108	Palouse River	Low	2026
	17060209	Lower Salmon	Low	2028
	17060306	Clearwater River	Low	2028
Pocatello				
	16010201	Bear Lake	High	2022
	16010102	Central Bear River	Medium	2024
	16010202	Middle Bear River	Low	2026
	16010203	Little Bear River/Logan	Low	2026
	16010204	Lower Bear River/Malad	Low	2026
	16020309	Curlew Valley	Low	2026
	17040105	Salt	Low	2026
	17040206	American Falls Reservoir	Low	2026
	17040207	Blackfoot River	Low	2026
	17040208	Portneuf River	Low	2026
Twin Falls				
	17040210	Raft River	High	2022
	17040211	Goose Creek	High	2022

DEQ Region	HUC	Subbasin	Priority	Year
	17040212	Upper Snake River/Rock Creek	High	2022
	17040219	Big Wood	Medium	2024
	17040220	Camas	Medium	2024
	17040213	Salmon Falls Creek	Low	2020
	17040221	Little Wood River	Low	2020
	17040209	Lake Walcott	Low	2026



## Appendix G. DEQ's WQ-27 Priority List (2016–2022)

DEQ's WQ-27 priority list was submitted to EPA in February 2017. In Table G1, the year in the *Priority ID* column represents the state fiscal year when DEQ plans to submit a TMDL for EPA approval (ending June 30 of the nominal year). The *Progress Update* column provides the year EPA approved the TMDL or whether DEQ delisted the AU-cause combination from the § 303(d) list based on new data that showed the applicable water quality standard was met. For more information on the WQ-27 priority list, refer to Appendix O in the 2016 Integrated Report (DEQ 2018).

**Table G1. WQ-27 priority list (2016–2022).**

Priority ID	Subbasin	Assessment Unit ID	Cause Name	Progress Update
2016	Priest	ID17010215PN001_05	Temperature	2019
2016	Priest	ID17010215PN008_03	Temperature	2019
2016	Priest	ID17010215PN009_03	Temperature	2019
2016	Priest	ID17010215PN010_02	Temperature	2019
2016	Priest	ID17010215PN010_03	Temperature	2019
2016	Priest	ID17010215PN012_02	Temperature	2019
2016	Priest	ID17010215PN013_02	Temperature	2019
2016	Priest	ID17010215PN017_02	Temperature	2019
2016	Priest	ID17010215PN017_03	Temperature	2019
2016	Priest	ID17010215PN018_02	Temperature	2019
2016	Priest	ID17010215PN019_02	Temperature	2019
2016	Priest	ID17010215PN020_03	Temperature	2019
2016	Priest	ID17010215PN022_04	Temperature	2019
2016	Priest	ID17010215PN023_02	Temperature	2019
2016	Priest	ID17010215PN023_03	Temperature	2019
2016	Priest	ID17010215PN024_03	Temperature	2019
2016	Priest	ID17010215PN025_02	Temperature	2019
2016	Priest	ID17010215PN026_02	Temperature	2019
2016	Priest	ID17010215PN027_04	Temperature	2019
2016	Priest	ID17010215PN028_03	Temperature	2019
2016	Priest	ID17010215PN030_03	Temperature	2019
2016	Priest	ID17010215PN030_04	Temperature	2019
2016	Priest	ID17010215PN031_03	Temperature	2019
2016	Salt	ID17040105SK001_02b	Sedimentation/siltation	2018
2016	Salt	ID17040105SK003_02	Sedimentation/siltation	2018
2016	Salt	ID17040105SK003_02j	Sedimentation/siltation	2018
2016	Salt	ID17040105SK006_04	Sedimentation/siltation	2018
2016	Salt	ID17040105SK007_02c	Sedimentation/siltation	2018
2016	Salt	ID17040105SK007_02f	Sedimentation/siltation	2018
2016	Salt	ID17040105SK007_03	Sedimentation/siltation	2018
2016	Salt	ID17040105SK008_02a	Sedimentation/siltation	2018

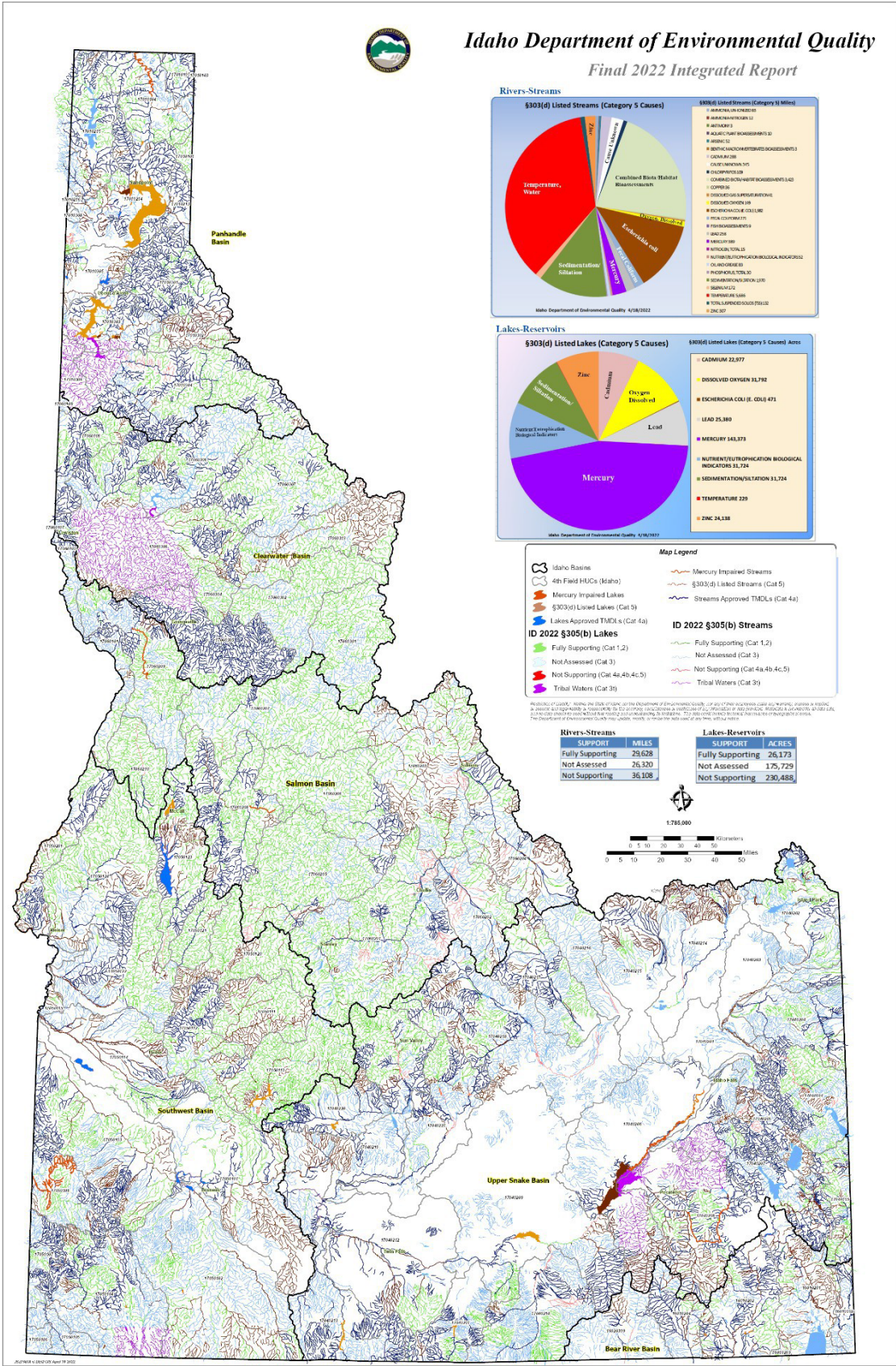
Priority ID	Subbasin	Assessment Unit ID	Cause Name	Progress Update
2016	Salt	ID17040105SK008_02c	Sedimentation/siltation	2018
2016	Salt	ID17040105SK008_04	Sedimentation/siltation	2018
2016	Salt	ID17040105SK003_02e	Escherichia coli	2018
2016	Salt	ID17040105SK007_02c	Escherichia coli	2018
2016	Salt	ID17040105SK008_04	Escherichia coli	2018
2016	Willow	ID17040205SK008_02	Escherichia coli	
2016	Willow	ID17040205SK024_02	Escherichia coli	
2016	Willow	ID17040205SK005_04	Temperature	
2016	Willow	ID17040205SK008_04	Temperature	
2018	Curlew Valley	ID16020309BR001_03	Sedimentation/siltation	2019
2018	Curlew Valley	ID16020309BR001_03a	Sedimentation/siltation	Delisted
2018	Curlew Valley	ID16020309BR002_02a	Sedimentation/siltation	2019
2018	Curlew Valley	ID16020309BR003_02a	Sedimentation/siltation	2019
2018	Curlew Valley	ID16020309BR003_03a	Sedimentation/siltation	2019
2018	Curlew Valley	ID16020309BR003_02a	Escherichia coli	2019
2018	Curlew Valley	ID16020309BR003_03a	Escherichia coli	2019
2018	Little Wood	ID17040221SK009_03	Sedimentation/siltation	
2018	Lochsa	ID17060303CL001_02	Temperature	2018
2018	Lochsa	ID17060303CL001_05	Temperature	
2018	Lochsa	ID17060303CL003_05	Temperature	
2018	Lochsa	ID17060303CL008_05	Temperature	
2018	Lochsa	ID17060303CL009_05	Temperature	
2018	Lochsa	ID17060303CL013_05	Temperature	
2018	Lochsa	ID17060303CL020_05	Temperature	
2018	Lochsa	ID17060303CL061_02	Temperature	2018
2018	Lochsa	ID17060303CL062_03	Temperature	2018
2018	Lochsa	ID17060303CL063_02	Temperature	2018
2018	Lochsa	ID17060303CL063_03	Temperature	2018
2018	Lochsa	ID17060303CL064_02	Temperature	2018
2018	Middle Salmon-Panther	ID17060203SL005_03	Copper	
2018	Middle Salmon-Panther	ID17060203SL007_02	Copper	
2018	Middle Salmon-Panther	ID17060203SL010_05	Copper	Delisted
2018	Middle Salmon-Panther	ID17060203SL011_04	Copper	Delisted
2018	Middle Salmon-Panther	ID17060203SL040_02	Sedimentation/siltation	Delisted
2018	Middle Salmon-Panther	ID17060203SL040_02	Temperature	Delisted
2018	Upper Snake-Rock	ID17040212SK000_03A	Sedimentation/siltation	
2018	Upper Snake-Rock	ID17040212SK040_03	Sedimentation/siltation	
2018	Upper Snake-Rock	ID17040212SK000_03A	Escherichia coli	
2018	Upper Snake-Rock	ID17040212SK035_04	Escherichia coli	
2018	Upper Snake-Rock	ID17040212SK010_03	Temperature	
2018	Upper Snake-Rock	ID17040212SK012_03	Temperature	

Priority ID	Subbasin	Assessment Unit ID	Cause Name	Progress Update
2018	Upper Snake-Rock	ID17040212SK014_02	Temperature	
2018	Upper Snake-Rock	ID17040212SK015_02	Temperature	
2018	Upper Snake-Rock	ID17040212SK015_03	Temperature	
2018	Upper Snake-Rock	ID17040212SK020_07	Temperature	
2018	Upper Snake-Rock	ID17040212SK022_03	Temperature	
2018	Upper Snake-Rock	ID17040212SK034_04	Temperature	
2018	Upper Snake-Rock	ID17040212SK035_04	Temperature	
2018	Upper Snake-Rock	ID17040212SK036_02	Temperature	
2018	Upper Snake-Rock	ID17040212SK040_02	Temperature	
2018	Upper Snake-Rock	ID17040212SK040_03	Temperature	
2018	Upper Spokane	ID17010305PN003_04	Lead	2022
2018	Upper Spokane	ID17010305PN003_04	Zinc	2022
2018	Upper Spokane	ID17010305PN004_04	Lead	2022
2018	Upper Spokane	ID17010305PN004_04	Zinc	2022
2020	Brownlee Reservoir	ID17050201SW003_02	Escherichia coli	
2020	Brownlee Reservoir	ID17050201SW005_02	Escherichia coli	2021
2020	Brownlee Reservoir	ID17050201SW006_03	Escherichia coli	2021
2020	Brownlee Reservoir	ID17050201SW007_03	Escherichia coli	2021
2020	Brownlee Reservoir	ID17050201SW008_02	Escherichia coli	2021
2020	Brownlee Reservoir	ID17050201SW008_03	Escherichia coli	2021
2020	Brownlee Reservoir	ID17050201SW010_02	Escherichia coli	2021
2020	Brownlee Reservoir	ID17050201SW010_03	Escherichia coli	2021
2020	Lake Walcott	ID17040209SK008_04	Escherichia coli	
2020	Lemhi	ID17060204SL011_04	Escherichia coli	
2020	Lemhi	ID17060204SL058_04	Escherichia coli	
2020	Lemhi	ID17060204SL036_03	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW009_03	Escherichia coli	
2020	Middle Snake-Succor	ID17050103SW025_02	Escherichia coli	
2020	Middle Snake-Succor	ID17050103SW016_02	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW019_02	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW019_03	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW019_04	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW021_02	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW024_03	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW025_02	Sedimentation/siltation	
2020	Middle Snake-Succor	ID17050103SW026_02	Sedimentation/siltation	
2020	South Fork Coeur d'Alene	ID17010302PN001_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN001_05	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN007a_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN007a_03	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN009a_02	Temperature	

