303(d) and 305(b) Listings of Impaired Waters: Ten Examples

Contact info@earthlaw.org for more information

SUMMARY

This document provides excerpts from Clean Water Act 303(d) and 305(b) reports of ten sample states that have listed waterways as being impaired due to causes related to altered flows. Category 4C (also "4c") refers to a US EPA-created category of water segments impaired by "pollution" (*e.g.*, flows) as opposed to "pollutants" (*e.g.*, chemical constituents).[1] A summary of the attached excerpts is provided below, with "prior appropriation" (or mixed) water law states in **bold**.

As summarized below and illustrated in the pages to follow, state approaches to listing flow alterations as a "cause" of impairment that we investigated vary and include the following permutations:

- Flow on 303(d) list by itself: deliberately listing flow impairments as part of the state's Section 303(d) list solely on the merit of their 4C identification as a cause of impairment; that is, whether alone *or* in combination with a pollutant impairment (TN);
- Flow on 303(d) list if there is also an impairing pollutant: listing flow impairments as a cause of impairment specifically on the "303(d) list" (OH) or on the "Category 5/303(d)" list (NM, MI) *if* there is also a pollutant impairing the waterway;
- Flow on 305(b) list: listing flow impairments as a cause of impairment of beneficial uses, but on the 305(b) rather than the 303(d) list; that is, characterizing both 4C and 5 waters as causing beneficial use impairment but distinguishing the 303(d) list for purposes of drafting TMDLs (ID, MT, NM, VT, WA, WY).

For all of the above examples, each state clearly listed flow alterations as a "cause" (not solely "source") of impairment where that impairment was occurring. The only variability was with respect to where the impairment is listed in the states' Integrated Reports.

The permutations indicate that states (except Tennessee) struggle with reconciling the clear language of Section 303(d) to list impaired waters with US EPA guidance setting out categories for the listing process. (*See* the discussion under Washington State below for one of the more transparent illustrations of that struggle.) The data do illustrate, however, that throughout the

[1] For more information on the requirements under federal Clean Water Act Section 303(d) to list impaired waters, and the utility of such required listings, *see* Comment Letter from Earth Law Center et al. to North Coast RWQCB, "2012 Integrated Report for the Clean Water Act Section 305(b) Surface Water Quality Assessment and the 303(d) List of Impaired Waters: (Aug. 8, 2014); at: http://earthlawcenter.org/static/uploads/documents/303d__Ltr_NorCal_Flows_Res_and_Staff_Rpt.pdf.

country (including in "prior appropriation" water law states), numerous states correctly interpret their mandate to identify waterways impaired by altered flows as impaired, rather than ignoring these impairments. This information is important in a number of ways, with some states illustrating the value of the data through data summaries. For example, as noted below, Montana and Ohio use the 4C flow impairment data in compiling overall statistics on statewide sources of impairment, providing more accurate statewide data on threats to waterway health from low flow than in states that fail to include this important information.

I. **California –** The 2020/2022 California Integrated Report Appendix A recommends 30 sites of "hydromodification" (San Diego, Lahontan, Central Coast, North Coast Region) to be regulated with TMDLs according to Category 5 and 4a.[2] 303(d) listings for Category 5 for "water diversion" and "hydromodification" are required in the Los Angeles region.[3]

II. **Idaho –** The latest (2018/2020) Idaho Integrated Report includes "flow alteration" in **Category 4c** where "waters failing to meet applicable water quality standards due to other types of pollution, not a pollutant." The report also lists 316 waterways under Category 4c as impacted by "flow regime modification."[4] The report defines Category 5 waterways as a "streamlined"303(d) list in which "Waters do not meet applicable water quality standards for one or more beneficial uses due to one or more pollutants." Therefore, EPA-approved TMDL (Category 4a), waters addressed by other pollution control measures (Category 4b), and waters impaired by pollution (Category 4c) are excluded.[5]

III. Michigan – Appendix B, the "Comprehensive List of Assessment Unit Designated Use Support," "305(b) list," contains all information on assessment units and is split (for size reasons) into Appendices B1 and B2.[6] "Flow regime modification" is listed as a cause of impairment for **Category 4c** assessment units in Appendix B. Category 4c is defined as "Impairment is not caused by a pollutant." As of 2020. Michigan Integrated report delisted flow regime modification from Category 5/Appendix C, for "reassessment of a water body indicates that the cause of impairment is not a pollutant."[7]

IV. **Montana** – Appendix A ("Impaired Waters") of the Integrated Report lists *all* impaired waters in the state, including **Category 4c** ("a TMDL is not needed because the impairment or threat is not caused by a pollutant") waters[8]; it specifically includes "Impacts from hydrostructure" and "flow regulation/modification."[9] Appendix B lists "Waters in need of TMDLs [303(d) list] and TMDL Priority Schedule"; this includes only pollutants, as the focus of the table is on TMDLs.[10] Montana also uses flow impairment data elsewhere; for example, "Flow regime modification" is described as one of the most common causes impacting stream beneficial uses. It ranked third in the "ten most common causes for

[2] https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/#impaired.
[3] http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r4_06_303d_reqtmdls.pdf.
[4] https://www2.deq.idaho.gov/admin/LEIA/api/document/download/14888.
[5] https://www2.deq.idaho.gov/admin/LEIA/api/document/download/14888.
[6] https://www.michigan.gov/egle/0,9429,7-135-3313-12711--,00.html.
[7] https://www.michigan.gov/documents/egle/egle-wrd-swas-ir2020-finalreport_703521_7.pdf.
[8] https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/MT_2020_IR_Final.pdf.
[9] https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/Appendix_A_Final.pdf.
[10] http://deq.mt.gov/WQInfo/CWAIC/Reports/IRs/2012/Appendix_B.pdf.

perennial rivers and streams based on mileage." Number of impacted assessment units (AUs) raised to 299 as of 2020.[11] This statistic illustrates the utility of collecting flow impairment data in identifying the *correct* priorities for state action to improve waterway health.

V. **New Mexico** – The "List of Assessed Surface Waters" (Appendix A) lists impaired waters for every assessment unit as organized by watershed, which includes Category 4c listings. "Flow alterations" is included in **Category 4c** and the condition is considered as an impairment caused not by pollutants, but is pollution (reads by USEPA).[12]

VI. Ohio – Ohio **excludes** "flow regime modification" from both 303(d) and 305(b) listings in the 2020 Integrated Report and explained that "original basis for listing was incorrect." The state measures flow regime modification not as a pollution but rather by water quality standards. Nevertheless, like Montana, Ohio also provides statewide summaries of impairments by cause; for example, "hydromodification" is identified as one of the "top five causes of impairment" for 31.7% of monitored assessment units with aquatic life impairment (nutrients is first for watershed assessment units). Again, this illustrates the utility and importance of identifying impairment causes properly, rather than neglecting to list entire categories of impairment causes and potentially identifying state priorities based on inaccurate data.[13]

VII. Tennessee – Tennessee's 2016 report definitively and deliberately lists numerous flow-impaired waterways as "flow alteration" and 1 as "hydromodification" on its 303(d) (*i.e.*, not 305(b)) list).[14] Unlike combining the two concepts like many other states, distinction is clearly drawn out between "flow alteration" and "hydromodification" in Tennessee, despite both being included in **Category 4c**. As seen in both the 2012 and the 2014 lists, Tennessee determines "flow alteration" as "pollution not caused by a pollutant." Tennessee used to determine that "a TMDL would not be helpful" in the case of flow alteration, although case-by-case consideration is given. In the most updated 2016 303(d) listings, Tennessee modifies the description and the restriction on TMDL is removed.

"Hydromodification" and "hydrological impairment," however, is identified as "modifications [that] include channelization (straightening streams), impoundments (construction of a reservoir), dredging for navigation, and flow regulation or modification." It is categorized under **Category 5** in the 303(d) listing where TMDL is required.

Despite expanding the protection coverage on flow alteration and hydromodification, Tennessee recognizes the impacts flow alteration has, as "causes of pollution in streams and rivers." The state considers flow condition to be closely related to fish and aquatic life regulation and conservation. In the 2014 305(b) Report, Tennessee provides details that "over 500 stream miles are currently assessed as impaired by flow alteration…[which] leads

---

[11] https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/MT_2020_IR_Final.pdf.

[12] https://www.env.nm.gov/wp-content/uploads/sites/25/2018/03/2020-2022-IR-Appendix-A-Integrated-List_012221.pdf.

[13] https://epa.ohio.gov/Portals/35/tmdl/2020intreport/2020_Final_IR_CompleteReport_May2020.pdf.

[14] https://www.nrc.gov/docs/ML1802/ML18023A299.pdf.

to a loss of instream habitat...In extreme cases, flow alterations cause stream or river channels to be dry."[15]

VIII. Vermont – Lists "Impaired Surface Waters in need of TMDL" in Part A, which they identify as their Section 303(d) list.[16] For its **Category 4c** listings, Vermont lists "Surface Waters Altered by Flow Regulation" in **Part F**, which includes nine pages of waterways with aquatic habitat or other designated uses for which "one or more designated uses are not supported" due to flow alteration.[17] Vermont identifies the Part F waters as "priority waters for management action," lists management actions to be taken for each where available, and also identifies the "Projected WQS Compliance Year" for each of these flow-impaired waterways.[18] Besides, Vermont includes more than 10 sites where waters are determined to be "stressed" because of "flow regime modification" in the 2020 Stressed River list, defining stress as "where stressors are present that prohibit the waters from attaining a higher water quality. "[19]

IX. **Washington** – Lists waterways as impaired for flow under **Category 4C** as impairments due to "low water flow, stream channelization, and dams." The state also recognizes that impaired flow conditions, despite not being pollutants, "require complex solutions to help restore water bodies to more natural conditions."[20] Washington currently recognizes Category 5 as comprising the 303(d) List, with no flow listings in Category 5/303(d). However, the Report notes in the Section 4C portion of the Integrated Report that flow listings that had been on earlier 303(d) lists (*e.g.*, on the 1998 List) were moved off the 303(d) list specifically as a result of US EPA Guidance.[21] In other words, the de-listings behind the change were based on a new reporting convention rather than a state legal finding under the Clean Water Act.[22] In fact, a quick search of all flow listings that had been so moved from the 1998 303(d) list to the 305(b) list showed 48 separate listings for flow impairments.

---

[15] https://www.nrc.gov/docs/ML1802/ML18023A239.pdf.

[16] https://www.epa.gov/sites/default/files/2019-02/documents/2018-vt-303d-list-report.pdf?VersionId=Eg1j8o1nOCa0DQMrW2qbPqJ6j37ObhQq.

[17] http://www.watershedmanagement.vt.gov/mapp/docs/mp_2012_priority_waters_lists.pdf (2012); http://www.watershedmanagement.vt.gov/mapp/docs/mapp_Part_F_2014_draft_complete.pdf (draft 2014).

[18] https://dec.vermont.gov/sites/dec/files/documents/mp_PriorityWatersList_PartF_2018.pdf.

[19] https://dec.vermont.gov/sites/dec/files/documents/mp_PriorityWatersList_PartC_2020.pdf.

[20] https://ecology.wa.gov/Water-Shorelines/Water-quality/Water-improvement/Assessment-of-state-waters-303d

[21] *See, e.g.,* http://apps.ecy.wa.gov/wats/ViewListing.aspx?LISTING_ID=6212 ("This listing was on the 1998 303(d) list, but has been moved to the new Category 4C (impaired by a non-pollutant) based on EPA Guidance for preparing the 2004 Integrated Report").

[22] This list can be viewed at: http://earthlawcenter.org/static/uploads/documents/WA_1998_Flow_Listings_9-15-2014.pdf. The movement of impaired waters off the impaired waters list raises a question as to the use and application of EPA guidance. In particular, US EPA regulations or policy cannot contravene the Clean Water Act, as (for example) the Administrative Procedure Act makes clear that rules "found to be . . . in excess of statutory jurisdiction" shall be both held unlawful and "set aside." 5 U.S.C. § 706(2)(C); *see also Nat'l Mining Ass'n v. United States Army Corps of Engrs*, 145 F.3d 1399, 1409 (D.C. Cir. 1998), and *Oregon v. Ashcroft*, 368 F.3d 1118, 1129 (9th Cir. 2004) (quoting *NLRB v. Brown*, 380 U.S. 278, 291-92 (1965)). Parties' arguments as to the reasons that flow impaired waters must be included on states' Section 303(d) lists have been offered at length before the California State Water Resources Control Board and North Coast Regional Water Quality Control Board.

X. Wyoming – Wyoming 2016/2018 303(d)/305(b) report recognizes "hydrologic modification" impacted waters under **Category 4C**.[23] Flow alteration is discussed with hydromodification projects that affect aquatic ecosystems in creeks and basins. The 2016/2018 report reads "WDEQ would prepare a schedule to develop water quality standards for those waters identified as not meeting water quality standards due to hydrologic modification (i.e., 4C waters)." The 2020 Integrated Report talks about flow conditions and their effects on basins. For example, in discussing Big Horn Basin (6.3.3), the report reads "the prevalence of dams and other hydrologic modifications have altered the natural flow regime of the basin (Colby et al., 1956; Bray, 1996)."[24]

---

23 https://bloximages.newyork1.vip.townnews.com/jhnewsandguide.com/content/tncms/assets/v3/editorial/9/28/928a8b2f-c019-5a71-9e02-dce2947483aa/5af3a0f38b385.pdf.pdf.

24 http://deq.wyoming.gov/media/attachments/Water%20Quality/Water%20Quality%20Assessment/Reports/2020_Integrated-305b-and-303d-Report.pdf.

I. California

303(d) Listings - Category 5 (2020)

CATEGORY 5 *Draft 2020 Integrated Report (CWA Section 303(d) List / 305(b) Report)*

2020 CALIFORNIA 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS*

ards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment.
:t Code. Calwater = State Water Resources Control Board hydrological subunit area or even smaller planning watershed.
:tants are: A= TMDL still required, B= being addressed by USEPA approved TMDL, C= being addressed by action other than a TMDL, ALT= being addressed by

łate for A= TMDL scheduled completion date, B= Date USEPA approved TMDL, and C= Completion date for action other than a TMDL

4904.510000,4904.610000 / 18070303	**Benthic Community Effects** **A Source Unknown** **Hydromodification** **Illicit Connections/Illegal Hook-ups/Dry Weather Flows** **Other** **Unknown Point Source** **Urban Runoff/Storm Sewers**	**1.5 Miles**	**2014**	**5A**	**2025**
	DDT (Dichlorodiphenyltrichloroethane) **A Source Unknown**	**1.5 Miles**	**2006**	**5A**	**2019**
	Nitrogen **A Source Unknown**	**1.5 Miles**	**2014**	**5A**	**2023**
	Phosphorus **A Source Unknown**	**1.5 Miles**	**2006**	**5A**	**2019**
	Selenium **A Source Unknown**	**1.5 Miles**	**2010**	**5A**	**2019**
	Toxicity **A Source Unknown**	**1.5 Miles**	**2014**	**5A**	**2019**

90610000 / 18070304	**Sedimentation/Siltation** **A Source Unknown** **Channel Erosion** **Channelization** **Erosion/Siltation** **Flow Alteration/Regulation/Modification** **Hydromodification** **Illicit Connections/Illegal Hook-ups/Dry Weather Flows** **Streambank Modification/Destabilization** **Urban Runoff/Storm Sewers** *On June 13, 2014, the San Diego Water Board conducted a public hearing and adopted the Resolution No. R9-2012-0033 which amended the Basin Plan to include the Los Peñasquitos Sediment TMDL. The State Water Resources Control Board adopted Resolution No. 2014-0001 on January 21, 2014 to incorporate the Los Peñasquitos Sediment TMDL into the Basin Plan. The Office of Administrative Law approved the Los PeÃ±asquitos Sediment TMDL Basin Plan Amendment on July 14, 2014. The USEPA approved the Los Peñasquitos Sediment TMDL Basin Plan Amendment on October 30, 2014.*	**469 Acres**	**1992**	**5B**	**2014**
	Toxicity **A Source Unknown**	**469 Acres**	**2014**	**5A**	**2027**