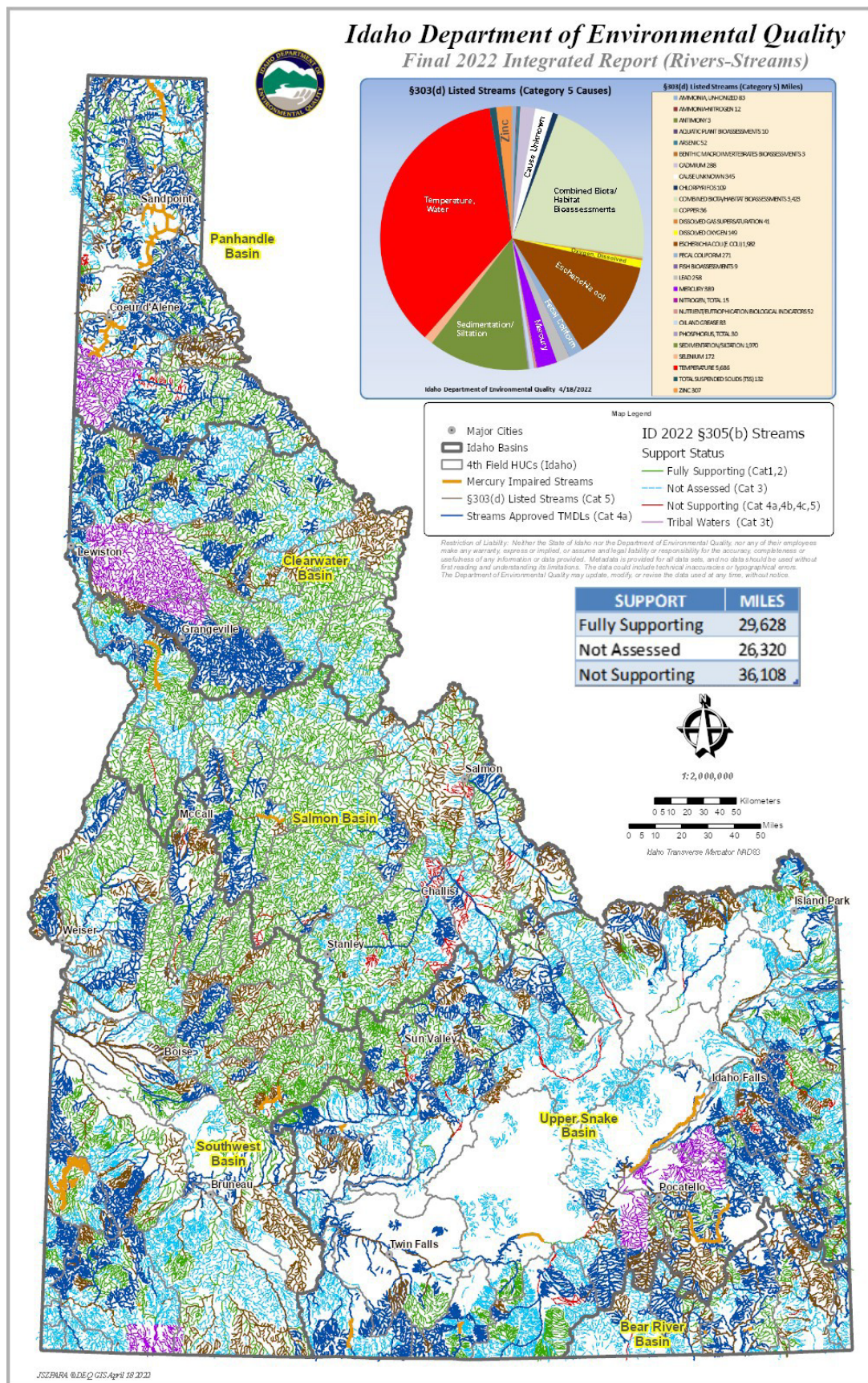
Priority ID	Subbasin	Assessment Unit ID	Cause Name	Progress Update
2020	South Fork Coeur d'Alene	ID17010302PN010_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN013_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN014_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN015_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN016_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN018_02	Temperature	
2020	South Fork Coeur d'Alene	ID17010302PN018_03	Temperature	
2022	Blackfoot	ID17040207SK015_02	Temperature	
2022	Blackfoot	ID17040207SK015_03	Temperature	
2022	Blackfoot	ID17040207SK016_02a	Temperature	
2022	Blackfoot	ID17040207SK016_03	Temperature	
2022	Blackfoot	ID17040207SK016_03a	Temperature	
2022	Blackfoot	ID17040207SK021_02a	Temperature	
2022	Blackfoot	ID17040207SK023_02b	Temperature	
2022	Blackfoot	ID17040207SK023_04	Temperature	
2022	Blackfoot	ID17040207SK015_02a	Sedimentation/siltation	Delisted
2022	Blackfoot	ID17040207SK025_02c	Sedimentation/siltation	
2022	Blackfoot	ID17040207SK018_02d	Escherichia coli	
2022	Blackfoot	ID17040207SK018_04	Escherichia coli	
2022	Blackfoot	ID17040207SK021_02a	Escherichia coli	
2022	Blackfoot	ID17040207SK030_02	Escherichia coli	
2022	Lower Kootenai	ID17010104PN001_02	Temperature	
2022	Lower Kootenai	ID17010104PN001_08	Temperature	
2022	Lower Kootenai	ID17010104PN010_03a	Temperature	
2022	Lower Kootenai	ID17010104PN012_08	Temperature	
2022	Lower Kootenai	ID17010104PN024_03	Temperature	
2022	Lower Kootenai	ID17010104PN027_03	Temperature	
2022	Lower Kootenai	ID17010104PN029_08	Temperature	
2022	Moyie	ID17010105PN001_05	Temperature	
2022	Palisades	ID17040104SK008_02	Sedimentation/siltation	
2022	Payette	ID17050122SW002_02	Escherichia coli	2021
2022	Payette	ID17050122SW016_03	Escherichia coli	2021
2022	Payette	ID17050122SW012_03	Sedimentation/siltation	
2022	Payette	ID17050122SW015_02	Sedimentation/siltation	
2022	Portneuf	ID17040208SK001_02c	Escherichia coli	
2022	Portneuf	ID17040208SK002_02	Escherichia coli	
2022	Portneuf	ID17040208SK004_02a	Escherichia coli	
2022	Portneuf	ID17040208SK004_02c	Escherichia coli	
2022	Portneuf	ID17040208SK004_02d	Escherichia coli	
2022	Raft	ID17040210SK006_02	Escherichia coli	
2022	Raft	ID17040210SK021_03	Escherichia coli	

## **Appendix H. Maps Showing the Support Status of All State Waters**

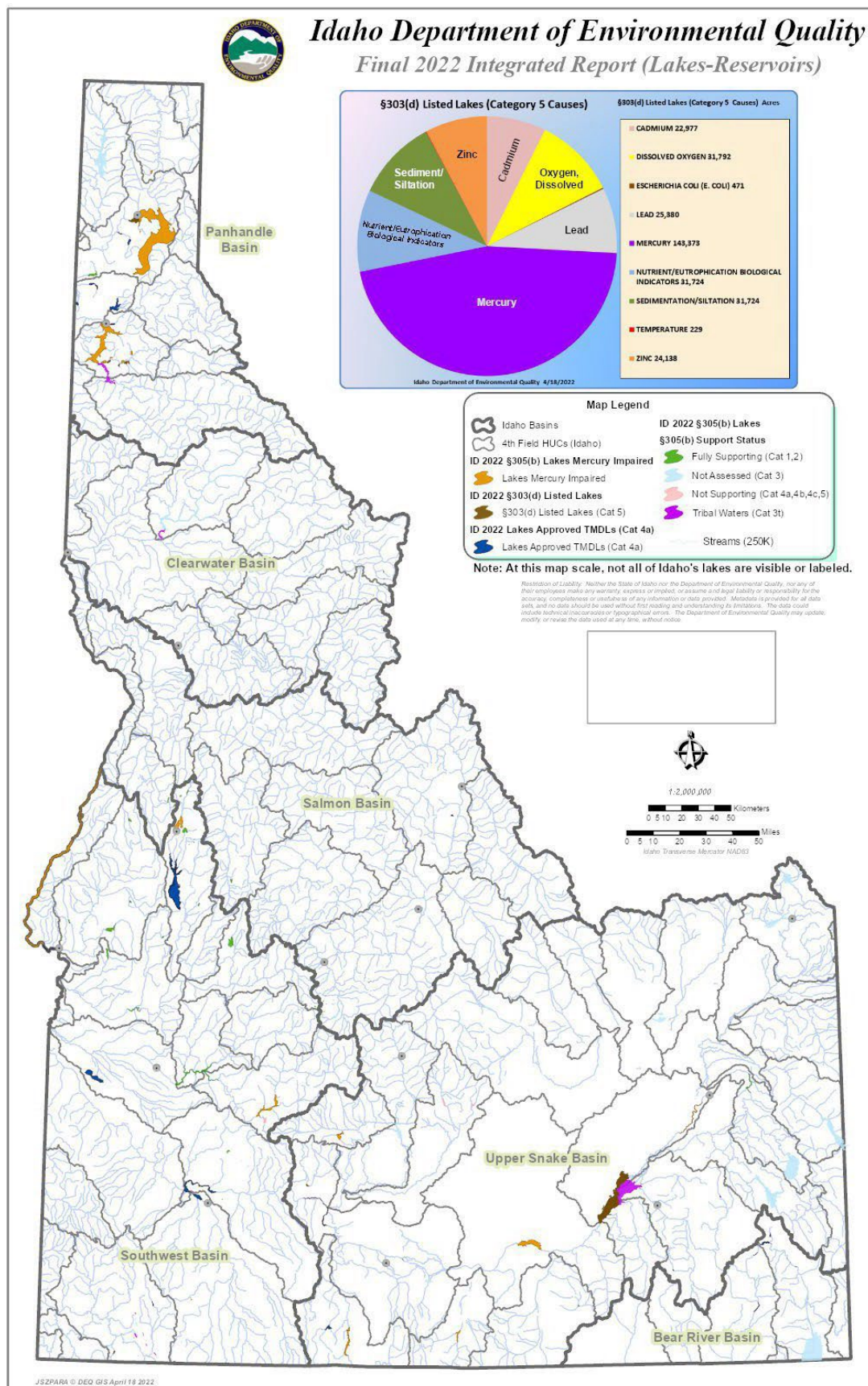
Appendix H includes three maps. The first map displays the support status of all state waters, the second map displays the support status of Idaho's streams, and the third map displays the support status of Idaho's lakes. An [interactive map](#) is also available. As DEQ corrects errors associated with AUs and HUC boundaries, some maps and AU/HUC associations included in this report may be subject to change.





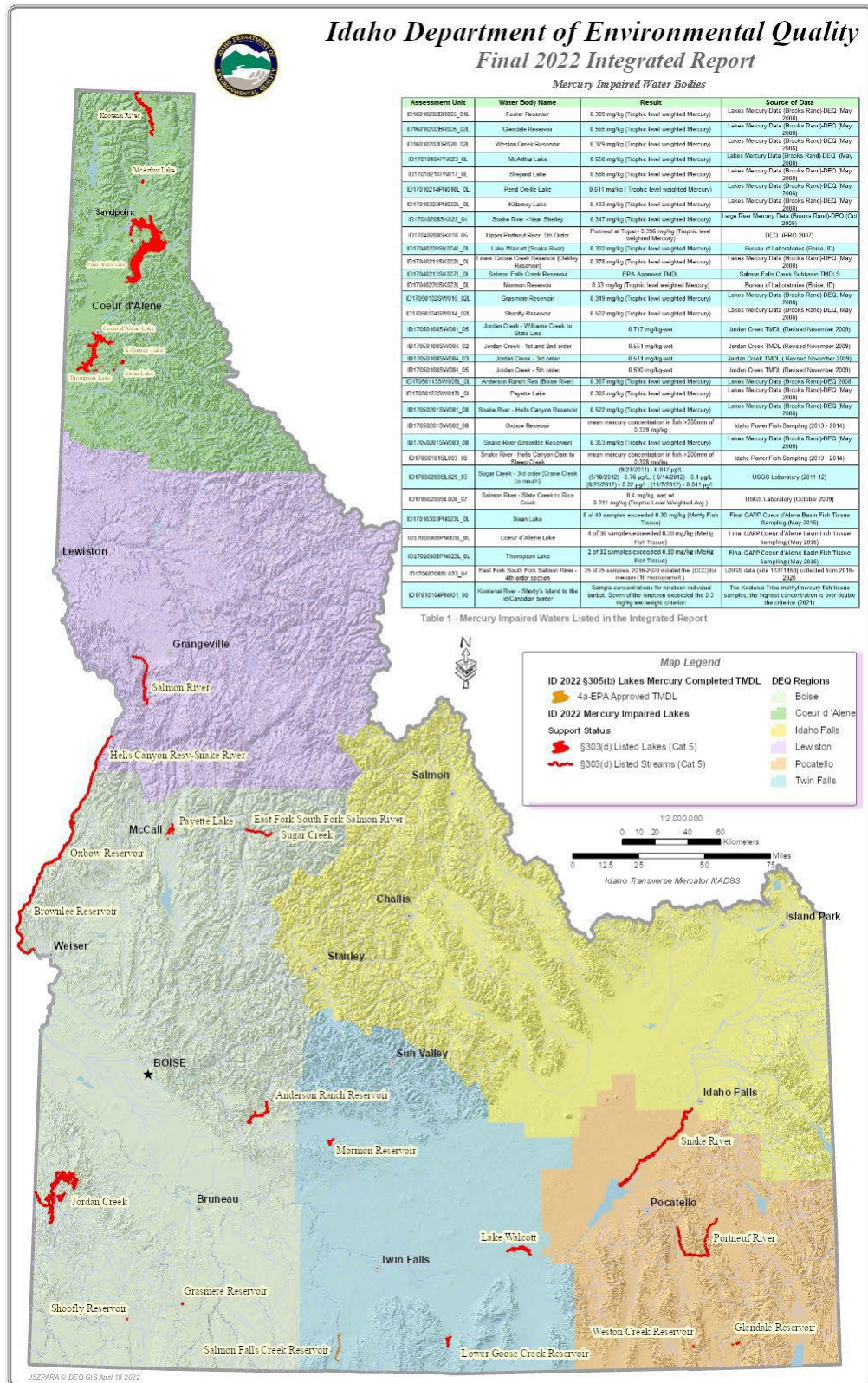








# Appendix I. Map of Mercury-Impaired Water Bodies



## Appendix J. Response to Public Comments

DEQ conducted a 30-day public comment period from February 18 to March 21, 2022 for the draft 2022 Integrated Report. Table J1 provides the list of individuals and organizations who submitted public comments to DEQ. DEQ's responses to public comments are provided below.

**Table J1. Individuals and organizations who submitted public comment letters to DEQ.**

Name	Affiliation and Organization
Scott Maclean	Bureau of Land Management
Michelle Maier	EPA Region 10
Jeff Campbell	Hecla Mine
Benjamin Davenport	Idaho Mining Association
Alan Haslam	Perpetua Resources Idaho, Inc.
Pete Stayton	SFSD
Christopher Mebane	Idaho Water Science Center

### **Scott Maclean, Bureau of Land Management**

**Comment:** Assessment Unit ID: ID17050102SW028\_05 (Salmonid Spawning)

Recommend adding BLM Jarbidge Office temperature loggers indicate continued temperature impairment (2018-2020).

**Response:** Thank you for your comment. We appreciate the offer of recent temperature data for AU ID17050102SW028\_05, which is currently in Category 5 with documented temperature impairment to its Cold Water Aquatic Life and Salmonid Spawning uses. We cannot incorporate the 2018–2020 BLM Jarbidge temperature data into the 2022 Integrated Report cycle because it was not submitted during the applicable “Call for Data.” For the 2022 Integrated Report, DEQ conducted a 60-day call for data from December 4, 2020, to February 4, 2021. We encourage you to submit your data for AU ID17050102SW028\_05 during the Call for Data for the 2024 integrated reporting cycle. DEQ ranks the quality of external data it receives into one of three tiers: Tier 1, Tier 2, and Tier 3. Only Tier 1 data can be used for § 303(d) listing decisions, but Tier 2 or 3 data can be used for other water quality programmatic purposes. Final tiering decisions will be at the discretion of DEQ. Refer to section 4 of the *Water Body Assessment Guidance* for more information about how DEQ uses external data for water quality assessments.

**Comment:** Why is secondary contact recreation “PRESUMED” for the following AUs given documented exceedances in 2018?

Assessment Unit ID: ID17050102SW034\_03

Assessment Unit ID: ID17050102SW031\_03

Assessment Unit ID: ID17050102SW030\_04

**Response:** Thank you for your comment. This may be a case of misunderstanding regarding the DEQ definition of a “presumed” use. The department presumes most waters in the state could support cold water aquatic life and primary or secondary contact recreation unless data has been collected to suggest otherwise. Presumed uses are those which a water body could

reasonably achieve, while the actual attainment of those uses is referred to as the support status. The three assessment units in question do not support the presumed secondary contact recreation use due to *E. coli* geometric mean samples collected by the BLM Jarbidge Office in 2018 that exceeded the criteria of 126 cfu/100 mL. These assessment units could reasonably support secondary contact recreation activities, such as wading, but since they have documented *E. coli* criteria violations, they are listed as “Not Supporting”.