California Appendix A compilation

Appendix A: Recommended 2020-2022 303(d) List (Hydromodification)					
Regional Board	Board Name	Water Body	WBID	Water Body Type	ed Report Ca
1	Regional Board 1 - North Coast Region	Klamath River HU, Scott River HA	CAR1054103	River & Stream	5
2	Regional Board 1 - North Coast Region	Klamath River HU, Shasta River HA	CAR1055000	River & Stream	5
3	Regional Board 1 - North Coast Region	Trinity River HU, Lower Trinity HA	CAR1061103	River & Stream	5
4	Regional Board 1 - North Coast Region	Trinity River HU, Middle HA	CAR1063102	River & Stream	4a
5	Regional Board 1 - North Coast Region	Trinity River HU, Upper HA	CAR1064000	River & Stream	4a
6	Regional Board 1 - North Coast Region	Trinity River HU, Upper HA, Trinity River, East Fork	CAR1064003	River & Stream	5
7	Regional Board 3 - Central Coast Region	Branciforte Creek	CAR3041205	River & Stream	5
8	Regional Board 3 - Central Coast Region	Llagas Creek (below Chesbro Reservoir)	CAR3053002	River & Stream	5
9	Regional Board 3 - Central Coast Region	Pajaro River	CAR3051003	River & Stream	5
10	Regional Board 3 - Central Coast Region	Salinas River (lower, estuary to near Gonzales Rd cross	CAR3091101	River & Stream	5
11	Regional Board 3 - Central Coast Region	San Benito River	CAR3053002	River & Stream	5
12	Regional Board 3 - Central Coast Region	San Lorenzo River	CAR3041202	River & Stream	5
13	Regional Board 3 - Central Coast Region	San Lorenzo River	CAR3041202	River & Stream	5
14	Regional Board 5 - Central Valley Region	Old River (San Joaquin River to Delta-Mendota Canal; ir	CAR5440000	River & Stream	5
15	Regional Board 6 - Lahontan Region	Squaw Creek	CAR6352001	River & Stream	4a
16	Regional Board 6 - Lahontan Region	Tahoe, Lake	CAL6343001	Lake & Reservoir	4a
17	Regional Board 9 - San Diego Region	Carroll Canyon	CAR9061000	River & Stream	5
18	Regional Board 9 - San Diego Region	Cottonwood Creek (San Marcos Creek watershed)	CAR9045100	River & Stream	5
19	Regional Board 9 - San Diego Region	Green Valley Creek	CAR9052200	River & Stream	5
20	Regional Board 9 - San Diego Region	Loma Alta Creek	CAR9041000	River & Stream	5
21	Regional Board 9 - San Diego Region	Los Penasquitos Creek	CAR9061000	River & Stream	5
22	Regional Board 9 - San Diego Region	Los Penasquitos Lagoon	CAE9061000	Estuary	5
23	Regional Board 9 - San Diego Region	Rose Creek	CAR9064000	River & Stream	5
24	Regional Board 9 - San Diego Region	Salt Creek (Orange County)	CAR9011400	River & Stream	5

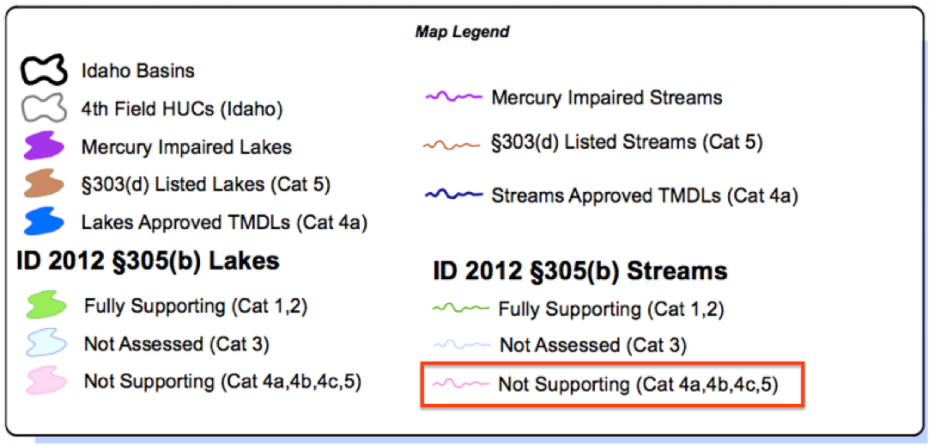
Source: State Water Resources Control Board, "2020 CALIFORNIA 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS (draft)"; at:
https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_draft/apx_c/category4a_report.shtml
https://www.waterboards.ca.gov/water_issues/programs/tmdl/2020_2022state_ir_reports_draft/apx_c/category5_report.shtml

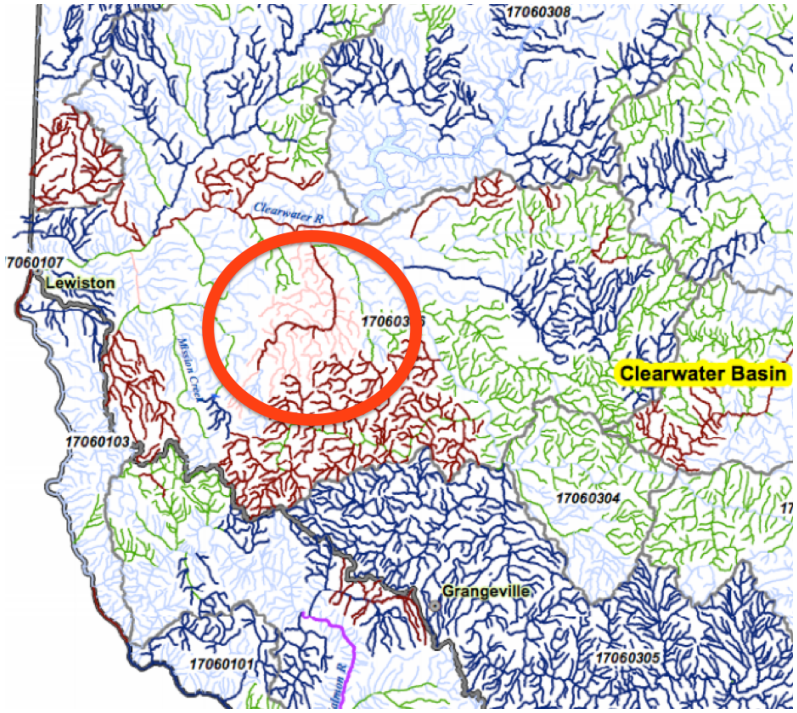
(*Note*: Hydromodification list for California, Idaho, and Montana available here:
https://docs.google.com/spreadsheets/d/1ELiJ0l-URA9csF4dlnL5RLWlJWT0w9slND8ccTevUUI/edit?usp=sharing)

II. Idaho

Integrated Map (Non-Interactive)

New: https://storymaps.arcgis.com/stories/740e317eebc546d0b3ebbed5419aba79

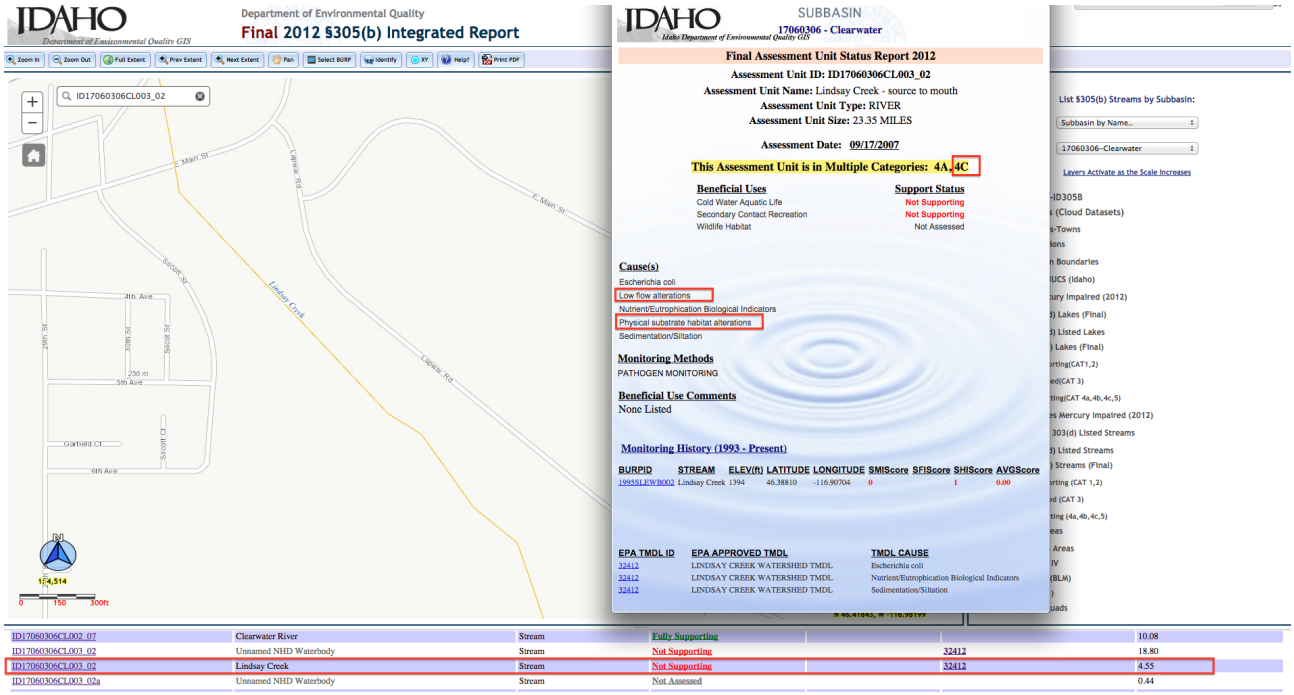




Source: Idaho Department of Environmental Quality, "2012 Integrated Report Map," at: https://www.deq.idaho.gov/media/1117324/2012-integrated-report-map.pdf.

Integrated Map (Interactive), Idaho (cont'd)

New: https://mapcase.deq.idaho.gov/wq2020/



Source: Idaho Department of Environmental Quality, Final 2012 §305(b) Integrated Report (Interactive Map), at: http://mapcase.deq.idaho.gov/wq2012.

https://www.arcgis.com/home/item.html?id=87406081d0cd417cba37eb280dc84619

2018/2020 Integrated Report - Category 4c

Bear River

ID16010202BR003_03	Cub River - Sugar Creek to Maple Creek	5.28	Miles
FLOW REGIME MODIFICATION			
ID16010202BR006_06	Bear River-Oneida Narrows Reservoir Dam to Idaho/Utah border	36.09	Miles
FLOW REGIME MODIFICATION			
ID16010202BR007_02a	Strawberry Creek	10.36	Miles
PHYSICAL SUBSTRATE HABITAT ALTERATIONS			
FLOW REGIME MODIFICATION			
ID16010202BR009_06	Bear River - Alexander Reservoir Dam to Densmore Creek	15.62	Miles
FLOW REGIME MODIFICATION			
ID16010202BR009_06a	Bear River - Denismore Cr to above Oneida Reservoir	21.37	Miles
FLOW REGIME MODIFICATION			
ID16010202BR011_03	Trout Creek - source to mouth	3.94	Miles
FLOW REGIME MODIFICATION			
ID16010202BR013_02	Densmore Creek - source to mouth	22.88	Miles
FLOW REGIME MODIFICATION			
ID16010202BR014_04	Cottonwood Creek - lower Cottonwood Creek (4th order)	14.02	Miles
FLOW REGIME MODIFICATION			
ID16010202BR015_04	Battle Creek - source to mouth	16.27	Miles
FLOW REGIME MODIFICATION			
PHYSICAL SUBSTRATE HABITAT ALTERATIONS			
ID16010202BR018_02b	Swan Lake Creek	13.79	Miles
FLOW REGIME MODIFICATION			
ID16010202BR020_02	Weston Creek - unnamed tributaries	32.2	Miles
FLOW REGIME MODIFICATION			
ID16010202BR020_02c	upper Weston Creek - FS boundary to reservoir	12.19	Miles
PHYSICAL SUBSTRATE HABITAT ALTERATIONS			
FLOW REGIME MODIFICATION			
ID16010202BR020_02d	Weston Cr - HW to FS boundary and Trail Hollow	10.76	Miles
PHYSICAL SUBSTRATE HABITAT ALTERATIONS			
FLOW REGIME MODIFICATION			
ID16010202BR020_03	Weston Creek - Dry Canyon to above Weston City	8.29	Miles
FLOW REGIME MODIFICATION			

Source: Idaho Department of Environmental Quality, "Idaho's 2018/2020 Integrated Report," at: https://www2.deq.idaho.gov/admin/LEIA/api/document/download/14890.

(*Note*: compiled listings available here: https://docs.google.com/spreadsheets/d/1ELiJ0l-URA9csF4dlnL5RLWlJWT0w9slND8ccTevUUI/edit?usp=sharing.)

Table A. Five-part categorization results for Idaho's streams. Percentage of total stream miles is out of 92,059 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 total stream miles
Category 1	4,110	326	-	4.5%
Category 2	27,827	1,444	-	30.2%
Category 3	27,115	1,342	-	29.5%
Category 4a	25,426	-	2,396	27.6%
Category 4b	51	-	4	0.1%
Category 4c	6,923	-	543	7.5%
Category 5	9,613	-	729	10.4%

Source: Idaho Department of Environmental Quality, "Idaho's 2018/2020 Integrated Report" at: https://www2.deq.idaho.gov/admin/LEIA/api/document/download/14888.

III. Michigan

Michigan DEQ - Appendix B (2020)

12 Digit HUC: 040601011010 Muskegon Newaygo Drain-Black Creek

AUID: MI040601011010-01 Rivers/Streams in HUC 040601011010 RIVER 5.4904 Miles
Includes: BLACK CREEK

Designated Use	Use Support	Cause	Pollutant?	TMDL Priority	TMDL ID	Expected to Attain
Warm Water Fishery	Not Assessed					
Total Body Contact Recreation	Not Assessed					
Partial Body Contact Recreation	Not Assessed					
Other Indigenous Aquatic Life and Wildlife	Fully Supporting					
Fish Consumption	Not Supporting	PCBS IN FISH TISSUE	Y		68285	
Cold Water Fishery	Not Supporting	FLOW REGIME MODIFICATION	Y		9931	
Cold Water Fishery	Not Supporting	OTHER ANTHROPOGENIC SUBSTRATE	Y		9931	

12 Digit HUC: 040601011011 Mona Lake-Black Creek

AUID: MI040601011011-01 Rivers/Streams in HUC 040601011011 RIVER 14.9906 Miles
Includes: BLACK CREEK

Designated Use	Use Support	Cause	Pollutant?	TMDL Priority	TMDL ID	Expected to Attain
Fish Consumption	Not Supporting	PCBS IN FISH TISSUE	Y		68285	
Total Body Contact Recreation	Not Assessed					
Warm Water Fishery	Not Assessed					
Cold Water Fishery	Not Supporting	OTHER ANTHROPOGENIC SUBSTRATE	Y		9931	
Cold Water Fishery	Not Supporting	FLOW REGIME MODIFICATION	Y		9931	
Other Indigenous Aquatic Life and Wildlife	Fully Supporting					
Partial Body Contact Recreation	Not Assessed					

AUID: MI040601020805-02 Rivers/Streams in HUC 040601020805 RIVER 9.6499 Miles
Includes: WEATHERBY DRAIN

Designated Use	Use Support	Cause	Pollutant?	TMDL Priority	TMDL ID	Expected to Attain
Warm Water Fishery	Not Assessed					
Total Body Contact Recreation	Not Assessed					
Partial Body Contact Recreation	Not Assessed					
Other Indigenous Aquatic Life and Wildlife	Not Supporting	OTHER ANTHROPOGENIC SUBSTRATE	N			
Other Indigenous Aquatic Life and Wildlife	Not Supporting	FLOW REGIME MODIFICATION	N			
Cold Water Fishery	Not Assessed					
Fish Consumption	Not Supporting	POLYCHLORINATED BIPHENYLS (PCB	Y		68285	

Source: Michigan Department of Environmental Quality, "Appendix B - Comprehensive List of Assessment Unit Designated Use
Support," at:
https://www.michigan.gov/documents/egle/egle-wrd-swas-ir2020-appB2final_703523_7.pdf
(*Note*: There are 144 sites on Appendix B and many more examples of 4c listings in the "Comprehensive List of Assessment Unit Designated Use Support.")

IV. Montana

Montana DEQ - Appendix A (2020)

Appendix A: Impaired Waters

Red Rock	MT41A001_020	RED ROCK RIVER, Lower Red Rock Lake to Lima Dam	5	43.82	MILES	B-1	N	F	-	N	Alteration in stream-side or littoral vegetative covers Escherichia coli (E. Coli) Nitrogen, Total Phosphorus, Total Sedimentation/Siltation Temperature	Grazing in Riparian or Shoreline Zones Impacts from Hydrostructure Flow Regulation/modification Natural Sources On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Unspecified Unpaved Road or Trail
Red Rock	MT41A003_010	MEDICINE LODGE CREEK, headwaters to mouth (Horse Prairie Creek)	5	34.64	MILES	B-1	N	X	-	N	Alteration in stream-side or littoral vegetative covers Escherichia coli (E. Coli) Flow Regime Modification Iron Nitrogen, Total Phosphorus, Total Sedimentation/Siltation Temperature	Crop Production (Irrigated) Grazing in Riparian or Shoreline Zones Impacts from Abandoned Mine Lands (Inactive) Impacts from Hydrostructure Flow Regulation/modification Livestock (Grazing or Feeding Operations)
Beaverhead	MT41B002_090	RATTLESNAKE CREEK, from the Dillon PWS off-channel well T7S R10W S11 to the mouth (Van Camp Slough)	5	9.52	MILES	B-1	N	X	-	N	Alteration in stream-side or littoral vegetative covers Copper Flow Regime Modification Lead Nitrogen, Total Phosphorus, Total Sedimentation/Siltation	Crop Production (Irrigated) Grazing in Riparian or Shoreline Zones Subsurface (Hardrock) Mining

Source: Montana Department of Environmental Quality, "Appendix A - Impaited Waters" at: https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/Appendix_A_Final.pdf

(*Note*: There are more examples of 4c listings, available here: https://docs.google.com/spreadsheets/d/1ELiJ0l-URA9csF4dlnL5RLWlJWT0w9slND8ccTevUUI/edit?usp=sharing.)