**Comment:** Assessment Unit ID: ID17050102SW011\_06 (Cold Water Aquatic Life)  
Recommend adding NFS - BLM Jarbidge Office temperature loggers indicate temperature impairment (2017-2020).

**Response:** We appreciate the offer of recent temperature data for assessment unit ID17050102SW011\_06. We cannot incorporate the 2017–2020 BLM Jarbidge temperature data into the 2022 Integrated Report cycle because it was not submitted during the applicable “Call for Data.” For the 2022 Integrated Report, DEQ conducted a 60-day call for data from December 4, 2020, to February 4, 2021. We encourage you to submit your data for ID17050102SW011\_06 during the Call for Data for the 2024 integrated reporting cycle. DEQ ranks the quality of external data it receives into one of three tiers: Tier 1, Tier 2, and Tier 3. Only Tier 1 data can be used for § 303(d)-listing decisions, but Tier 2 or 3 data can be used for other water quality programmatic purposes. Final tiering decisions will be at the discretion of DEQ. Refer to Section 4 of the *Water Body Assessment Guidance* for more information about how DEQ uses external data for water quality assessments.

**Comment:** Assessment Unit ID: ID17040213SK003\_06 (Salmonid Spawning)  
Recommend incorporating BLM water temperature data (2007-2018) indicating temperature impairment. The BLM Jarbidge Office can supply a report for 11 Salmon Falls Creek headwater streams that all exceeded salmonid spawning criteria for redband trout whereas most of the streams were fully supporting cold water aquatic life.

**Response:** Thank you for your comment. We appreciate the offer of temperature data for multiple assessment units located in the Salmon Falls Creek subbasin. We cannot incorporate this data into the 2022 Integrated Report cycle because it was not submitted during the “Call for Data.” For the 2022 Integrated Report, DEQ conducted a 60-day call for data from December 4, 2020, to February 4, 2021. DEQ welcomes submittal of water quality data to assess water bodies for all categories in the Integrated Report. Particularly useful are data collected within the last 5 years that have not been previously submitted to DEQ. DEQ ranks the quality of external data it receives into one of three tiers: Tier 1, Tier 2, and Tier 3. Only Tier 1 data can be used for § 303(d) listing decisions, but Tier 2 or 3 data can be used for other water quality programmatic purposes. Final tiering decisions will be at the discretion of DEQ. Refer to section 4 of the *Water Body Assessment Guidance* for more information about how DEQ uses external data for water quality assessments. We encourage you to submit your data for the assessment units in the Salmon Falls Creek subbasin during the Call For Data for the 2024 integrated reporting cycle.

**Comment:** Assessment Unit ID: ID17050102SW033\_03 (Secondary Contact Recreation)  
Assessment Unit ID: ID17050102SW034\_02 (Secondary Contact Recreation)

Recommend adding Secondary Contact Recreation not fully supported as indicated by *E. coli* data collected in 2021 by BLM Jarbidge Office. Geomean exceedances of threshold 126 cfu/100 mL occurred in both AUs. BLM submitted data to IDEQ Boise Regional Office in 2021

**Response:** Thank you for your comment. Data collected in 2021 would be included in our next reporting cycle. DEQ will gladly accept your *E. coli* data during the Call for Data for the 2024 Integrated Report. When the time comes, please submit the data to the state office with all the appropriate forms.

### **Michelle Maier, EPA Region 10**

**Comment:** External data. The draft IR includes a table (Table 4) of the external data received by the Idaho Department of Environmental Quality (IDEQ) and the Assessment Units (AUs) that are associated with each of the datasets. However, for some data providers, multiple parameters are included, and it is unclear if any of the data were excluded when making assessment decisions for any of the applicable AUs. If all of the data were used when making assessment decisions, please state that in the text. If all of the data were not used when making assessment decisions, please include a rationale for why the data were not used, either in the IR or in a separate document. 40 CFR §130.7(b)(6)(iii) requires “a rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters.”

**Response:** Thank you for your comment. As a result of this request, we have added Appendix K, “External Data Summary” into the 2022 Integrated Report. Appendix K summarizes all the external data that was received during the Call for Data, including the data used and not used for assessments in the 2022 Integrated Report. It also summarizes external data DEQ queried from public databases, and the data used and not used for the assessments.

AU-specific delistings. The following comments are related to the Combined Biota/Habitat Bioassessments delistings for ID17040214SK018\_02, ID17040205SK005\_02, ID17040205SK008\_02, ID17040205SK030\_02, and ID17040205SK009\_02. These AUs are also listed as category 4a or category 5 for temperature. Please ensure that other potential causes of biological impairment besides temperature are not being left off of the 303(d) list by removing the Combined Biota/Habitat Bioassessments as a cause of impairment.

**Comment:** ID17040214SK018\_02: The delisting rationale states that “This AU was first listed for combined biota/habitat bioassessments in the 2010 Integrated Report due to failing BURP scores in 2008. However, DEQ had already identified temperature as a specific cause of impairment to the AU in the 2002 Integrated Report, and a temperature TMDL was approved by EPA in 2005. [...]” According to the 2005 TMDL, sediment was not evaluated in the AU, although sediment was documented as the largest water quality issue in the basin 2 and Streambank Erosion Inventories (SEIs) were recommended during the implementation phase. EPA recommends evaluating sediment conditions before removing the listing for Combined Biota/Habitat Bioassessments.

**Response:** Thank you for your comment. This AU, made up of several tributaries of Beaver Creek from Miners Creek to Rattlesnake Creek, was listed as Category 5 for Combined Biota/Habitat Bioassessments and Category 4a for Temperature in the 2018/2020 Integrated Report. Failed monitoring attempts in four different reaches were due to dry stream

conditions—but these all occurred in the same year: 2003. This AU was sampled twice in 2018 (2018SIDFA013 and 2018SIDFA014). The macroinvertebrate metrics from 2018SIDFA013 were marginally superior to the 2018SIDFA014 sample, but it was enough to surpass the conditional rating threshold that defines passing index scores. The 2018SIDFA014 sample contained few sediment-intolerant species, and the corresponding fine sediment index score was very low (FSBI=20). The stream substrate metrics were mixed; the percent fines were not very high (%FS=14.2), substrate size classes were relatively complex (# wolman size classes = 7)—but only ~20% of surveyed banks in the reach appeared to be stable and only 74% of the banks had cover. There were also very few cold water-associated taxa; only two taxa, one from each cold-water list, were present in the 2018SIDFA014 sample. In comparison, the 2018SIDFA013 site in Stoddard Creek had marginally more sediment-tolerant species (4 sediment intolerant taxa, FSBI=30) while having slightly higher fine sediment (%FS=16.5). The estimated bank stability was also poor but better than the 2018SIDFA014 reach. There was also a greater amount of cold-water associated taxa (four different species altogether). These data suggest a moderate degree of impairment that may be due to elevated stream temperature, which has already been identified as a cause in this AU, as well as sedimentation. Given this information, DEQ will gather additional data and reassess during the 2024 integrated reporting cycle. DEQ will retain AU ID17040214SK018\_02 in Category 5 for Combined Biota/Habitat Bioassessments and Category 4a for Temperature.

**Comment:** ID17040205SK005\_02: The delisting rationale states that “[...]. No other available data shows impairment from another cause. This AU is largely inaccessible due to private land and, as a result, has not been monitored using BURP protocols since 1997. [...]” The 2004 Willow Creek subbasin TMDL included temperature, sediment, and nutrient TMDLs and it appears that IDEQ collected temperature, sediment, and nutrients data at Kepp’s Crossing downstream. EPA recommends evaluating sediment conditions before removing the listing for Combined Biota/Habitat Bioassessments.

**Response:** As part of the continued development of the Draft Willow Creek TMDL, DEQ will gather additional data to better make the case for this proposed delisting. For now, DEQ will delay the recommendation to delist Combined Biota/Habitat Bioassessment as a parameter for this AU. ID17040205SK005\_02 will remain in Category 5 for Combined Biota/Habitat Bioassessment and Category 4a for Temperature.

**Comment:** ID17040205SK008\_02, ID17040205SK030\_02, and ID17040205SK009\_02: While meeting the SEI bank stability target is a good indicator that there is not excessive streambank sediment going into the channel, EPA recommends evaluating multiple lines of evidence related to sediment sources and/or in-channel sediment conditions.

**Response:** As part of the continued development of the Draft Willow Creek TMDL, DEQ will gather additional data to better make the case for these proposed delistings. For now, DEQ will delay the recommendation to delist Combined Biota/Habitat Bioassessment as a parameter for these AUs. AUs ID17040205SK008\_02, ID17040205SK030\_02, and ID17040205SK009\_02 will remain in Category 5 for Combined Biota/Habitat Bioassessment and Temperature.

**Comment:** Count of approved AU-pollutant TMDLs. Please double check the number of approved AU pollutant TMDLs between July 15, 2020 and the time of the final submittal to EPA.

It appears that Salmon Falls Creek Subbasin temperature TMDLs may have been left off of this list. These include 24 AU-pollutant TMDLs, and they were approved by EPA on October 12, 2021.

**Response:** Thank you for your comment. The number of AU pollutant TMDLs between July 15, 2020, and the time of final submission to EPA has been verified as 49. Salmon Falls Creek subbasin and its revised 24 AU-pollutant TMDLs have been added to the final count as well as upper Spokane River and its two new AUs. This brings the total approved AU-pollutant TMDLs for the 2022 Integrated Report to 32 revised (already in Category 4a) AU TMDLs and 17 new Category 4a AU TMDLs listings. This number has been reflected in text and tables in the 2022 Integrated Report and 2022 Integrated Report StoryMap.

**Comment:** Appendix D and count of delistings. Please double check the count of the number of delistings throughout the IR text, in summary tables, and in Appendix D. Please consider adding a field for each AU-pollutant delisting in Appendix D that includes the category during the last listing cycle and a brief statement of the delisting rationale. This summary information will make it easier for the public to see the changes in categories between assessment cycles.

**Response:** Thank you for your comment. Category of the AU in the previous cycle cannot be added for this cycle. Delisting rationale is found in the comments for each parameter associated with delisting of an AU. We have also verified the number of delistings as 42, and this has been reflected in text and tables in the 2022 Integrated Report and 2022 Integrated Report StoryMap.

**Comment:** Appendix C Lochsa River Subbasin Temperature Natural Conditions Assessments. The attached document includes specific comments and suggested modifications to the 4th paragraph on page 34 of Appendix C. We agree that the approach can provide a conservative estimate of stream shade deficits resulting from human activities. However, we also understand that modeled shade estimates developed for this effort were accurate and are representative of expected conditions.

**Response:** Thank you for your comment. DEQ edited the 4th paragraph on page 34 of Appendix C to state “in general model performance was considered adequate for the intended application...”. The full paragraph now reads:

In addition, this framework is conservative and protective of CWAL and SS beneficial uses for several reasons. First, our approach to assigning riparian shade impact scores (Figure 3) likely overestimated human impacts on shade for some DUs because it assumed shade deficits predicted by shade modeling only result from human activities. After excluding riparian areas exposed to recent wildfire from shade analysis, shade modeling still predicted shade deficits for some stream segments within wilderness where there are no known human disturbances (Figure 8). For stream segments near wildfire-impacted areas, predicted shade deficits may result from imperfect wildfire extent information. However, shade deficits were also predicted in some wilderness areas with little or no known wildfire impacts. This suggests some predicted shade deficits outside wilderness may reflect a combination of natural processes and human activities rather than only human activities. Shade model performance is described in detail in Supplemental Materials S4, and in general model performance was considered adequate for the intended application and conservative (protective). However, some DUs may have been



assigned a 'potential impact' or 'likely impact' shade score when a lower shade score would more accurately reflect human impact levels.

**Jeff Campbell, Hecla Mine**

The enclosed Report prepared by Anchor QEA, LLC evaluates all available data for Waterbody Assessment Unit ID: ID17010302PN011\_03 for the reach Between Daisy Gulch and Canyon Creek (AU) and concludes that it should not be listed as impaired in the 2022 Integrated Report (IR). The enclosed Report concludes the following:

1. Metals suspected impairment is not supported by the water quality data. The sample used to identify this impairment was rejected by USGS. A sample with clear QA/QC issues like dissolved concentrations in excess of total concentrations, should not have been included in the Tetra Tech (2020) assessment or the 2022 IR. New metals data that are fully documented to meet IDEQ Tier 1 data quality requirements should be incorporated into the next review cycle, including samples at USGS site 12413040, near the downstream end of the AU above Canyon Creek, and in the middle of the AU downstream of Mullan.
2. Temperatures exceeded Salmonid Spawning criteria at the USFS site 606 is in the Golconda District, approximately 1 mile downstream of 2013SDEQA108 and approximately 3 miles downstream of Mullan. This is a reach along I-90 with poor riparian habitat, and few cold-water tributaries. Temperature impairment to salmonid spawning is not demonstrated in the AU above Mullan. IDEQ did not evaluate temperature data in this reach, however Hecla monitoring data show water temperatures consistently meet Salmonid Spawning criteria. Several cold water tributaries contribute to overall low temperature in the AU above Mullan, including the Little North Fork of the South Fork and Willow Creek. As has been consistently demonstrated by IDEQ and Hecla BURP data in this reach, young-of-year fish (e.g., <100 millimeters) were present, therefore confirming salmonid spawning.
3. The AU upstream of Mullan exhibits a range of natural geomorphic and riparian features. In contrast, the AU downstream of Mullan is channelized, has almost no separation between the stream and I-90, and has limited riparian vegetation. The structure of cold-water macroinvertebrate and fish communities is determined to a large degree by habitat quality. Within the context of the CSM, lower SHI2 scores are logically connected to lower scores for the biologically based indices SMI2 and SFI2. Therefore, a baseline level of impairment exists due to habitat constraints that should not be confused with impairment from pollution. Because metals in the AU are in compliance with aquatic life standards, they are unlikely to be contributing to lower biota scores.

Due to the following conclusions, it is Hecla's recommendations that the following changes are made to the 2022 Integrated Report:

**Comment:** IDEQ will consider BURP data submitted in the SFCDAR by Hecla in determining impairment status.

**Response:** Thank you for your comment. The assessment unit is currently not supporting the Cold Water Aquatic Life use. The cause remains as Combined Biota/Habitat Bioassessments.

The Hecla-submitted BURP-compatible data will be utilized for assessments during this cycle of the 2022 Integrated Report.

**Comment:** It is Hecla's recommendation that IDEQ explicitly recognize water quality data does not support the IDEQ conclusion of suspected metals impairment. The combined biota/habitat bioassessment cold water aquatic life designation of "Not Supporting" is primarily from watershed-level physical stressors that impair habitat throughout the AU.

**Response:** Thank you for your comment. Combined Biota/Habitat Bioassessment will remain for the designation of not supporting Cold Water Aquatic Life use. Hydrologic alteration through channelization and habitat alteration has an impact on this beneficial use and will be a factor in determining the cause of impairment. This will be addressed during the 2024 Integrated Report cycle. Excessive fine sediment was determined to not be a cause in the stressor identification, but other causes have not been ruled out.

**Comment:** It is Hecla's recommendation that IDEQ removes the designation of "Not Supporting" of coldwater aquatic life and salmonid spawning due to temperature impairment.

**Response:** Thank you for your comment. The data submitted on water temperature for this cycle did not exceed criteria for Cold Water Aquatic Life but did exceed for Salmonid Spawning. The existing use of Salmonid Spawning is not supporting.

**Comment:** It is Hecla's recommendation that splitting the AU so that the reach along I-90 between Canyon Creek and Mullan is separate from the upstream reach where Lucky Friday NPDES outfalls are located.

**Response:** DEQ established assessment units based on stream order and land use. DEQ will consider this request for a split of the assessment unit during the 2024 Integrated Report cycle. A split retains the beneficial uses, status, and impairments of the original assessment unit.

### **Benjamin Davenport, Idaho Mining Association**

The Idaho Mining Association is an Idaho-based, multi-member association that advocates for a responsible and sustainable mining industry that benefits Idahoans and the local communities in which they reside.

IMA is recognized as the trusted voice of Idaho's Mining industry through its promotion of responsible development of Idaho's diverse mineral resources, encouraging economic growth by creating and maintaining high quality jobs, being involved with government to support the interests of Idaho's mining company, educating the public on the importance of the mineral industry to society, and interacting with other organizations on matters of common interest.

IMA fully supports the primary objective of the Idaho Department of Environmental Quality's ("IDEQ") 2022 Integrated Report, namely, to describe the attainment status of Idaho's surface waters relative to their beneficial uses. IDEQ's development of the Integrated Assessment is critical to the process directed by the Clean Water Act to preserve the State of Idaho's sovereign voice in first, identifying problem surface waters, and then second, address a state-based path to improvement of surface water quality. Integral to this process is the appropriate utilization of science to provide the public and the regulated community the best data possible



so that fully informed decisions can be made to address water quality impaired waters in the State of Idaho.

**Comment:** Distribution of Monitoring Locations and Data Points

First, IDEQ should examine the distribution of monitoring locations and data points within its assessment units (AU) to evaluate whether the data sufficiently represent all waters within the assessment units.

For example, the draft 2022 303(d) list would place some 25 miles of 1st and 2nd order tributaries to the East Fork South Fork of the Salmon River (AUID17060208SL023\_02) in Category 5 based on temperature data obtained from the 3rd -order segment downstream. Given the lack of data to indicate whether any or all of such tributaries are actually impaired, it would be more appropriate to consider revising the assessment unit boundaries to allow placement of streams without data in Category 3 until data are obtained to determine their actual status.

The same situation exists for other stream segments and other parameters throughout the state. While the geospatial analysis to conduct such an examination may be time-consuming in the near term, it could prevent the listing of many miles of Idaho waters that are fully supporting their Beneficial Uses and thus avoid the need to develop unnecessary TMDLs for those waters and unnecessary IPDES permit conditions for existing and new dischargers to such waters.

**Response:** Thank you for your comment. DEQ has the ability to revise the configurations of its assessment units based on new data ( see section 4.2.1 of the *Water Body Assessment Guidance* for a detailed description of how external data is tiered—final data tiering decisions are at the discretion of DEQ) and would welcome more information on AU ID17060208SL023\_02 that may indicate a need to reconsider AU boundaries due to criteria attainment in select 1st- and 2nd-order streams. During the Call for Data for the 2022 Integrated Report, we received USGS temperature data from two stations (one on Meadow Creek and another on the 2nd-order section of East Fork South Fork Salmon River) collected from 2016–2019 indicating the EPA 1997 bull trout temperature criteria (10°C maximum weekly maximum temperature) was exceeded each year. Given clear evidence of violation of the federal criterion, this AU will remain in Category 5 for temperature impairment until further data can be evaluated proving otherwise, or a TMDL is developed. We encourage you to submit data for AU ID17060208SL023\_02 during the Call For Data for the 2024 integrated reporting cycle.

**Comment:** Location of Data Acquisition Points

Second, IDEQ should review the location of data acquisition points used to determine impairments within AUs to determine whether they are sufficiently representative of the waters to be deemed impaired. For example, an 11-mile long 4th order segment of East Fork South Fork of the Salmon River (AU ID17060208SL023\_04) is proposed to be listed for three different parameters using data obtained only from the very upper end of the segment. This ignores any changes in water quality that may result from tributaries or other inflows to the stream in the 11 miles downstream of the monitoring point.

**Response:** Thank you for your comment. DEQ has the ability to revise the configurations of its assessment units based on new data (see section 4.2.1 of the *Water Body Assessment Guidance* for a detailed description of how external data is tiered—final data tiering decisions are at the discretion of DEQ) and would welcome more information on AU ID17060208SL023\_04 that may indicate a need to reconsider AU boundaries due to the attainment of arsenic, mercury, or temperature criteria in downstream segments of the 4th-order section of the East Fork South Fork Salmon River. During the Call for Data for the 2022 Integrated Report, we received USGS data from site 13311450 collected between 2016–2020 indicating the violation of Salmonid Spawning and Cold Water Aquatic Life mercury criteria, Human Health arsenic criteria, Domestic Water Supply arsenic criteria, and the EPA 1997 bull trout temperature criteria (10°C maximum weekly maximum temperature). Given clear evidence of these violations, this AU will remain in Category 5 for the listed parameters until further data can be evaluated proving otherwise, or a TMDL is developed. We encourage you to submit data for AU ID17060208SL023\_04 during the Call For Data for the 2024 integrated reporting cycle.

**Comment:** Direct Evidence of Temperature Exceedance

Finally, IDEQ should avoid placing waters in Category 5 for temperature impairment when there is no direct evidence of the temperature exceedance resulting from regulated human activities. It is not prudent to add 3,349 miles of streams to Category 5 when there has been no change in the applicable temperature criteria and when, as demonstrated in Appendix C to the Integrated Report, some stream segments with data indicating elevated temperatures are located in designated wilderness or areas with natural background conditions where human influence on 3 temperature is not apparent. Such segments could more appropriately be placed in Categories 1, 2, 3, 4b, or 4c, which would be more appropriate for this non-pollutant-based condition that may not be the result of human activities or could be addressed through land management practices rather than conventional water quality improvement measures including TMDL development and implementation.

**Response:** (4/1/22 JW Draft Response) Thank you for your comment concerning the placement of waters in Category 5 for temperature impairment. The all-new Category 5 temperature impairments in the 2022 Integrated Report were added based on temperature data demonstrating exceedances of one or more applicable numeric temperature criteria values and an identified or presumed human contribution to criteria value exceedances. Idaho's Water Quality Standards state temperatures must not exceed numeric criteria values "due to human activities" (IDAPA 58.01.02.250.02 and IDAPA 58.01.02.250.02f ), and do not distinguish between "regulated human activities" and other types of human activities within the watershed.

The Clean Water Act requires that states develop TMDLs for waters listed in Category 5 of Idaho's Integrated Report. DEQ develops TMDLs and associated implementation plans in consultation with watershed stakeholders including relevant land management agencies, and TMDLs and implementation plans typically identify actions needed to address both point and nonpoint sources of pollution to achieve applicable water quality standards, including land management practices where applicable. Placing a stream in Category 5 due to temperature impairment now also does not preclude DEQ from proposing to revise the listed cause of impairment, delisting the cause of impairment, or conducting a detailed stream temperature

natural conditions assessment in subsequent integrated reporting cycles if subsequent investigation suggests that is warranted.

**Alan Haslam, Perpetua Resources Idaho, Inc.**

By way of introduction to the Stibnite Gold Project (“SGP”) and to help frame the comments below, the Department should be advised the Plan of Restoration and Operation for the SGP is designed to improve water quality on or near the Stibnite Site as a function of the execution of its mine plan. For example, the Project addresses elevated stream temperatures by increasing shade. Shade is increased by extended the planting width to 18 feet on both banks of restored channels, additional stream length of riparian planting, and plantings. The Project also includes a dedicated groundwater supply and surface water intake from the East Fork South Fork Salmon River with the point of diversion at the head of the East Fork South Fork Salmon River tunnel. The surface water diversion avoids large groundwater and streamflow impacts on Meadow Creek.

Additionally, the SGP includes geosynthetic covers on the entire surface of all remaining development rock storage features and tailings storage facility, including the Tailings Storage Facility buttress. This cover will reduce the infiltration of meteoric water, thus reducing interaction with development rock or tailings and improving water quality. All of these Project designs are dedicated to improving water quality as a product of the Project proceeding into construction and operation.

As discussed in the attachment and summarized below, PRII is concerned that some of the proposed changes to the assessment status of certain waters reflected in Idaho’s draft 2022 IR are not based on the precise scientific methodology that such new designations demand, that selected water modeling may not indicate the full scientific picture of the assessment units at issue; and that better practices could be integrated into the IDEQ discussion to better serve water quality attainment. A summary of these comments are below.

**Comment:** Lack of Actual Temperature Measurements

Addition of portions of the 25 stream miles of 1st and 2nd order tributaries to EFSFSR (AU ID17060208SL023\_02) to Category 5 based upon water temperature are apparently proposed with no actual temperature measurements from those streams.

IDEQ has the ability to revise the configurations of its AUs based on new information or changing conditions. Placement of these tributaries in Category 3 while additional data are collected would allow for determination of whether WQS are actually exceeded there, or whether the AU configuration should be altered to avoid misclassifying streams that are fully supporting their uses.

**Response:** Thank you for your comment. DEQ has the ability to revise the configurations of its assessment units based on new data (see section 4.2.1 of the *Water Body Assessment Guidance* for a detailed description of how external data is tiered—final data tiering decisions are at the discretion of DEQ) and would welcome more information on AU ID17060208SL023\_02 that may indicate a need to reconsider AU boundaries due to criteria attainment in select 1st- and 2nd-

order streams. During the Call for Data for the 2022 Integrated Report, we received USGS temperature data from two stations (one on Meadow Creek and another on the 2nd-order section of East Fork South Fork Salmon River) collected from 2016–2019 indicating the EPA 1997 bull trout temperature criteria (10°C maximum weekly maximum temperature) was exceeded each year. Given clear evidence of violation of the federal rule, this AU will remain in Category 5 for temperature impairment until further data can be evaluated proving otherwise, or a TMDL is developed. We encourage you to submit data for AU ID17060208SL023\_02 during the Call For Data for the 2024 integrated reporting cycle.

**Comment:** Limited Water Quality Data

IDEQ proposes to Add some 11 stream miles comprising the 4th order segment of ESFSR to Category 5 (AU ID17060208SL023\_04) for arsenic, mercury, and temperature based upon water quality data obtained only from the very upper end of the AU, thus ignoring water quality conditions in the vast majority of the AU, including the influence of numerous tributaries draining undeveloped forested lands.

The agency has the ability to revise the configurations of its AUs based on new information or changing conditions. Placement of this AU in Category 3 while additional data are collected would allow for determination of the spatial extent of the stream where WQS are actually exceeded so the AU configuration could be adjusted to avoid misclassifying a stream segment that is fully supporting its uses.

**Response:** Thank you for your comment. DEQ has the ability to revise the configurations of its assessment units based on new data (see section 4.2.1 of the *Water Body Assessment Guidance* for a detailed description of how external data is tiered—final data tiering decisions are at the discretion of DEQ) and would welcome more information on AU ID17060208SL023\_04 that may indicate a need to reconsider AU boundaries due to the attainment of arsenic, mercury, or temperature criteria in downstream segments of the 4th-order section of the East Fork South Fork Salmon River. During the Call for Data for the 2022 Integrated Report, we received USGS data from site 13311450 collected between 2016–2020 indicating the violation of Salmonid Spawning and Cold Water Aquatic Life mercury criteria, Human Health arsenic criteria, Domestic Water Supply arsenic criteria, and the EPA 1997 bull trout temperature criteria (10°C maximum weekly maximum temperature). Given clear evidence of these violations, this AU will remain in Category 5 for the listed parameters until further data can be evaluated proving otherwise, or a TMDL is developed. We encourage you to submit data for AU ID17060208SL023\_04 during the Call For Data for the 2024 integrated reporting cycle.

**Comment:** Inappropriate Category Placement

The Integrated Report adds 3,349 stream miles in numerous AUs statewide to the list of Category 5 waters. Placement of at least some of these AUs in Category 2, 3, 4b, or 4c is more appropriate for this non-pollutant-based condition that may not be the result of human activities or could be addressed through land management practices and not conventional water quality improvement measures.

**Response:** (4/1/22 JW Draft Response) Thank you for your comment concerning the placement of waters in Category 5 for temperature impairment. The all-new Category 5 temperature impairments in the 2022 Integrated Report were added based on temperature data

demonstrating exceedances of one or more applicable numeric temperature criteria values and an identified or presumed human contribution to criteria value exceedances. Idaho's Water Quality Standards state temperatures must not exceed numeric criteria values "due to human activities" (IDAPA 58.01.02.250.02 and IDAPA 58.01.02.250.02f ), and do not distinguish between "regulated human activities" and other types of human activities within the watershed. The Clean Water Act requires that states develop TMDLs for waters listed in Category 5 of Idaho's Integrated Report. DEQ develops TMDLs and associated implementation plans in consultation with watershed stakeholders including relevant land management agencies, and TMDLs and implementation plans typically identify actions needed to address both point and nonpoint sources of pollution to achieve applicable water quality standards, including land management practices where applicable. Placing a stream in Category 5 due to temperature impairment now also does not preclude DEQ from proposing to revise the listed cause of impairment, delisting the cause of impairment, or conducting a detailed stream temperature natural conditions assessment in subsequent integrated reporting cycles if subsequent investigation suggests that is warranted.

#### **Pete Stayton, South Fork Coeur d'Alene River Sewer District (SFSD)**

Comments related to ID17010302PN011\_03 (Daisy Gulch to Canyon Creek):

The District supports comments made by Hecla Mining's Lucky Friday Unit. In particular:

**Comment:** The metals suspected impairment is not supported by the water quality data. The sample used to identify this impairment was rejected by USGS. A sample with clear QA/QC issues like dissolved concentrations in excess of total concentrations, should not have been included in the Tetra Tech (2020) assessment or the 2022 IR. Instead, new metals data that are fully documented to meet IDEQ Tier 1 data quality requirements should be incorporated into the next review cycle.

**Response:** Thank you for the comment. DEQ agrees that more Tier 1 metals data should be collected.

**Comment:** Temperatures noted as exceeding Salmonid Spawning criteria occurred at USFS site 606. This site is in the Golconda District, approximately 1 mile downstream of 2013SDEQA108 and approximately 3 miles downstream of Mullan (Map 2). This is a reach along I-90 with poor riparian habitat, and few cold water tributaries. Initial data collected by the District immediately downstream of the Mullan indicate temperatures are generally in compliance with water quality standards (data available on District DMRs). This is supported by Hecla monitoring data which show water temperatures consistently meeting Salmonid Spawning criteria above Mullan as well as IDEQ and Hecla BURP data showing the presence of young-of-year fish (e.g., <100 millimeters), confirming salmonid spawning.

**Response:** The focused spawning periods are from May 1 through July 1 and August 15 through November 15. Although the USFS temperature data does not exceed the criteria for Cold Water Aquatic Life, the temperature clearly exceeds the Salmonid Spawning criteria, in maximum daily maximum temperature and maximum daily average temperature, during these spawning periods. The 2014 DEQ BURP and 2019 Hecla monitoring identified multiple salmonids  $\leq 100$  mm long within this assessment unit. Per section 3.2.2 of the *Water Body Assessment*

*Guidance*, salmonid spawning should be considered an existing use if individuals  $\leq 100$  mm long were observed on or after November 28, 1975. Salmonid Spawning is an existing use.