Montana 2020 Integrated Report, Appendix A
Search Criteria: Cycle = 2020; Water Quality Category = 4C

AUID	WNAME	HUC	HUC_NAME	COUNTY	CATEGORY
MT39G002_010	Lamesteer Natio	10110204	Beaver (Yellowst	Wibaux County	4C
MT40A002_011	North Fork Muss	10040201	Upper Musselsh	Meagher County	4C
MT40A002_051	Careless Creek	10040201	Upper Musselsh	Beaverhead Cou	4C
MT40A002_051	Careless Creek	10040201	Upper Musselsh	Golden Valley Co	4C
MT40A002_051	Careless Creek	10040201	Upper Musselsh	Wheatland Cour	4C
MT40C004_030	Blood Creek	10040205	Lower Musselsh	Fergus County	4C
MT40C004_030	Blood Creek	10040205	Lower Musselsh	Petroleum Coun	4C
MT40F005_010	Fresno Reservoir	10050002	Upper Milk	Hill County	4C
MT40L001_010	Frenchman Cree	10050013	Frenchman	Phillips County	4C
MT40L001_010	Frenchman Cree	10050013	Frenchman	Valley County	4C
MT40P001_014	Redwater River	10060002	Redwater	Dawson County	4C
MT40P001_014	Redwater River	10060002	Redwater	McCone County	4C
MT40P001_014	Redwater River	10060002	Redwater	Richland County	4C
MT40T002_010	Divide Creek	9040001	St. Marys	Glacier County	4C
MT41A002_010	Clark Canyon Re	10020001	Red Rock	Beaverhead Cou	4C
MT41A004_060	Hell Roaring Cre	10020001	Red Rock	Beaverhead Cou	4C
MT41B002_040	East Fork Blackta	10020002	Beaverhead	Beaverhead Cou	4C
MT41B002_040	East Fork Blackta	10020002	Beaverhead	Madison County	4C
MT41D002_030	Canyon Creek	10020004	Big Hole	Beaverhead Cou	4C
MT41D002_110	Willow Creek	10020004	Big Hole	Beaverhead Cou	4C
MT41E002_140	Big Limber Gulch	10020006	Boulder	Jefferson County	4C
MT41F004_040	Indian Creek	10020007	Madison	Madison County	4C
MT41F004_050	Jack Creek	10020007	Madison	Madison County	4C
MT41H001_010	Gallatin River	10020008	Gallatin	Gallatin County	4C
MT41H002_031	South Cottonwo	10020008	Gallatin	Gallatin County	4C

Table 8. Ten Most Common Causes for Perennial Rivers and Streams Based on Mileage

CAUSE (RIVERS and Streams)	# of Impacted AUs	Total Miles of Impacted Rivers and Streams	% of Assessed River and Stream Miles	% of Total Perennial River and Stream Milles Excluding ORW and Tribal Waters
Alteration in stream-side or littoral vegetative covers	417	8,526	41%	15%
Sedimentation/Siltation	452	6,802	33%	12%
Flow Regime Modification	299	6,367	31%	11%
Phosphorus, Total	247	5,299	26%	9%
Nitrogen, Total	213	5,023	24%	9%
Iron	126	3,745	18%	6%
Lead	169	3,228	16%	6%
Physical substrate habitat alterations	146	2,909	14%	5%
Temperature	105	2,699	13%	5%
Copper	147	2,691	13%	5%

Source: Montana Department of Environmental Quality, "Final Water Quality Integrated Report (2020)," Table 8, at: https://deq.mt.gov/files/Water/WQPB/CWAIC/Reports/IRs/2020/MT_2020_IR_Final.pdf

V. New Mexico

2020 - 2022 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List.

Vermejo River (Canadian River to Rail Canyon)			AU IR CATEGORY	LOCATION DESCRIPTION	
			4C	HUC: 11080001 Canadian Headwaters	
AU ID	**WQS REF**	**WATER TYPE**	**SIZE**	**ASSESSED**	**MONITORING SCHEDULE**
NM-2305.A_210	20.6.4.305	STREAM, PERENNIAL	25.82 MILES	2018	2023
USE	**ATTAINMENT**	**CAUSE(S)**	**FIRST LISTED**	**TMDL DATE**	**PARAMETER IR CATEGORY**
IRR	Fully Supporting				
LW	Fully Supporting				
MWWAL	Not Supporting	Flow Regime Modification			4C
PC	Fully Supporting				
WH	Fully Supporting				
AU Comment: Often extremely low or no flow due to diversion. Application of the SWQB Hydrology Protocol (survey date 6/9/2009) indicate this assessment unit should be perennial (Hydrology Protocol score of 30.0 but 0.3% no flow days at USGS gage 07203000 - see http://www.nmenv.state.nm.us/swqb/Hydrology/ for additional details on the protocol).					

Glorieta Ck (Perennial prt Glorieta Camps WWTP to hdwtrs)			AU IR CATEGORY	LOCATION DESCRIPTION	
			4C	HUC: 13060001 Pecos Headwaters	
AU ID	**WQS REF**	**WATER TYPE**	**SIZE**	**ASSESSED**	**MONITORING SCHEDULE**
NM-2214.A_082	20.6.4.217	STREAM, PERENNIAL	6.24 MILES	2014	2020
USE	**ATTAINMENT**	**CAUSE(S)**	**FIRST LISTED**	**TMDL DATE**	**PARAMETER IR CATEGORY**
DWS	Fully Supporting				
FC	Not Assessed				
HQColdWAL	Not Supporting	Flow Regime Modification	2014		4C
IRR	Not Assessed				
LW	Not Assessed				
PC	Not Assessed				
WH	Not Assessed				
AU Comment: Very limited data. Low flow alterations affecting stream condition (impoundments on Glorieta Camps property).					

Source: New Mexico Environment Department Surface Water Quality Bureau, "2020 – 2022 State o f New Mexico, Clean Water Act §303(d)/§305(b) Integrated Report, Appendix A, Integrated List" at: https://www.env.nm.gov/wp-content/uploads/sites/25/2018/03/2020-2022-IR-Appendix-A-Integrated-List_012221.pdf

(*Note:* Here, there are many more examples of 4c listings in this Integrated List.)

VI. Ohio

Ohio Integrated Report - Flow Regime Modification Listings (2020)

Table J-4 — Parameters delisted and delisting reason

Assessment Unit	Assessment Unit Name	Parameter Name	Delisting Reason
OH041000010308	Sibley Creek-Ottawa River	Habitat alterations	Not caused by a pollutant (4c)
OH041000030301	Nettle Creek	Habitat alterations	Not caused by a pollutant (4c)
OH041000030303	Eagle Creek	Habitat alterations	Not caused by a pollutant (4c)
OH041000040102	Center Branch	Habitat alterations	Not caused by a pollutant (4c)
OH041000040103	East Branch	Habitat alterations	Not caused by a pollutant (4c)
OH041000040104	Kopp Creek	Habitat alterations	Not caused by a pollutant (4c)
OH041000040106	Fourmile Creek-Saint Marys River	Habitat alterations	Not caused by a pollutant (4c)
OH041000040202	Eightmile Creek	Flow regime modification	Applicable WQS attained; original basis for listing was incorrect
OH041000050208	Snooks Run-Maumee River	Flow regime modification	Applicable WQS attained; original basis for listing was incorrect
OH041000090904	Delaware Creek-Maumee River	Flow regime modification	Applicable WQS attained; based on new data

Source: Ohio 2020 Integrated Water Quality Monitoring and Assessment Report at: https://epa.ohio.gov/Portals/35/tmdl/2020intreport/2020_Final_IR_CompleteReport_May2020.pdf.

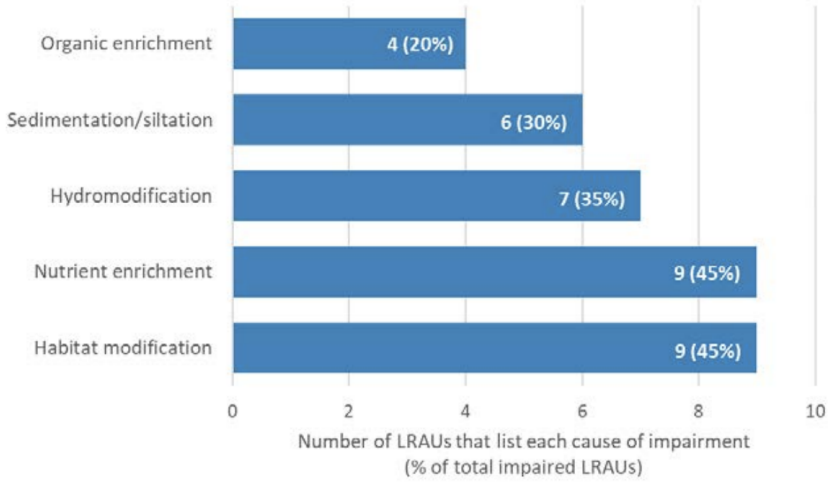


Figure A-6 — Top five causes of impairment in LRAUs.

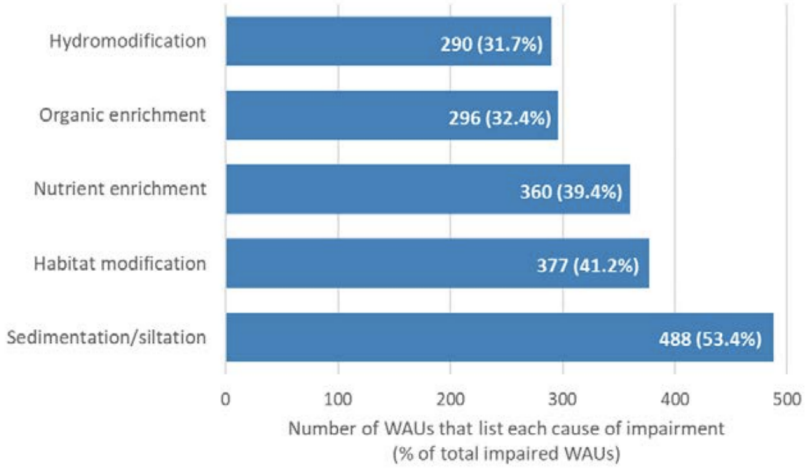


Figure A-7 — Top five causes of impairment in WAUs.

Source: Ohio 2020 Integrated Water Quality Monitoring and Assessment Report at: https://epa.ohio.gov/Portals/35/tmdl/2020intreport/2020_Final_IR_CompleteReport_May2020.pdf.

VII. Tennessee

Draft Version - YEAR 2016 303(d) LIST FOR THE STATE OF TENNESSEE

Barren River Watershed

This small basin is USGS Hydrologic Unit Code 05110002 and flows into Kentucky as part of the Barren River watershed.

Waterbody ID	Impacted Waterbody	County	Miles/Acres Impaired	CAUSE / TMDL Priority	Pollutant Source	COMMENTS
TN05110002 008 – 0550	UNNAMED TRIB TO WEST FORK DRAKES CREEK	Sumner	2.7	Flow Alterations NA	Upstream Impoundment	Randomly selected for Impounded Streams Survey. Category 4c. (Impairment not caused by a pollutant.)
TN05110002 008 – 0600	DONAHO BRANCH	Sumner	3.0	Nitrate+Nitrite L Total Phosphorus L Physical Substrate Habitat Alterations L Escherichia coli NA	Collection System Failure Urbanized High Density Area Channelization	Category 5. (One or more uses impaired.) However, EPA approved a pathogen TMDL which addresses some of the known pollutants.
TN05110002 009 – 0200	UNNAMED TRIB TO MIDDLE FORK DRAKES CREEK	Sumner	3.7	Low Dissolved Oxygen L Hydrogen Sulfide L	Petroleum/Natural Gas Activities	Attempts to plug this abandoned well have not been successful. A TMDL would not help this situation.
TN05110002 010 – 0300	DAVIS BRANCH	Sumner Macon	1.6	Flow Alterations NA	Upstream Impoundment	Impounded Streams Survey. Category 4C. (Impairment nor caused by a pollutant.)
TN05110002 010 – 0550	LITTLE TRAMMEL CREEK	Sumner	2.82	Nitrate+Nitrite L Total Phosphorus L	Municipal Point Source	Stream is Category 5. (One or more uses impaired.)
TN05110002 027 – 0431	TOWN CREEK	Macon	3.71	Unionized Ammonia L Nitrate+Nitrite L Total Phosphorus L Low dissolved oxygen L Escherichia coli NA	Minor Municipal Point Source Urbanized High Density Area	Category 5. (One or more uses impaired.) EPA approved a pathogen TMDL that addresses some of the known pollutants.
TN05110002 027 – 0435	WHITE OAK CREEK	Macon	3.41	Alteration in stream-side or littoral vegetation M Nitrate+Nitrite L Total Phosphorus L Escherichia coli H	Municipal Point Source Urbanized High Density Area	Stream is Category 5. (One or more uses impaired.)
TN05110002 031 – 0250	LITTLE TRACE CREEK	Clay	7.86	Flow Alterations NA	Upstream Impoundment	Impounded Streams Survey. Category 4C. (Impairment nor caused by a pollutant.)
TN05110002 CTYLKPO_1 000	CITY LAKE PORTLAND	Sumner	34 ac	Loss of biological integrity due to siltation M Low dissolved oxygen L Nutrients L Taste & odor L	Urbanized High Density Area Animal Feeding Area	Stream is Category 5. (One or more uses impaired.)
TN05110002 CITYLKW_1 000	CITY LAKE WESTMORELAND	Sumner	11.0 ac	Nutrients L Low dissolved oxygen L Taste & odor L	Pastureland Urbanized High Density Area	Stream is Category 5. (One or more uses impaired.)

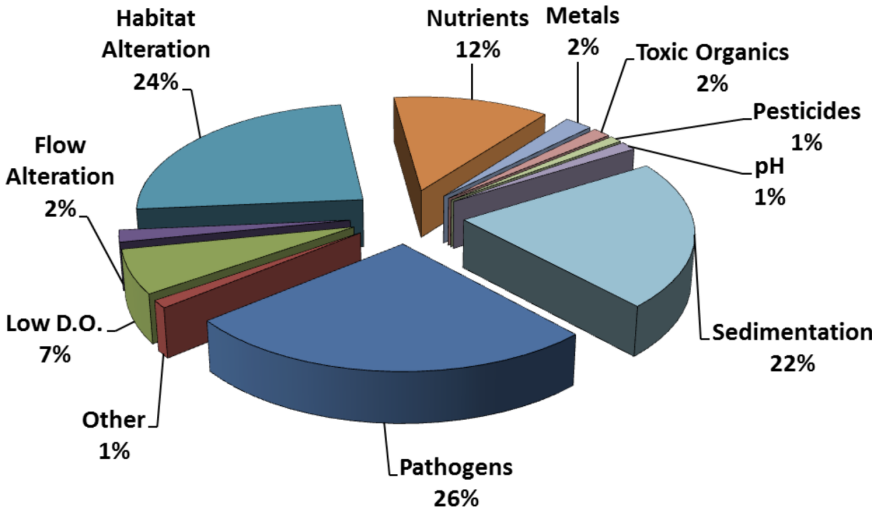
Harpeth River Watershed

This basin contains the following USGS Hydrologic Unit Code: 05130204 (Harpeth River)

Waterbody ID	Impacted Waterbody	County	Miles/Acres Impaired	CAUSE / TMDL Priority	Pollutant Source	COMMENTS
TN05130204 001 –0600	UNNAMED TRIB. TO HARPETH RIVER	Dickson	1.59	Flow Alterations NA	Upstream Impoundments	Category 4c. Impacts not caused by a pollutant.
TN05130204 001 –0700	TRACE CREEK	Cheatham Dickson	8.3	Escherichia coli NA	Collection System Failure	Category 4a. EPA approved a pathogen TMDL that addresses the known pollutant.
TN05130204 002 –0200	UNNAMED TRIB. TO JONES CREEK	Dickson	6.48	Flow Alterations NA	Upstream Impoundments	Category 4c. Impacts not caused by a pollutant.
TN05130204 002 –0400	WILL HALL CREEK	Dickson	0.96	Escherichia coli NA	Pasture Grazing	Category 4a. EPA approved a pathogen TMDL for the known pollutant.
TN05130204 002 –0410	CREECH HOLLOW BRANCH	Dickson	4.32	Alteration in stream-side or littoral vegetative cover L Escherichia coli NA	Pasture Grazing	Category 5. EPA approved a pathogen TMDL for some of the known pollutants.
TN05130204 002 –0411	WILDCAT HOLLOW BRANCH	Dickson	3.27	Flow Alterations NA	Upstream Impoundments	Category 4c. Impacts not caused by a pollutant.
TN05130204 002 –0600	UNNAMED TRIB. TO JONES CREEK	Dickson	0.26	Other anthropogenic substrate alterations NA Loss of biological integrity due to siltation NA	Golf Course Upstream Impoundment	Category 4a. EPA approved a siltation/ habitat alteration TMDL for the known pollutants.
TN05130204 002 –0700	SPICER BRANCH	Dickson	4.6	Physical substrate habitat alterations NA Loss of biological integrity due to siltation NA	Channelization Land Development	Category 4a. EPA approved a siltation/ habitat alteration TMDL for the known pollutants.
TN05130204 002 –1300	TOWN BRANCH	Dickson	7.6	Escherichia coli H	Undetermined Source	Category 5. TMDL needed.
TN05130204 002 –2000	JONES CREEK	Dickson	7.0	Nitrate+Nitrite M Total Phosphorus M Escherichia coli NA	Municipal Point Source Pasture Grazing	Category 5. EPA approved a pathogen TMDL for some of the known pollutants.
TN05130204 002 –3000	JONES CREEK	Dickson	8.1	Nutrients M Alteration in stream-side or littoral vegetative cover NA Loss of biological integrity due to siltation NA	Land Development Pasture Grazing	Category 5. EPA approved a siltation/ habitat alteration TMDL for some of the known pollutants in this stream.
TN05130204 009 –0400	FLAT CREEK	Davidson	3.6	Alteration in stream-side or littoral vegetative cover NA Loss of biological integrity due to siltation NA	Discharges from MS4 Area	Category 4a. Impaired, but EPA approved a TMDL for the known pollutants.
TN05130204 009 –0600	MURRAY BRANCH	Williamson	3.6	Alteration in stream-side or littoral vegetative cover NA Loss of biological integrity due to siltation NA	Pasture Grazing Non-irrigated Crop Production	Category 4a. EPA approved siltation/ habitat alteration TMDLs for the known pollutants.