**Comment:** The AU downstream of Mullan is channelized (there is almost no separation between the stream and I-90) and has limited riparian vegetation likely leading to both habitat and temperature effects. Therefore, the listing of this stream section is due to habitat constraints and less likely due to pollution.

**Response:** Hydrologic alteration through channelization and habitat alteration has an impact on this beneficial use and will be a factor in determining the cause of impairment. This will be addressed during the next cycle. Excessive fine sediment was determined to not be a cause in the stressor identification, but other causes have not been ruled out.

Comments related to ID17010302PN001\_04 (Big Creek to Pine Creek):

**Comment:** Temperature data used to list this reach of the River was based on "...2017 and 2018 external temperature logger data submitted by the United States Forest Service, for site 609, [which] exceeded the temperature criteria for Salmonid Spawning. Water quality is impaired by temperature and not supporting Salmonid Spawning."

Since these data were collected, the District has installed an activated sludge facility with significantly lower effluent temperatures and the Coeur d'Alene Basin Commission has completed construction of groundwater treatment at the Central Treatment Plant in Kellogg. Both of these will significantly lower water temperatures so new temperature data should be incorporated into the next review cycle.

**Response:** DEQ appreciates the efforts of those projects that reduce pollutants. DEQ will gladly accept data for the next cycle, during the Call for Data of the 2024 Integrated Report.

Christopher Mebane, Idaho Water Science Center, USGS

In response to the *call for comments* on the draft 2022 integrated report, I wished to provide a summary of some additional data we have from our selenium monitoring efforts on the Kootenai River that are conducted as a collaborative effort with Idaho Department of Fish and Game and the Kootenai Tribe of Idaho.

**Comment:** I have attached selected selenium monitoring results that I believe are of greatest relevance to IDEQ's assessment process – selenium concentrations in egg/ovary tissue from fish collected from the Kootenai River in 2020 and 2021. Because of severe limitations in the structure of the USGS's National Water Information System's (NWIS) database for housing biological data and imminent plans by the USGS to replace it, we have not attempted to enter all recent biological data from the Kootenai River selenium into NWIS. Instead these will be released through a USGS static Data Release, in the same manner as the Mebane and Schmidt (2019) Data Release. Namely, the chief constraint with the NWIS structure is the inability to cross link different tissues from the same fish, so for example, muscle and egg data from the same fish become disaggregated in NWIS.

The attached spreadsheet is an abbreviated form which only includes relevant columns. It has data from 3 locations on the Kootenai River in Idaho:

Site USGS 12305000, Kootenai River at Leonia, Idaho, which appears to be within IDEQ assessment unit ID17010104PN031\_08;

Site USGS 12308500 Kootenai River at Crossport nr Bonners Ferry, ID, which appears to be within IDEQ assessment unit ID17010104PN029\_08; and

Site USGS 12322000 Kootenai River at Porthill, ID, which appears to be within IDEQ assessment unit ID17010104PN001\_08

Egg and ovary data are available (attached) for 4 species including results for 6 Mountain whitefish (taxonomic code 162009) collected September 10, 2020 at site 12305000; and 6 northern pikeminnow (taxonomic code 163523) collected from site 12308500 on April 13, 2021. Also included are results from the Kootenai River at Porthill, ID, with egg/ovary tissue for 1 largescale sucker (163896), 3 rainbow trout (161989) and 2 pikeminnow. Tissue selenium concentrations are under the column p49254 and are defined as "Selenium, biota, tissue, recoverable, dry weight, milligrams per kilogram." Total length (mm) and weight (g) of the fish are under columns p72273 and p91104. We are getting other data from these sampling events for other species, but these are from a different lab and have been delayed. Sample collection and analysis followed the procedures described in Mebane and Schmidt (2019).

A few other details related to working the data into the NWIS data structure. The closest "body\_part\_id" selection available in NWIS is "eggs." The samples would more accurately be described as consisting of egg/ovary tissue, for the manner in which they were processed. The USGS site numbers are the nearest established site numbers, they are not the exact physical locations where the fish were collected. USGS site ID's are point locations, corresponding to a gage if present. The fish are collected over defined reaches, which may be 2 km in length or more. Site 12305000 Kootenai River at Leonia, Idaho, has been a source of confusion in the past as the right bank of the river (where the streamgage is located) is in Montana and the left bank is in Idaho. The IDFG fish collection reach, which they call "KR9.1" is located downstream of the gage between the confluence of Boulder Creek and Curley Creek.

**Response:** Thank you for your comment. The data set provided is important in assessing beneficial use status of the Kootenai River. Toxic criteria exist to protect aquatic life and human health. DEQ appreciates the hard work and expense that went into collecting this data set. A comparison to the toxic substances criteria is complex, with exact sampling, analytical, and quality control requirements. The duration and frequency components of criteria, while grounded in toxicological mechanisms, present challenges in monitoring and assessment. This requires an abundance of data that is time consuming and costly.

The chronic criterion for the protection of aquatic life on selenium concentration in fish egg-ovary is not to exceed 15.1 mg/kg dry weight (IDAPA 58.01.02). Egg-ovary supersedes any whole-body, muscle, or water column element. The egg-ovary data collected within AU ID17010104PN001\_08 provides the selenium results for one largescale sucker, three rainbow trout, and two northern pikeminnow. The comparison to the egg-ovary criterion requires a

single measurement of an average sample of at least five individuals of the same species. These samples were not compliant with this criterion element and not assessed.

Individual	1	ID17010104PN001_08
Length (mm)	475	1 largescale sucker individual egg-ovary
Selenium mg/kg dry weight	3.96	

Individual	1	2	3	ID17010104PN001_08
Length (mm)	461	463	483	3 rainbow trout individuals' egg-ovary
Selenium mg/kg dry weight	4.61	5.55	5.16	

Individual	1	2	ID17010104PN001_08
Length (mm)	530	567	2 northern pikeminnow individuals' egg-ovary
Selenium mg/kg dry weight	8.09	4.83	

The egg-ovary data within AU ID17010104PN029\_08 provides the selenium results for six individual northern pikeminnow. The average concentration of 20.05 mg/kg dry weight exceeds the criterion element for selenium.

Individual	1	2	3	4	5	6	ID17010104PN029_08
Length (mm)	402	402	503	452	438	435	6 northern pikeminnow individuals' egg-ovary
Selenium mg/kg dry weight	18.5	18.6	19.2	19.5	33.8	10.7	120.3/6= Average 20.05 mg/kg dry weight

Selenium will be included as a cause for not supporting cold water aquatic life beneficial use on AU ID17010104PN029\_08 in the 2022 Integrated Report.

The egg-ovary data within AU ID17010104PN031\_08 provides the selenium results for six individual mountain whitefish. The average concentration of 19.2 mg/kg dry weight exceeds the criterion element for selenium.



Individual	1	2	3	4	5	6	ID17010104PN031_08
Length (mm)	305	305	290	303	303	295	6 mountain whitefish individuals' egg-ovary
Selenium mg/kg dry weight	20	21	14.4	16.9	24.1	18.8	$115.2/6 =$ Average 19.2 mg/kg dry weight

Selenium will remain a cause for not supporting cold water aquatic life beneficial use on AU ID17010104PN031\_08, Kootenai River from Idaho/Montana border to the Moyie River, in the 2022 Integrated Report.

## Appendix K. External Data Summary

The Idaho Department of Environmental Quality (DEQ) conducted a 60-day call for data from December 4, 2020, to February 4, 2021 for the 2022 Integrated Report. DEQ announced the [Call for Data](#) on its website, which also provided detailed instructions for submitting external data to DEQ. DEQ reviewed the data that were submitted during this period for quality, scientific rigor, and relevance, as described in section 4 of the [Water Body Assessment Guidance](#). Only *Tier 1* data were used for § 303(d) listing and delisting decisions while preparing the draft 2022 Integrated Report. This document summarizes all the external data received during the call for data, including the data used and not used for the assessments in the 2022 Integrated Report. It also summarizes external data DEQ queried from public databases and includes the data used and not used for the assessments.

**Organization:** Kalispel Tribe Natural Resources Department

**Datasets:** water chemistry; flow; continuous water temperature data (2018-2020)

**Submission Date:** January 25, 2021

The Kalispel Tribe Natural Resources Department submitted single-measurement water chemistry data (i.e., pH, dissolved oxygen, specific conductance, turbidity, and temperature), hourly flow data, and continuous water temperature data (collected from 2018–2020) to DEQ on January 25, 2021. The hourly flow data, specific conductance, and turbidity was not utilized for assessments as they were not comparable with a specific water quality standard to determine beneficial use support. Continuous water temperature data collected by the tribe in 2018–2020 (i.e., ≤ 5 years old) were considered *Tier 1* data and were used to make assessments for the following waters in the 2022 Integrated Report.

DEQ did consider the single-measurement water chemistry data for pH and dissolved oxygen collected by the tribe in 2018-2020 for assessments in the 2022 Integrated Report. The pH and dissolved oxygen assessment outcome is meeting criteria for each assessment units below. The assessment outcome in the table below is related to the continuous water temperature data.

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17010215PN001_02	Lower Priest River - Upper West Branch Priest River to mouth	New § 303(d) listing for Salmonid Spawning
ID17010215PN001_05	Lower Priest River-Upper West Branch Priest River to mouth	Already Impaired-No Change
ID17010215PN002_03	Big Creek - source to mouth	Already Impaired for Salmonid Spawning-No Change
ID17010215PN003_03	Middle Fork East River - source to mouth	Already Impaired-No Change
ID17010215PN003_04	East River main stem - source to mouth	Already Impaired-No Change
ID17010215PN004_03	North Fork East River - source to mouth	Already Impaired-No Change
ID17010215PN005_05	Lower Priest River - Priest Lake to Upper West Branch Priest	Already Impaired-No Change
ID17010215PN008_03	Soldier Creek - source to mouth	Already Impaired-No Change
ID17010215PN009_03	Hunt Creek - source to mouth	Already Impaired-No Change

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17010215PN010_03	Indian Creek - source to mouth	Already Impaired-No Change
ID17010215PN022_04	Granite Creek - Idaho/Washington border to mouth	Already Impaired-No Change
ID17010215PN026_02	Binarch Creek - Idaho/Washington border to mouth	Already Impaired-No Change
ID17010215PN027_04	Upper West Branch Priest River - Idaho/Washington border	Already Impaired-No Change
ID17010215PN028_03	Goose Creek - Idaho/Washington border to mouth	Already Impaired-No Change
ID17010215PN029_03	Quartz Creek - source to mouth	Already Impaired for Salmonid Spawning-No Change
ID17010215PN030_03	Lower West Branch Priest River - Idaho/Washington border	Already Impaired-No Change
ID17010215PN030_04	Lower West Branch Priest River -ID/WA border to Priest River	Already Impaired-No Change
ID17010216PN002_08	Pend Oreille River - Albeni Falls Dam to Idaho/Washington	Already Impaired for water temperature and dissolved gas supersaturation-No Change

Note: Cells shaded in grey indicate new § 303(d) listings with *Temperature* identified as the cause.

**Organization:** Kootenai Tribe of Idaho

**Dataset:** Kootenai River Burbot Mercury and Selenium Data (2020)

**Submission Date:** January 26, 2021

The Kootenai Tribe of Idaho submitted mercury and selenium results from muscle, liver, and egg/ovary tissue samples of 30 Burbot (15 male and 15 female), collected in 2020, to DEQ in January 2021. The liver tissue sample results were not utilized for assessments, since there is no liver tissue criterion element for comparison

(<https://adminrules.idaho.gov/rules/current/58/580102.pdf>).

Updated ArcGIS StoryMap link:

<https://storymaps.arcgis.com/stories/e53e6853ec254ece918b284334e7c0ef>

The remaining data collected in 2020 (i.e., ≤ 5 years old) were considered *Tier 1* data and were used to make assessments for the following waters in the 2022 Integrated Report:

<b>ID17010104PN001_08</b>	<b>Kootenai River - Shorty's Island to the Id/Canadian border</b>
<b>Assessment Outcome</b>	<b>Cold Water Aquatic Life</b>
<p>The Kootenai Tribe egg-ovary data for nine individual Burbot from this Assessment Unit on the Kootenai River provides the selenium results with an average concentration of 7.7 mg/kg dry weight. This concentration does not exceed the chronic criterion for the protection of aquatic life in fish egg-ovary of 15.1 mg/kg dry weight. The selenium fish tissue muscle samples from fifteen of the nineteen individual Burbot were averaged, where the smallest individual is no less than 75% of the total length of the largest individual. The four excluded samples were outside of the size requirement. The highest concentration, within this size class requirement, is 2.89 mg/kg dry weight. This concentration does not exceed the chronic criterion for the protection of aquatic life in fish tissue muscle of 11.3 mg/kg dry weight. Cold Water Aquatic Life is meeting criteria for selenium. Liver tissue sample results were also submitted but not used for assessments. The Idaho Water Quality Standards does not have a liver</p>	

criterion for comparison. The Kootenai Tribe total mercury fish tissue data provided sample concentrations for nineteen individual Burbot. Seven of the nineteen exceeded the 0.3 mg/kg wet weight criterion. The highest concentration is over double the criterion. The sample average is 0.268 mg/kg wet weight. Cold Water Aquatic Life is "not supporting" due to mercury.

**Assessment Outcome      Primary Contact Recreation**

The Kootenai Tribe total mercury fish tissue data provided sample concentrations for nineteen individual Burbot. Seven of the nineteen exceeded the 0.3 mg/kg wet weight criterion. The highest concentration is over double the criterion. The sample average is 0.268 mg/kg wet weight. Primary Contact Recreation is "not supporting" due to mercury.

**Assessment Outcome      Salmonid Spawning**

The Kootenai Tribe total mercury fish tissue data provided sample concentrations for nineteen individual Burbot. Seven of the nineteen exceeded the 0.3 mg/kg wet weight criterion. The highest concentration is over double the criterion. The sample average is 0.268 mg/kg wet weight. Salmonid Spawning is "not supporting" due to mercury.

**ID17010104PN012\_08      Kootenai River - Deep Creek to and including Shorty's Island**

**Assessment Outcome      Cold Water Aquatic Life**

The Kootenai Tribe egg-ovary data for two individual Burbot from this Assessment Unit on the Kootenai River were not compared to criterion since at least five individuals of the same species are required. The Kootenai Tribe selenium fish tissue muscle samples from four individuals (3 in the appropriate size class) were not compared to criterion since at least five individuals of the same species and size class are required. Liver tissue sample results were also submitted but not used for assessments. The Idaho Water Quality Standards does not have a liver criterion for comparison. The Kootenai Tribe total mercury fish tissue data provided sample concentrations for four individual Burbot. None of these concentrations exceeded the 0.3 mg/kg wet weight criterion, with a sample average of 0.106 mg/kg wet weight.

**Assessment Outcome      Primary Contact Recreation**

The Kootenai Tribe total mercury fish tissue data provided sample concentrations for four individual Burbot. None of these concentrations exceeded the 0.3 mg/kg wet weight criterion, with a sample average of 0.106 mg/kg wet weight. Primary Contact Recreation is meeting criteria for mercury.