Source: Tennessee Department of Environmental and Conservation, "Year 2016 303(d) List, Draft Version" (July. 2016), at: https://www.nrc.gov/docs/ML1802/ML18023A299.pdf (*Note:* There are many more examples of 4c listings in the 303(d) List.)

Tennessee 305(b) Report (2014)



Source: Tennessee Department of Environmental and Conservation - Division of Water Resources, "2014 305(b) Report, The Status of Water Quality in Tennessee" (Dec. 2014), at: https://www.nrc.gov/docs/ML1802/ML18023A239.pdf

VIII. Vermont

2014 Priority Waters List

Impaired by pollutant	Altered by non-pollutant
Part A – 303(d) List of Impaired Waters, including waters proposed for de-listing (submitted to EPA for approval 6-20-14, pdf, 296 KB) These waters are assessed as impaired due to one or more pollutants for which a TMDL is required to be developed. This list is developed in even-numbered years and submitted to EPA for approval according federal Clean Water Act regulations.	Part E – Waters altered by aquatic invasive species (pdf, 120KB) These waters are assessed as altered where aquatic habitat and/or other designated uses are not supported due to the extent of invasive aquatic species.
Part B – Impaired waters for which a TMDL is not required (pdf, 199KB) These waters are assessed as impaired by a pollutant but because other pollution control mechanisms are in place, no TMDL is required to be developed	Part F – Waters altered by flow regulation (pdf, 132KB) These waters are assessed as altered due to hydrologic factors. These often include a lack of flow, water level or flow fluctuations or some other modified hydrologic condition.
Part D – Impaired waters with an approved TMDL (pdf, 142KB) These waters are assessed as impaired by a pollutant and have a completed TMDL that has been approved by EPA.	

Source: "Condition of Vermont Waters - 2014 Priority Waters List [Draft]" at: www.vtwaterquality.org/mapp/htm/mp_assessment.htm#mapp303d.
(*Note*: In addition to the "Integrated List," the 2014 Priority Waters List also includes separate sections for categories of impairment.)

Vermont List of Priority Surface Waters - Part F (2018)

Part F. Waters appearing below are altered by flow regulation. These are priority waters for management action.

Waterbody ID	ADB Code(s)	Segment Name/ Description	Use(s) Impacted	Surface Water Quality Problem	Current Status or Control Activity	Projected WQS Compliance Year
VT03-14	02	EAST CREEK, FROM GLEN DAM TO 3.0 MILES DOWNSTREAM	ALS	POSSIBLE FISH PASSAGE PROBLEM AT DAM (THREAT)	UNLICENSED FACILITY	2020
	02		ALL USES	ARTIFICIAL FLOW REGULATION & CONDITION BY HYDRO	UNLICENSED FACILITY	2020
	02	EAST CREEK, FROM PATCH DAM TO 2.4 MILES DOWNSTREAM	ALL USES	ARTIFICIAL FLOW REGULATION & CONDITION BY HYDRO	UNLICENSED FACILITY	2020
	02		ALS	POSSIBLE FISH PASSAGE PROBLEM AT DAM (THREAT)	UNLICENSED FACILITY	2020
	03	MENDON BROOK (3.3 MILES)	ALS	ARTIFICIAL FLOW CONDITION, INSUFFICIENT FLOW BELOW PICO SNOWMAKING WATER WITHDRAWAL	PARTIAL SUPPORT 3.3 MI (6.9 MI TOTAL LENGTH)	2021
		TRIB TO EAST CREEK, HYDRO FACILITY TO EAST CK CONFLUENCE	ALS	LOW DO DOWNSTREAM OF HYDRO FACILITY	UNLICENSED FACILITY	2020
VT03-14L03		CHITTENDEN RESERVOIR (Chittenden)	ALS	WATER LEVEL FLUCTUATION BY HYDRO ALTERS AQUATIC BIOTA & WETLANDS	UNLICENSED FACILITY	2020
VT03-14L05		PATCH POND (Rutland)	ALS	WATER LEVEL FLUCTUATIONS MAY ALTER AQUATIC BIOTA	UNLICENSED FACILITY	2020
VT06-01	03	MISSISQUOI RIVER, BELOW HIGATE FALLS TO LOWER SWANTON DAM (7.3 MI)	ALS	ARTIFICIAL FLOW FLUCTUATING AND CONDITION BY HYDROPOWER PRODUCTION	FERC LICENSE EXPIRES IN 2024	
	02, 03	MISSISQUOI RIVER, SHELDON SPRINGS PROJECT TO LOWR SWANTON DAM (15.5MI)	ALS, 2CR	ARTIFICIAL FLOW FLUCTUATING AND CONDITION BY HYDROPOWER PRODUCTION	FERC LICENSE EXPIRES 2024	
VT06-02	01	MISSISQUOI RIVER, BELOW ENOSBURG FALLS DAM (0.1 MILE)	ALS	ARTIFICIAL FLOW REGULTATION & CONDITION BY HYDRO	FERC LICENSE EXPIRES IN 2023	2023

2018 Part F List of Waters - Final *Page 2 of 9*

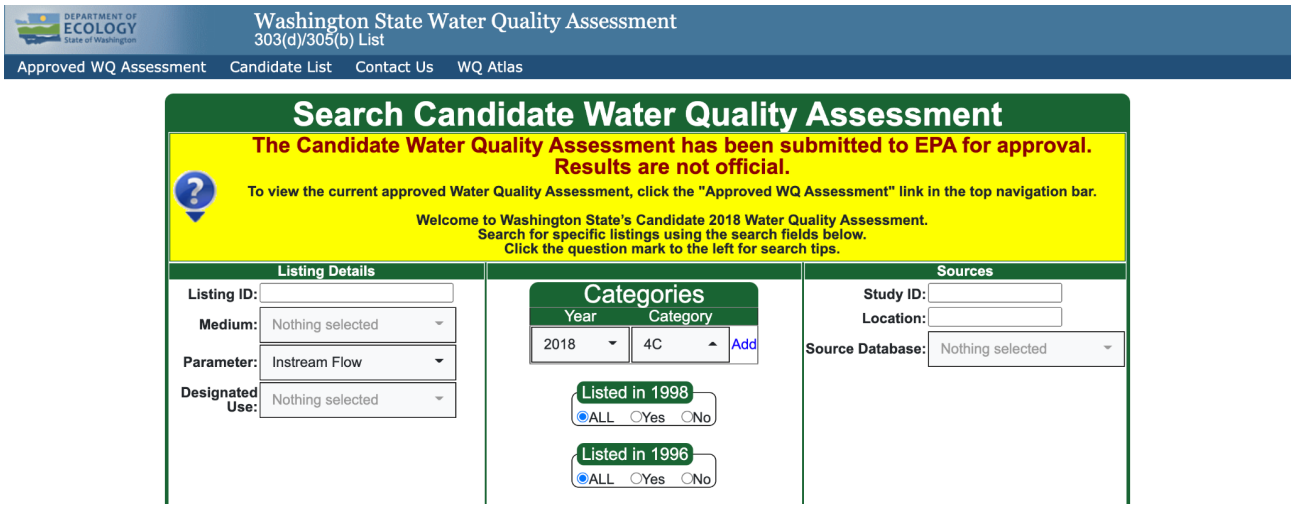
Source: Vermont Department of Environmental Conservation - Watershed Management Division, "State of Vermont 2018 List of Priority Surface Waters," at: https://dec.vermont.gov/sites/dec/files/documents/mp_PriorityWatersList_PartF_2018.pdf

Vermont Stressed River List (2020)