**Assessment Outcome      Salmonid Spawning**

The Kootenai Tribe total mercury fish tissue data provided sample concentrations for four individual Burbot. None of these concentrations exceeded the 0.3 mg/kg wet weight criterion, with a sample average of 0.106 mg/kg wet weight. Primary Contact Recreation is meeting criteria for mercury.

**ID17010104PN029\_08      Kootenai River - Moyie River to Deep Creek**

**Assessment Outcome      Cold Water Aquatic Life**

The Kootenai Tribe selenium fish tissue muscle samples from seven individual Burbot were averaged, where the smallest individual is no less than 75% of the total length of the largest individual. The average concentration is 3.35 mg/kg dry weight. This concentration does not exceed the chronic criterion for the protection of aquatic life in fish tissue muscle of 11.3 mg/kg dry weight. Cold Water Aquatic Life is meeting criteria for selenium. Liver tissue sample results were also submitted but not used for assessments. The Idaho Water Quality Standards does not have a liver criterion for comparison.

<b>Assessment Outcome</b>	<b>Primary Contact Recreation</b>
The Kootenai Tribe total mercury fish tissue data provided sample concentrations for seven individual Burbot. One of these concentrations, 0.474 mg/kg wet weight, exceeded the 0.3 mg/kg wet weight criterion. Primary Contact Recreation remains "fully supporting" until there are two exceedances within a three-year period.	
<b>Assessment Outcome</b>	<b>Salmonid Spawning</b>
The Kootenai Tribe total mercury fish tissue data provided sample concentrations for seven individual Burbot. One of these concentrations, 0.474 mg/kg wet weight, exceeded the 0.3 mg/kg wet weight criterion. Primary Contact Recreation remains "fully supporting" until there are two exceedances within a three-year period.	

**Organization:** USGS (Idaho Water Science Center)

**Dataset:** Kootenai River Selenium Data (2020-2021)

**Submission Date:** March 21, 2022

The USGS submitted selenium results from egg/ovary tissue samples, collected in 2020-2021, to DEQ during public comment in March 2022.

(<https://adminrules.idaho.gov/rules/current/58/580102.pdf>).

Updated ArcGIS StoryMap link:

<https://storymaps.arcgis.com/stories/e53e6853ec254ece918b284334e7c0ef>

The data collected in 2020-2021 (i.e.,  $\leq 5$  years old) were considered *Tier 1* data and were used to make assessments for the following waters in the 2022 Integrated Report:

<b>ID17010104PN001_08</b>	<b>Kootenai River - Shorty's Island to the Id/Canadian border</b>
<b>Assessment Outcome</b>	<b>Cold Water Aquatic Life</b>
The US Geological Survey submitted selenium egg/ovary data results during the public comment period on 3/21/2022. The data was from one Largescale Sucker (3.96 mg/kg dry weight), three Rainbow Trout (4.61, 5.55, 5.16 mg/kg dry weight), and two Northern Pikeminnow (8.09, 4.83 mg/kg dry weight) collected in 2020 and 2021 within this Assessment Unit. These samples were not compliant with the criterion element of a single measurement of an average or composite sample of at least five individuals of the same species. These data were not used for assessments.	
<b>ID17010104PN029_08</b>	<b>Kootenai River – Moyie River to Deep Creek</b>
<b>Assessment Outcome</b>	<b>Cold Water Aquatic Life</b>
The US Geological Survey submitted selenium egg/ovary data results during the public comment period on 3/21/2022. The data were from six Northern Pikeminnow (18.5, 18.6, 19.2, 19.5, 33.8, 10.7 mg/kg dry weight) collected in 2021 within this Assessment Unit. These samples were compliant with the criterion element of a single measurement of an average or composite sample of at least five individuals of the same species. The average selenium concentration of 20.05 mg/kg dry weight exceeds the chronic criterion for the protection of aquatic life in fish egg/ovary of 15.1 mg/kg dry weight. Cold Water Aquatic Life is "not supporting" with selenium as a cause of impairment.	

<b>ID17010104PN031_08</b>	<b>Kootenai River – Idaho/Montana border to the Moyie River</b>
<b>Assessment Outcome</b>	<b>Cold Water Aquatic Life</b>
<p>The US Geological Survey submitted selenium egg/ovary data results during the public comment period on 3/21/2022. The data was from six Mountain Whitefish (20, 21, 14.4, 16.9, 24.1, 18.8 mg/kg dry weight) collected in 2020 within this Assessment Unit. These samples were compliant with the criterion element of a single measurement of an average or composite sample of at least five individuals of the same species. The average selenium concentration of 19.2 mg/kg dry weight exceeds the chronic criterion for the protection of aquatic life in fish egg/ovary of 15.1 mg/kg dry weight. Cold Water Aquatic Life remains "not supporting" with selenium as a cause of impairment.</p>	

**Organization:** United States Forest Service Rocky Mountain Research Station

**Dataset:** Continuous Water Temperature Data (2016-2020)

**Submission Date:** January 27, 2021

The United States Forest Service Rocky Mountain Research Station submitted continuous water temperature data (collected from 2016–2020) to DEQ in January 2021. Sixteen of the 97 data files were missing temperature data and were not provided to DEQ upon further request. The remaining continuous water temperature data collected from 2014–2018 (i.e., ≤ 5 years old) were considered *Tier 1* data and were used to make assessments for the following waters in the 2018/2020 Integrated Report:

The below identified AUs, marked with an (\*), are a result of reevaluated submitted data in which impaired listing were determined appropriate.

Assessment Unit Number	Assessment Unit Name	Outcome
ID17010301PN001_05	North Fork Coeur d'Alene River, below Prichard Creek	Already Impaired-No Change
ID17010301PN013_05	North Fork Coeur d'Alene River btw Tepee Cr and Yellowdog Cr	Already Impaired-No Change
ID17010302PN001_04	South Fork Coeur d'Alene River - btw Big Cr and Pine Cr	New § 303(d) listing for Salmonid Spawning
ID17010302PN011_03	South Fork Coeur d'Alene R btw Daisy Gul and Canyon Cr	New § 303(d) listing for Salmonid Spawning
ID17010304PN007_05	St. Maries River - Santa Creek to mouth	Already Impaired-No Change
ID17010304PN027_05a	St. Joe River - North Fork St. Joe River to St. Joe City	Already Impaired-No Change
ID17040105SK002_03	Jackknife Creek - source to Idaho/Wyoming border	Not used – more information is needed; two data logger sites were used, one may have been influenced by a small tributary, and the other site is where the forest service road comes very close to the stream
ID17040105SK002_04	Jackknife Creek - source to Idaho/Wyoming border	No Change – Salmonid Spawning is not a listed use for this AU

Assessment Unit Number	Assessment Unit Name	Outcome
ID17040202SK001_02	Henrys Fork - Warm River to Ashton Reservoir Dam	No change – Assessment Unit remains Unassessed
ID17040203SK005_05	Falls River - Stream order 5 segments	New § 303(d) listing for Cold Water Aquatic Life
ID17040207SK010_02	Mill Canyon Creek and other Blackfoot River 2nd order tributaries	Not used to assess this AU; location of temperature logger is the main stem of the Blackfoot River, AU ID17040207SK010_04, which is already listed as impaired for temperature
ID17040208SK001_05	Portneuf River - Marsh Creek to American Falls Reservoir	Already Impaired – No Change
ID17040208SK016_05	Portneuf River- Twentyfour Mile Creek to Marsh Creek	Already Impaired – No Change
ID17040217SK001_05	Little Lost River - canal (T06N, R28E) to playas	New § 303(d) listing for Salmonid Spawning
ID17040217SK009_04	Little Lost River - Wet Creek to Badger Creek	New Cold Water Aquatic Life and Salmonid Spawning listing.
ID17040218SK025_04	Big Lost River - Summit Creek to and including Burnt Creek	New § 303(d) listing for Salmonid Spawning
ID17040219SK007_04	Big Wood River - North Fork Big Wood River to Seamans Creek	New § 303(d) listing for Salmonid Spawning
ID17040221SK023_03	Silver Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050102SW021_04	Jarbridge River - 4th order downstream of Buck Creek	New § 303(d) listing for Salmonid Spawning
ID17050111SW001_02	MF Boise River - 1st and 2nd order forested tributaries	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW001_03	MF Boise River, Swanholm and Lost Man Creeks: 3rd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW001_04	Middle Fork Boise River - 4th order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW002_02	East Fork Roaring River - 1st and 2nd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW002_03	Roaring River and EF Roaring River - 3rd order sections	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW006_03	Queens River - 3rd order section	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW010_04	North Fork Boise River - 4th order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW010_05	North Fork Boise River - 5th order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW012_03	Bear River - 3rd order section	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050111SW014_02	Crooked River, Pikes Fk, and Beaver Creek- 1st and 2nd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050112SW004_05	Boise River - 5th order (North Fork to Arrowrock)	Already Impaired – No Change
ID17050112SW007_02	Cottonwood Creek and tributaries - 1st and 2nd order	New § 303(d) listing for Salmonid Spawning



Assessment Unit Number	Assessment Unit Name	Outcome
ID17050112SW013_05	Grimes Creek - 5th order (Granite Creek to mouth)	Already Impaired – Cold Water Aquatic Life and Salmonid Spawning are listed and associated with existing Temperature TMDL
ID17050112SW014_02	Granite Creek - 1st and 2nd order	New § 303(d) listing for Salmonid Spawning, which was deemed an existing use in this IR cycle
ID17050113SW017_02	Boardman Creek - 1st and 2nd order	No change – Temperature data met applicable criteria; assessment unit remains Fully Supporting
ID17050113SW017_03	Boardman Creek - 3rd order (Smoky Dome Canyon to mouth)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050113SW018_03	Little Smoky, Salt & Grindstone Creeks - 3rd order sections	New § 303(d) temperature listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050113SW021_04	South Fork Boise River - 4th order	No change – Temperature data met applicable criteria; assessment unit remains Fully Supporting
ID17050113SW024_03	Skeleton Creek - 3rd order (East Fork to mouth)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050113SW031_03	Fall and Tally Creeks - 3rd order sections	New § 303(d) temperature listing for Salmonid Spawning
ID17050113SW033_02	Rattlesnake Creek and tributaries - 1st and 2nd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050120SW009_03	Canyon Creek - 3rd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050120SW013_02	Clear Creek and tributaries - 1st and 2nd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050120SW013_03	Clear Creek - 3rd order (South Fork Clear Creek to mouth)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17050124SW008_02	Little Weiser River tributaries - 1st and 2nd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060201SL001_06	Salmon River - Pennal Gulch to Pahsimeroi River	Already Impaired – Cold Water Aquatic Life listed and associated with existing Temperature TMDL
ID17060201SL016_06	Salmon River - East Fork Salmon River to Garden Creek	Already Impaired – Cold Water Aquatic Life listed and associated with existing Temperature TMDL
ID17060201SL019_05	Salmon River - Squaw Creek to East Fork Salmon River	Already Impaired – Cold Water Aquatic Life listed and associated with existing Temperature TMDL
ID17060201SL047_05	Salmon River - Valley Creek to Yankee Fork Creek	Already Impaired – No change
ID17060201SL068_05	Salmon River	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060201SL102_05	East Fork Salmon River - Herd Creek to mouth	New § 303(d) listing Cold Water Aquatic Life and Salmonid Spawning
ID17060202SL001_05	Pahsimeroi River - Patterson Creek to mouth	Already Impaired-No Change
ID17060203SL002_05	Panther Creek - Big Deer Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life
ID17060203SL011_04	Panther Creek - Blackbird Creek to	Already Impaired-No Change



Assessment Unit Number	Assessment Unit Name	Outcome
	Napias Creek	
ID17060203SL029_07	Salmon River - Indian Creek to Panther Creek	Already Impaired-No Change
ID17060203SL032_07	Salmon River - North Fork Salmon Creek to Indian Creek	Already Impaired-No Change
ID17060203SL039_07	Salmon River - Carmen Creek to North Fork Salmon River	New § 303(d) listing for Cold Water Aquatic Life
ID17060203SL041_07	Salmon River - Pollard Creek to Carmen Creek	New § 303(d) listing for Cold Water Aquatic Life
ID17060203SL042_06	Salmon River - Williams Creek to Pollard Creek	New § 303(d) listing for Cold Water Aquatic Life
ID17060203SL053_06	Salmon River - Pahsimeroi River to Iron Creek	Already Impaired-No Change
ID17060203SL068_04	North Fork Salmon River - Hughes Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL070_04	North Fork Salmon River - Sheep Creek to Hughes Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL077_03	North Fork Salmon River - Twin Creek to Dahlenega Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
*ID17060205SL012_04	Bear Valley Creek - 4th order (Cache Creek to Elk Creek)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
*ID17060205SL013_04a	Elk Creek - Wilderness Area	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060205SL020_03	Cape Horn Creek - Banner Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
*ID17060205SL028_04	Beaver Creek - Bear Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life, Salmonid Spawning already impaired
ID17060208SL001_06	South Fork Salmon River - East Fork Salmon River to mouth	Already Impaired – Cold Water Aquatic Life and Salmonid Spawning are listed and associated with existing Temperature TMDL
ID17060208SL005_04	Secesh River - 4th order (Grouse Creek to mouth)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060208SL010_03	SF Salmon River - 3rd order (Curtis Creek to Mormon Creek)	Already Impaired – Cold Water Aquatic Life and Salmonid Spawning are listed and associated with existing Temperature TMDL
ID17060208SL010_04	SF Salmon River - 4th order (Curtis Cr. to Buckhorn Cr.)	Already Impaired – Cold Water Aquatic Life and Salmonid Spawning are listed and associated with existing Temperature TMDL
ID17060208SL010_05	South Fork Salmon River - 5th order	Already Impaired – Cold Water Aquatic Life and Salmonid Spawning are listed and associated with existing Temperature TMDL
ID17060208SL017_02	Trail Creek & Curtis Creek - 1st and 2nd order	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060208SL025_04	Johnson Creek - 4th order	Already Impaired – Cold Water Aquatic Life and Salmonid Spawning are listed and associated with existing Temperature TMDL
ID17060209SL008_07	Salmon River - Slate Creek to Rice Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060305CL012_05	South Fork Clearwater River - Johns	No change – already temperature-impaired.

Assessment Unit Number	Assessment Unit Name	Outcome
	Creek to Butcher Creek	
ID17040219SK007_04	Big Wood River - North Fork Big Wood River to Seamans Creek	New § 303(d) listing for Salmonid Spawning
ID17040221SK023_03	Silver Creek – source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning

Note: Cells shaded in grey indicate new § 303(d) listings with *Temperature* identified as the cause.

**Organization:** United States Forest Service Salmon Challis National Forest

**Dataset:** Continuous Water Temperature Data (2016-2020)

**Submission Date:** December 2<sup>nd</sup>, 2020

The United States Forest Service Salmon Challis National Forest submitted continuous water temperature data (collected from 2016–2020) to DEQ in December 2020. The continuous water temperature data collected from 2016–2020 (i.e., ≤ 5 years old) were considered *Tier 1* data and were used to make assessments for the following waters in the 2022 Integrated Report:

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17060203SL002_05	Panther Creek - Big Deer Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL011_04	Panther Creek - Blackbird Creek to Napias Creek	Already Impaired-No Change
ID17060203SL014_02	Panther Creek - Porphyry Creek to Blackbird Creek	Fully Supporting-No change – No exceedances of Cold Water Aquatic Life and Salmonid Spawning temperature criteria.
ID17060203SL014_03	Panther Creek - Porphyry Creek to Blackbird Creek	Existing Biota/Habitat Bioassessments impairment parameter delisted; New § 303(d) Temperature parameter added. AU remains in Category 5
ID17060203SL014_04	Panther Creek - Porphyry Creek to Blackbird Creek	New § 303(d) listing for Cold Water Aquatic Life
ID17060203SL015_02	Musgrove Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL016_02	Porphyry Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL017_02	Panther Creek - source to Porphyry Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL017_03	Panther Creek - source to Porphyry Creek	Already Impaired-No Change
ID17060203SL018_02	Moyer Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL018_03	Moyer Creek - source to mouth	New § 303(d) listing for Salmonid Spawning
ID17060203SL019_03	Woodtick Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL020_03	Deep Creek - Little Deep Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17060203SL022_02	Deep Creek - source to Little Deep Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL023_04	Napias Creek - Moccasin Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL024_02	Napias Creek - Arnett Creek to and including Moccasin Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL024_03	Napias Creek - Arnett Creek to and including Moccasin Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL024_04	Napias Creek - Arnett Creek to and including Moccasin Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL025_02	Napias Creek - source to Arnett Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL026_02	Arnett Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL031_02	East Boulder Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL035_02	Moose Creek - Dolly Creek to Little Moose Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL039_02	Salmon River - Carmen Creek to North Fork Salmon River	No change – Fully Supported
ID17060203SL040_02	Wallace Creek - source to mouth	No change – Not assessed
ID17060203SL041_02	Salmon River - Pollard Creek to Carmen Creek	New § 303(d) listing for Salmonid Spawning
ID17060203SL042_02	Salmon River - Williams Creek to Pollard Creek	No Change – Assessment Unit already listed for Flow Regime Modification
ID17060203SL043_03	Williams Creek - confluence of North and South Fork Williams	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL044_02	North Fork Williams Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL045_02	South Fork Williams Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL047_02	Salmon River - Iron Creek to Twelvemile Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL048_03	Iron Creek - North Fork Iron Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL049_02	North Fork Iron Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL054_02	Hot Creek - source to mouth	Temperature data not used; Assessment Unit remains Unassessed
ID17060203SL057_03	McKim Creek - source to mouth	New § 303(d) listing for Salmonid Spawning
ID17060203SL060_03	Twelvemile Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL061_02	Carmen Creek - Freeman Creek to mouth	No temperature violations; Assessment Unit remains Unassessed
ID17060203SL063_02	Carmen Creek - source to Freeman Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17060203SL066_02	Fourth of July Creek - source to Little Fourth of July Creek	Temperature logger was not fully immersed; data not used for assessment. Assessment Unit remains Fully Supporting
ID17060203SL068_04	North Fork Salmon River - Hughes Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL070_04	North Fork Salmon River - Sheep Creek to Hughes Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL071_02	Sheep Creek - source to mouth	Temperature data did not show any violations of Cold Water Aquatic Life temperature criteria. Cold Water Aquatic Life moved to Fully Supporting
ID17060203SL071_03	Sheep Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL072_02	North Fork Salmon River - Dahlenega Creek to Sheep Creek	No Change – Temperature logger data did not show any violations of Cold Water Aquatic Life and Salmonid Spawning temperature criteria
ID17060203SL073_03	Dahlenega Creek - Nez Perce Creek to mouth	New § 303(d) listing for Salmonid Spawning
ID17060203SL077_02	North Fork Salmon River - Twin Creek to Dahlenega Creek	No Change – Temperature logger data did not show any violations of Cold Water Aquatic Life and Salmonid Spawning temperature criteria
ID17060203SL077_03	North Fork Salmon River - Twin Creek to Dahlenega Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL078_02	North Fork Salmon River - source to Twin Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL080_02	Twin Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL081_03	Hughes Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL082_02	Hull Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL083_03	Indian Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL084_02	Squaw Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL086_02	Boulder Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL087_03	Owl Creek - East Fork Owl Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060203SL090_02	Colson Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL004_02	Haynes Creek - source to mouth	New § 303(d) listing for Salmonid Spawning
ID17060204SL016_04	Bear Valley Creek -Wright Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL017_02	Bear Valley Creek - source to Wright Creek	No change – Fully Supporting

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17060204SL019_02	Kadletz Creek - source to mouth	Temperature data was visually abnormal – Data not used for assessment
ID17060204SL020_03	Hayden Creek -West Fork Hayden Creek to Bear Valley Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL023_02	East Fork Hayden Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL026a_02	Mill Creek - diversion (T16N, R24E, Sec. 22) to mouth	No Change – Assessment Unit already listed for Flow Regime Modification
ID17060204SL026b_02	Mill Creek - source to diversion (T16N, R24E, Sec. 22)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL028_02	Lee Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL029b_02	Big Eightmile Creek - source to diversion	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL029b_03	Big Eightmile Creek - source to diversion	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL032b_02	Little Timber Creek - source to diversion	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL033_03	Big Timber Creek - Rocky Creek to Little Timber Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL036_02	Texas Creek - Deer Creek to mouth	New § 303(d) listing for Salmonid Spawning
ID17060204SL037_02	Deer Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL050b_02	Hawley Creek - source to diversion (T15N, R27E, Sec. 03)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL050b_03	Hawley Creek - source to diversion (T15N, R27E, Sec. 03)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL051b_02	Canyon Creek - source to diversion (T16N, R26E, Sec.22)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL051b_03	Canyon Creek - source to diversion (T16N, R26E, Sec.22)	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060204SL052b_02	Little Eightmile Creek-source to diversion	No change – AU was already Temperature impaired
ID17060204SL058_02	Agency Creek - source to Cow Creek	New § 303(d) listing for Salmonid Spawning
ID17060204SL059b_03	Pattee Creek - source to diversion (T19N, R24E, Sec. 16)	No change – Recorded temperature did not violate temperature criteria
ID17060204SL061_02	Kenney Creek - source to mouth	No change – Recorded temperature did not violate temperature criteria
ID17060204SL063_02	Wimpey Creek - source to mouth	No change – Recorded temperature did not violate temperature criteria
ID17060206SL024_03	West Fork Camas Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060206SL025_04	Camas Creek - Castle Creek to Silver Creek	No change – AU was already Temperature impaired
ID17060206SL032_02	Furnace Creek - source to mouth	New § 303(d) listing for Cold Water

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
		Aquatic Life and Salmonid Spawning
ID17060206SL034_02a	Arrastra Creek	No change – Location metadata could not be verified--data not used for assessment
ID17060206SL034_03	Silver Creek - source to mouth	No change – AU was already Temperature impaired
ID17060207SL040_02	Corn Creek - source to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060207SL044_02	Horse Creek - source to Reynolds Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060207SL044_03	Horse Creek - source to Reynolds Creek	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning

Note: Cells shaded in grey indicate new § 303(d) listings with *Temperature* identified as the cause.

**Organization:** City of Boise

**Dataset:** Continuous Water Temperature Data (2019-2020)

**Submission Date:** February 10, 2021

The City of Boise submitted continuous water temperature data to DEQ on February 10, 2021. The water temperature data were considered *Tier 1* data and were used to make assessments for the following waters in the 2022 Integrated Report:

Assessment ID	Assessment Name	Dataset provided	Outcome
ID17050114SW005_06	Boise River - Veterans Memorial Parkway to Star Bridge	Temperature	Already Impaired for temperature.
ID17050114SW005_06a	Boise River-Star to Middleton	Temperature	Already Impaired for temperature.
ID17050114SW011a_06	Boise River - Diversion Dam to Veterans Memorial Parkway	Temperature	New § 303(d) temperature listing for Salmonid Spawning. Sonde data indicated that Cold Water Aquatic Life (CWAL) temperature criteria were met; however, the CWAL use in this assessment unit is associated with impairments caused by flow regime modification and physical habitat substrate alteration and will remain in Category 4c.

Note: Cells shaded in grey indicate new § 303(d) listings with *Temperature* identified as the cause.



**Organization:** Nez Perce Tribe Water Resources

**Datasets:** water chemistry; flow; continuous water temperature data (2017- 2020)

**Submission Date:** February 4, 2021

The Nez Perce Tribe submitted discrete flow and water chemistry data (total phosphorus (TP), ortho-phosphorus (OP), *E. coli* bacteria, nitrate-nitrite (NO<sub>3</sub>+NO<sub>2</sub>), ammonia (NH<sub>3</sub>), total Kjeldahl nitrogen (TKN), turbidity, total suspended sediment (TSS), instantaneous temperature, conductivity, total dissolved solids (TDS), dissolved oxygen (DO), and percent (%) saturation (DO)), and continuous water temperature data DEQ on February 4, 2021. Submitted data were collected 2017-2020.

The flow, specific conductance, TSS, TDS, and turbidity data were not utilized for assessments. There are not applicable Idaho water quality standards for flow and specific conductance. TSS and TDS data were not assessed because Idaho does not have numeric sediment criteria. Idaho's sediment criterion is narrative and Idaho's Water Body Assessment Guidance 3<sup>rd</sup> edition (DEQ 2016) requires (1) identification of an anthropogenic sediment source, (2) identification of a transport pathway, and (3) multiple sediment measures indicating an adverse effect on a beneficial use, but only TSS and TDS data were submitted.

*E. coli* data were assessed following procedures in Idaho's Water Body Assessment Guidance 3<sup>rd</sup> edition (DEQ 2016). No new *E. coli* impairments were identified based on submitted data because submitted data were individual samples and did not meet sample frequency requirements. For Idaho's *E. coli* criterion to be exceeded, 5 samples collected every 3-7 days over 30-day period must exceed 126 organisms per 100 mL.

DEQ did assess the submitted discrete water chemistry data for pH and dissolved oxygen data. For each assessment unit with submitted pH and dissolved oxygen data, applicable criteria were achieved. Continuous water temperature data submitted by the tribe were considered *Tier 1* data and were compared to applicable numeric temperature criteria.

Assessment Unit Number	Assessment Unit Name	Discrete Data	Temp Data	Assessment Outcome
ID17060305CL011b_02	Butcher Creek - source to mouth	x	x	No change; already temperature-impaired
ID17060305CL003_04	Cottonwood Creek – source to Cottonwood Creek waterfall	x	x	No change; Already temperature-impaired
ID17060305CL003_02	Cottonwood Creek – source to Cottonwood Creek waterfall.	x	x	No change -already temperature-impaired.
ID17060306CL029_03	Eldorado Creek - 3rd Order	x	x	New temperature § 303(d) listing; Salmonid Spawning and Bull Trout criteria exceeded.
ID17060306CL029_02	Eldorado Creek - 1st and 2nd Order Tributaries	x	x	No change; Already temperature-impaired.
ID17060306CL031_03	Jim Brown Creek - 3rd Order	x	x	Already temperature-impaired; no change.
ID17060306CL026_04	Lolo Creek - Yakus Creek to mouth	x	x	New temperature § 303(d) listing; Cold Water Aquatic

Assessment Unit Number	Assessment Unit Name	Discrete Data	Temp Data	Assessment Outcome
				Life, Salmonid Spawning and Bull Trout criteria exceeded.
ID17060306CL028_04	Lolo Creek - source to Yakus Creek	x	x	New temperature § 303(d) listing; Cold Water Aquatic Life, Salmonid Spawning and Bull Trout criteria exceeded.
ID17060306CL028_03	Lolo Creek - source to Yakus Creek	x	x	New temperature § 303(d) listing; Cold Water Aquatic Life, Salmonid Spawning and Bull Trout criteria exceeded.
ID17060305CL009_02	Long Haul Creek – source to mouth	x	x	No change; already temperature-impaired
ID17060306CL032_03	Musselshell Creek - 3rd Order	x	x	No change; already temperature-impaired.
ID17060306CL032_02	Musselshell Creek - 1st and 2nd order tributaries	x	x	Already temperature-impaired; no change.
ID17060305CL007_03	Shebang Creek – source to mouth	x	x	No change; already temperature-impaired.
ID17060305CL008_03	-South Fork Cottonwood Creek – 3rd order segment	x	x	No change; already temperature-impaired.
ID17060305CL006_03	Stockney Creek – source to mouth	x	x	No change; already temperature-impaired.
ID17060305CL010_02	Threemile Creek – source to unnamed tributary	x		No change
ID17060306CL007_02	Webb Creek - source to mouth	x	x	No change; already temperature-impaired.
ID17060306CL027_02	Yakus Creek - source to mouth	x	x	New temperature § 303(d) listing; Salmonid Spawning and Bull Trout criteria exceeded.
ID17060306CL030_03	Yoosa Creek - source to mouth	x	x	New temperature § 303(d) listing; Salmonid Spawning and Bull Trout criteria exceeded.
ID17060306CL029_02	Eldorado Creek - 1st and 2nd Order Tributaries	x	x	No change; already temperature-impaired.
ID17060305CL081_03T	Sally Ann Cr – Wall Creek to mouth Tribal Waters	x	x	The state does not assess tribal waters.

Note: Cells shaded in grey indicate new § 303(d) listings.



**Organization:** Idaho State Department of Agriculture

**Dataset:** Surface water pesticide monitoring data

**Submission Date:** February 1, 2021

The Idaho State Department of Agriculture (ISDA) submitted surface water pesticide data (collected in 2019) to DEQ on February 1, 2021. Of the 215 water-column parameters reported in the pesticide dataset, only one parameter (i.e., pentachlorophenol) had an established water-column criterion in Idaho's Water Quality Standards (IDAPA 58.01.02.201.1a). This parameter was detected at one stream location in 2018 and had a concentration of 0.14 µg/L. Because the aquatic life criteria for pentachlorophenol are expressed as a function of pH, and ISDA did not supply pH data, DEQ could not assess whether this concentration *exceeded* the acute criterion (CMC) or chronic criterion (CCC). Additionally, this single data point would not have been adequate to meet DEQ's *concentration, duration, and frequency* terms to determine a CMC or CCC *violation* (section 5.2.7.2 in WBAG). The remaining pesticide parameters in the ISDA dataset were not assessed for § 303(d) listing purposes because those parameters did not have established criteria in Idaho's Water Quality Standards.

Assessment Unit Number	Assessment Name	Parameter	Assessment Outcome
ID17060204SL001_06	Lemhi River - Kenney Creek to mouth		No Change – ISDA sample did not detect pesticide
ID17060204SL009_05	Hayden Creek - Basin Creek to mouth		No Change – ISDA sample did not detect pesticide
ID17060204SL024_05	Lemhi River - Peterson Creek to Hayden Creek		No Change – ISDA sample did not detect pesticide
ID17060204SL025_05	Lemhi River - confluence of Big and Little Eightmile Creeks		No Change – ISDA sample did not detect pesticide
ID17060204SL030_05	Lemhi River (East Branch)-Eighteenmile & Texas Ck Confluence		No Change – ISDA sample did not detect pesticide
ID17040209SK003_04	Marsh Creek - source to mouth	2, 4-D	No Change - Pesticide data meets criteria for Secondary Contact Recreation
ID17040209SK008_04	Rock Creek - lower (Rockland Valley)		No Change - Insufficient Information
ID17040209SK011_03	Snake River - American Falls Reservoir Dam to Rock Creek	2, 4-D	Primary Contact Recreation and Domestic Water Supply added as fully supporting uses - Pesticide data meets criteria
ID17040209SK012_02	Warm Creek - source to mouth		No Change - Insufficient Information
ID17040210SK002_05	Raft River - Cassia Creek to Heglar Canyon Creek		No Change - Insufficient Information
ID17040220SK001_05	Camas Creek - Elk Creek to Magic Reservoir		No Change - Insufficient Information
ID17040221SK000_03	Unclassified Waters	2, 4-D	Previously Unassessed - Primary Contact Recreation added as fully supporting use - Pesticide data meets criteria

Assessment Unit Number	Assessment Name	Parameter	Assessment Outcome
ID17040221SK001_05a	Little Wood River	2, 4-D	No Change - Pesticides data meets criteria for Primary Contact Recreation
ID17040221SK002_05	Little Wood River		No Change - Insufficient Information
ID17040221SK023_03	Silver Creek - source to mouth		No Change - Insufficient Information

**Organization:** Henry's Fork Foundation

**Dataset:** macroinvertebrates, water chemistry, and continuous water temperature, dissolved oxygen, and turbidity data (2016-2020)

**Submission Date:** February 2, 2021

The Henry's Fork Foundation submitted macroinvertebrate metrics, water chemistry sampling, and continuous water temperature, dissolved oxygen, and turbidity data to DEQ on February 2, 2021. While DEQ does consider the scientific rigor and relevance of the data to be *Tier 1*, DEQ does not consider the macroinvertebrate data to be Beneficial Use Reconnaissance Program (BURP)-compatible for § 303(d) listing and delisting decisions. Refer to Table 6 in the WBAG for BURP-compatible data requirements. Of the requirements provided in Table 6, the following were not met:

*Macroinvertebrate assemblages:* the sampling method was not identified in the dataset (i.e., targeted-riffle or reach wide); DEQ could not determine the taxonomic level of insect identification, or analyze macroinvertebrate assemblages, because raw macroinvertebrate data were not provided to DEQ upon request; several sites were collected outside of the July 1–October 15 timeframe.

Therefore, DEQ could not calculate the minimum multimetric indices (i.e., SMI2) for data integration and determining aquatic life use support. As a result, DEQ did not incorporate the macroinvertebrate data submission into assessments for the 2022 IR.

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17040104SK003_06	Snake River - Fall Creek to Black Canyon Creek	Assessment Unit already listed for Flow Regime Modification –Data not used for new assessment
ID17040201SK012_06	Snake River - Dry Bed to Annis Slough	New § 303(d) listing for Salmonid Spawning
ID17040202SK001_06	Henrys Fork - Warm River to Ashton Reservoir Dam	New § 303(d) listing for Salmonid Spawning
ID17040202SK001_06L	Ashton Reservoir (Henrys Fork)	Data was not used for assessment
ID17040202SK002_05	Warm River - Warm River Spring to mouth	New listing for Salmonid Spawning; AU was already in Category 4a for Temperature
ID17040202SK014_05	Henrys Fork - Thurman Creek to Warm River	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning

Assessment Unit Number	Assessment Unit Name	Assessment Outcome
ID17040202SK015_05	Henrys Fork - Island Park Reservoir Dam to Thurman Creek	No change – Not enough data submitted to use for assessment
ID17040202SK016_03	Buffalo River - Elk Creek to mouth	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17040202SK020L_0L	Island Park Reservoir	Data was not used for assessment
ID17040202SK021_05	Henrys Fork-Confluence of Big Springs and Henrys Lake Outlet	New § 303(d) listing for Salmonid Spawning
ID17040203SK002_06	Henry's Fork - North Fork Teton River to South Fork Teton R.	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning
ID17040203SK012_06	Henrys Fork - Ashton Reservoir Dam to Falls River	New § 303(d) listing for Cold Water Aquatic Life and Salmonid Spawning

Note: Cells shaded in grey indicate new § 303(d) listings

**Organization:** Hecla

**Dataset:** macroinvertebrates and water chemistry data (2019)

**Submission Date:** March 18, 2022

Hecla submitted biological assessment data to DEQ on March 18, 2022, during the public comment period. DEQ does consider the scientific rigor and relevance of the data to be *Tier 1*, being compatible data to the Beneficial Use Reconnaissance Program (BURP) for § 303(d) listing and delisting decisions. Refer to Table 6 in the WBAG for BURP-compatible data requirements.

Therefore, DEQ calculated the metric scores (i.e., SMI2, SFI2, or SHI2) for data integration and determining aquatic life use support. As a result, DEQ incorporated Hecla's data submission into assessments for the 2022 IR.

Assessment Unit	Assessment Unit Name	Assessment Outcome
ID17010302PN011_03	South Fork Coeur d'Alene R btw Daisy Gul and Canyon Cr	Already impaired – No Change

**Organization:** USGS National Water Information System

**IDEQ Queried Dataset:** water chemistry metals and water temperature data

**Query:** Metals data from USGS's NWIS database and compares these data against Idaho's Toxics Numeric Criteria (IDAPA 58.01.02.210.1a-b). This dataset only includes USGS "Accepted" data from January 1, 2016 through December 31, 2020.

Assessment Unit Number	Assessment Unit Name	Metals	Temp	Assessment Outcome
ID17010104PN001_08	Kootenai River - Shorty's Island to the Id/Canadian border	x	x	New § 303(d) listing for Impairment from mercury Already Impaired-No Change for temperature
ID17010104PN029_08	Kootenai River - Moyie River to Deep Creek	x	x	Meeting criteria for metals Already Impaired-No Change for temperature
ID17010105PN001_05	Moyie River - Moyie Falls Dam to Kootenai River	x		Meeting criteria for metals
ID17010213PN003_08	Clark Fork River - Cabinet Gorge Dam to Mosquito Creek	x		Already Impaired COLD for temperature, cadmium, copper, zinc
ID17010301PN001_05	North Fork Coeur d'Alene River, below Prichard Creek	x		Meeting criteria for metals
ID17010302PN001_03a	South Fork Coeur d'Alene River-Canyon Creek to Placer Creek	x		Already Impaired COLD for cadmium, zinc
ID17010302PN001_04	South Fork Coeur d'Alene River - btw Big Cr and Pine Cr	x		Already Impaired COLD for cadmium, zinc
ID17010302PN001_05	South Fork Coeur d'Alene River - btw Pine Cr and CdA River	x		Already Impaired COLD for cadmium, zinc
ID17010302PN002_04	Pine Creek - East Fork Pine Creek to South Fork CdA River	x		Already Impaired COLD for cadmium, zinc
ID17010302PN002_04	East Fork Pine Creek below Douglas Creek		x	New § 303(d) listing for Salmonid Spawning – temperature
ID17010302PN006_02	Government Gulch	x		Already Impaired COLD for cadmium, zinc
ID17010302PN011_03	South Fork Coeur d'Alene R btw Daisy Gul and Canyon Cr	x		Meeting criteria for metals
ID17010302PN014_02	Canyon Creek - from Gorge Gulch to South Fork CdA R.	x		Already Impaired COLD for cadmium, zinc New § 303(d) listing for DWS – zinc
ID17010302PN016_02	Ninemile Creek and tribs except Ninemile Cr above East Fork	x		Already Impaired COLD for cadmium, zinc New § 303(d) listing for SCR – zinc
ID17010303PN007_06	Coeur d'Alene River - Latour Creek to mouth	x		Already Impaired COLD for cadmium, lead, zinc
ID17010303PN016_06	Coeur d'Alene River-South Fork Coeur d'Alene River	x		Already Impaired COLD for cadmium, zinc

Assessment Unit Number	Assessment Unit Name	Metals	Temp	Assessment Outcome
	to Latour			
ID17010304PN041_04	St. Joe River - source to North Fork St. Joe River	x		Meeting criteria for metals
ID17010305PN003_04	Spokane River - Post Falls Dam to Idaho/Washington border	x		Already Impaired COLD for lead, zinc Meeting criteria for other metals
ID17010305PN004_04	Spokane River - Coeur d'Alene Lake to Post Falls Dam	x		Already Impaired COLD for lead, zinc Meeting criteria for other metals
ID17040207SK010_05	Blackfoot River	x		No Change – already impaired
ID17040209SK011_07	SNAKE River - American Falls Reservoir Dam to Rock Creek	x		No Change - Insufficient Information
ID17040212SK007_02	2nd order segments of Briggs Creeks and Cedar Draw		x	No Change - DO, pH, and temperature data meet criterion for Cold Water Aquatic Life
ID17040212SK007_07	SNAKE River - Rock Creek to Box Canyon Creek		x	New § 303(d) listing for impairment from temperature for Cold Water Aquatic Life and Salmonid Spawning
ID17040212SK013_05	Rock Creek -river mile 25 (T11S, R18E, Sec. 36) to mouth	x	x	New § 303(d) listing for temperature impairment for Salmonid Spawning. Metals + Organics meets criterion for Secondary Contact Recreation
ID17040212SK030_02	Box Canyon Creek – source to mouth		x	Previously unassessed – DO, pH and temperature data meet criterion for Cold Water Aquatic Life
ID17040213SK001_06	Salmon Falls Creek - Devil Creek to mouth		x	Already Impaired - Cold Water Aquatic Life and Salmonid Spawning remain impaired by temperature
ID17040219SK004_05	Big Wood River - Seamans Creek to Magic Reservoir	x		No Change - Insufficient Information
ID17040221SK023_03	Silver Creek – source to mouth		x	New § 303(d) listing for temperature impairment for Salmonid Spawning
ID17050101SW005_07	SNAKE River - Clover Creek to Browns Creek	x	x	New § 303(d) temperature listing for Cold Water Aquatic Life.
ID17050103SW002_04	Lower Succor Creek - 4th order (state line to mouth)	x		No Change – Met criteria for mercury but COLD and SS are impaired by other parameters
ID17050103SW006_07b	SNAKE River - Swan Falls to Marsing (RM425)	x		No Change – Met criteria for mercury but Cold Water Aquatic Life is impaired by other parameters
ID17050112SW004_05	Boise River - 5th order (North Fork to Arrowrock)	x		No Change – Insufficient metals information
ID17050113SW004_06	South Fork Boise River - Anderson Dam to Arrowrock Reservoir	x	x	New § 303(d) temperature listing for Salmonid Spawning; insufficient metals information

Assessment Unit Number	Assessment Unit Name	Metals	Temp	Assessment Outcome
ID17050114SW001_06	Boise River - Indian Creek to mouth	x	x	No Change – DO data met criteria for Cold Water Aquatic Life and temperature data exceeded criteria; Cold Water Aquatic Life already impaired for temp
ID17050114SW005_02	Mill Slough and East Hartley Gulch	x		PCR changed to Fully Supporting - Fish tissue mercury samples met Cold Water Aquatic Life and Primary Contact Recreation criteria
ID17050114SW005_06	Boise River - Veterans Memorial Parkway to Star Bridge	x		No Change – Insufficient metals information; Cold Water Aquatic Life and Salmonid Spawning already impaired for temperature
ID17050114SW011a_06	Boise River - Diversion Dam to Veterans Memorial Parkway	x		No Change – Fish tissue mercury samples were recorded in 2019
ID17050115SW001_08	SNAKE RIVER - Boise River to Weiser River	x		No Change – Insufficient metals information; Fish tissue mercury samples met Cold Water Aquatic Life criteria, but COLD is impaired by other parameters
ID17050120SW001_04	South Fork Payette River - 4th order	x		No Change – Insufficient metals information
ID17050122SW001_06	Payette River - Black Canyon Reservoir Dam to mouth	x	x	No Change – Already impaired for temperature; Insufficient metals information
ID17050122SW003_06	Payette River - NF/SF Confluence to Black Canyon Reservoir	x		No Change – Insufficient metals information
ID17050123SW001_06a	North Fork Payette River - Smiths Ferry to Banks	x		No Change – Insufficient metals information
ID17050123SW016_04	North Fork Payette River - Payette Lake to Cascade Reservoir	x		No Change – Insufficient metals information
ID17050124SW001_06	Weiser River - Crane Creek to Galloway Dam	x	x	No Change – Insufficient metals information; Cold Water Aquatic Life already impaired for temperature
ID17050124SW001_06a	Weiser River - Galloway Dam to Snake River	x		No Change – Insufficient metals information
ID17050124SW007_05a	Weiser River - Little Weiser River to Keithly Creek	x		No Change – Insufficient metals information
ID17050201SW001_08	Hells Canyon Reservoir	x		No Change – Dissolved mercury samples met criteria but previously submitted fish tissue mercury samples did not meet criteria
ID17050201SW002_08	Oxbow Reservoir	x		No Change – Dissolved mercury samples met criteria but previously submitted fish tissue mercury samples did not meet criteria

Assessment Unit Number	Assessment Unit Name	Metals	Temp	Assessment Outcome
ID17050201SW003_02	Tributaries to Snake River - 1st and 2nd order	x		No Change – insufficient metals information
ID17050201SW003_08	Brownlee Reservoir, Lower (Porters Flat to Brownlee Dam)	x		No Change – Dissolved mercury samples met criteria but previously submitted fish tissue mercury samples did not meet criteria
ID17050201SW004_08	Brownlee Reservoir, Upper (Weiser to Porters Flat)	x		No Change – insufficient metals information
ID17050201SW013_02	Sturgill Creek - entire watershed	x		No Change – insufficient metals information
ID17050201SW015_04	Wildhorse River - 4th order (Bear Creek to mouth)	x		No Change – insufficient metals information
ID17060205SL001_06	Middle Fork Salmon River - Marsh Creek to Loon Creek	x		No Change – insufficient metals information
ID17060208SL023_02	East Fork of the South Fork Salmon River - 1st and 2nd order	x	x	New § 303(d) temperature listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060208SL023_03	East Fork of the South Fork of the Salmon River - 3rd order	x	x	New § 303(d) temperature listing for Cold Water Aquatic Life and Salmonid Spawning
ID17060208SL023_04	East Fork of the South Fork of the Salmon River - 4th order	x	x	New § 303(d) listings for Cold Water Aquatic Life and Salmonid Spawning due to temperature and dissolved mercury; new § 303(d) listings for Domestic Water Supply and Primary Contact Recreation due to arsenic
ID17060101SL002_08	SNAKE RIVER – Sheep Creek to Wolf Creek	x		2019 USGS water mercury concentrations from USGS-13290472 did not exceed applicable criteria
ID17060101SL004_03	Deep Creek – 3rd order (Lake Creek to mouth)	x		Dissolved mercury sample result at USGS-13290445 did not exceed applicable criteria
ID17060209SL008_07	Salmon River – Slate Creek to Rice Creek	x	x	New § 303(d) listing for temperature impairment; Cold Water Aquatic Life and Salmonid Spawning. No change based on metals data – insufficient information.
ID17060302CL006_06	Selway River – Meadow Creek to O'Hara Creek	x		No change- submitted metals data achieved applicable criteria.
ID17060103SL003_08	SNAKE RIVER – Cottonwood Creek to Captain John Creek		x	New § 303(d) listing for temperature impairment; 2016-2020 USGS temperature data on Snake River at McDuff Rapids (USGS gage 13317660) exceeded Cold Water Aquatic Life Use temperature criteria
ID17060306CL001_07	Lower Granite Dam pool		x	No change: temperature data did not exceed Cold Water Aquatic Life temperature criteria.

Assessment Unit Number	Assessment Unit Name	Metals	Temp	Assessment Outcome
ID17060308CL008_05	North Fork Clearwater River – Aquarius Cmpgrd to Dworshak R.		x	New § 303(d) listing for temperature impairment; USGS temperature data at USGS gage site 13340600 exceeded Idaho numeric criteria for protection of Cold Water Aquatic Life use.

Note: Cells shaded in grey indicate new § 303(d) listings.