Waterbody ID	Code	Waterbody Name	Stressed Use(s)	Pollutant	Problem
	02	Lemon Fair River, Richville Pond to Johnson Pond	CR	ESCHERICHIA COLI (E. COLI)	Elevated E. colii; sources unknown; potential large wildlife contribution
	03	Beaver Brook, from Lemon Fair Up to Ledge Creek	ALS	NUTRIENTS, FLOW REGIME MODIFICATION	Agriculture and Ledge Creek impoundment
	04	Ledge Creek, Below Perry Jackson Pond	AES, AH, RB	TEMPERATURE, FLOW REGIME MODIFICATION	Onstream pond & dam
VT03-11	01	New Haven River	AH, CR, RF	SEDIMENTATION/SILTATION, ESCHERICHIA COLI (E. COLI)	E. coli source unkown, streambank erosion
VT03-12	04	Halnon Brook Aboveconfluence with Trib 9 Upstream	ALS	NUTRIENTS	Discharge from Salisbury fish hatchery
VT03-14	08	Tributary to East Creek	ALS	IRON	Heavy iron precipitate, sources unknown
	09	East Creek Trib	AES, ALS	IRON	Iron precipate degrading habitat, source not known
	10	Mendon Brook, from Mouth Upstream to Wheelerville Rd	AES, ALS	HABITAT ALTERATIONS	Channelization, dredging
VT03-15	01	Clarendon River	CR	ESCHERICHIA COLI (E. COLI)	Agricultural, industrial, and urban runoff
VT03-17	01	Mill River, Where Rt 103 Parallels River	AES, AH, RF	TEMPERATURE, HABITAT ALTERATIONS	Channelization, dredging
VT04-01	01	Hospital Creek, Mouth to rm 3.5	AES, ALS	TURBIDITY, PHOSPHORUS	Runoff from agricultural lands
VT04-02	02	Whitney Creek, from rm 1.0 to 2.5	AES, ALS, CR	NUTRIENTS	Runoff from agricultural lands
VT04-03	03	East Creek-North Fork	ALS	NUTRIENTS	Agricultural activites
VT05-07	03	Jewett Brook (3.5 Miles)	CR	ESCHERICHIA COLI (E. COLI)	
	08	Mill River, 3.5 Miles in Upper Reaches	AES, ALS, CR	SEDIMENT, NUTRIENTS, ORGANIC ENRICHMENT, ESCHERICHIA COLI (E. COLI)	Agricultural & urban runoff, streambank erosion
	09	Rugg Brook, Upstream from Route 7	AES, AH	HABITAT ALTERATIONS, FLOW REGIME MODIFICATION	Land development, suburban runoff
VT05-09	03	Indian Brook, Mouth to rm 5.4	ALS	SEDIMENT, METALS, TOXICITY	potential impacts from landfill leachate, developed areas, hazardous waste site
VT05-11	04	Laplatte River, at Mouth	AES, AH, RF	SEDIMENTATION/SILTATION, TURBIDITY, TEMPERATURE	Land development

Source: Vermont Department of Environmental Conservation - Watershed Management Division, "State of Vermont 2020 Stressed River List," at: https://dec.vermont.gov/sites/dec/files/documents/mp_PriorityWatersList_PartC_2020.pdf

IX. Washington

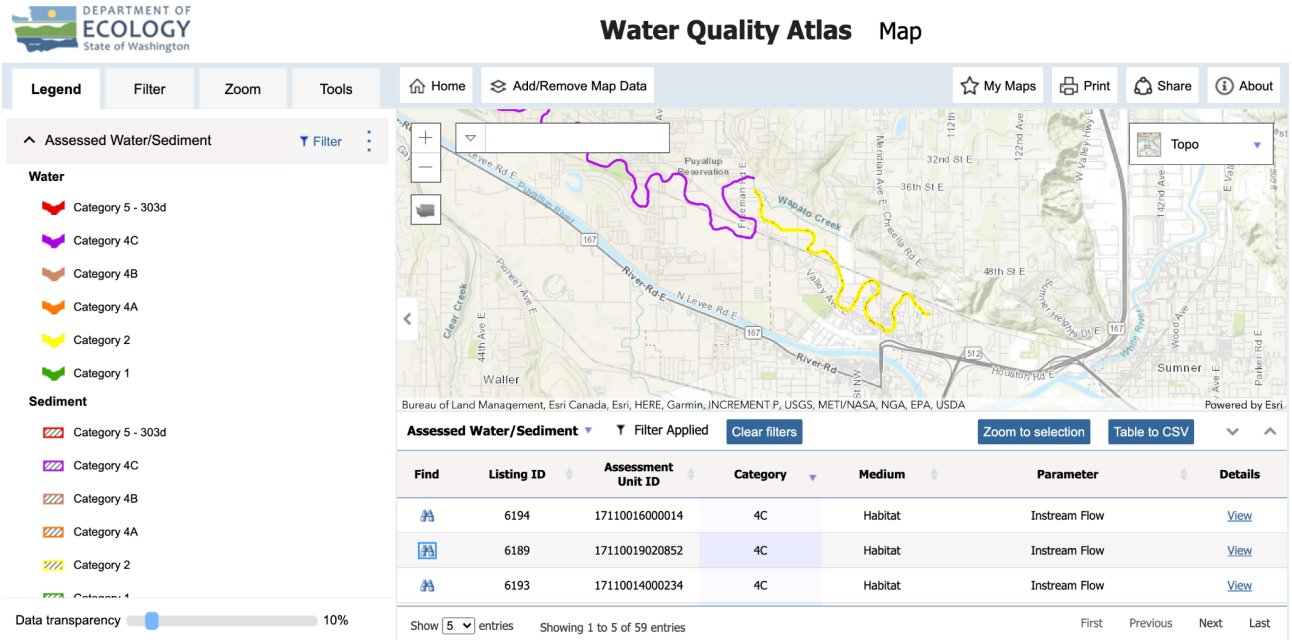


New Search | Modify Search | Export

Search Results - 70 Matched Listings

	ListingID	AU ID	Medium	Parameter	Category	Waterbody Name	WRIA	WQ Improvement Project	WQ Atlas Map Link
View	5781	17030003000222_001_001	Habitat	Instream Flow	4C	YAKIMA RIVER	37-Lower Yakima		5781
View	5782	17030002000407_001_001	Habitat	Instream Flow	4C	COWICHE CREEK	38-Naches		5782
View	5783	17030001000593_002_002	Habitat	Instream Flow	4C	BIG CREEK	39-Upper Yakima		5783
View	5784	17030001000638_001_002	Habitat	Instream Flow	4C	MANASTASH CREEK	39-Upper Yakima		5784
View	5785	17030001000300_001_001	Habitat	Instream Flow	1	SWAUK CREEK	39-Upper Yakima		5785
View	5786	17030001015352_001_001	Habitat	Instream Flow	4C	TANEUM CREEK	39-Upper Yakima		5786
View	5787	17030001000331_001_001	Habitat	Instream Flow	4C	TEANAWAY RIVER	39-Upper Yakima		5787
View	5788	17030001000724_001_001	Habitat	Instream Flow	4C	WENAS CREEK	39-Upper Yakima		5788
View	5789	17020011004850_001_001	Habitat	Instream Flow	4C	CHUMSTICK CREEK	45-Wenatchee		5789
View	5790	17020011008081_001_001	Habitat	Instream Flow	4C	ICICLE CREEK	45-Wenatchee		5790
View	5791	17020011014888_001_001	Habitat	Instream Flow	4C	MISSION CREEK	45-Wenatchee		5791
View	5792	17020011009273_001_001	Habitat	Instream Flow	4C	PESHASTIN CREEK	45-Wenatchee		5792
View	5793	17020011000075_001_001	Habitat	Instream Flow	4C	WENATCHEE RIVER	45-Wenatchee		5793
View	6181	17110020000660_001_001	Habitat	Instream Flow	4C	DUNGENESS RIVER	18-Elwha-Dungeness		6181
View	6182	17110020000847_001_001	Habitat	Instream Flow	4C	DUNGENESS RIVER	18-Elwha-Dungeness		6182
View	6183	17110004000396_001_001	Habitat	Instream Flow	4C	BERTRAND CREEK	1-Nooksack		6183
View	6184	17110004000393_001_001	Habitat	Instream Flow	4C	FISHTRAP CREEK	1-Nooksack		6184
View	6185	17110004000143_001_001	Habitat	Instream Flow	4C	NOOKSACK RIVER, S.F.	1-Nooksack		6185
View	6186	17110005000196_002_002	Habitat	Instream Flow	4C	NEWHALEM CREEK	4-Upper Skagit		6186
View	6187	17110014000073_001_001	Habitat	Instream Flow	4C	PUYALLUP RIVER	10-Puyallup-White		6187
View	6188	17110019020836_001_001	Habitat	Instream Flow	4C	WAPATO CREEK	10-Puyallup-White		6188
View	6189	17110019020852_001_001	Habitat	Instream Flow	4C	WAPATO CREEK	10-Puyallup-White		6189
View	6190	17110019020834_001_001	Habitat	Instream Flow	4C	WAPATO CREEK	10-Puyallup-White		6190
View	6192	17110014000436_001_003	Habitat	Instream Flow	4C	WHITE RIVER	10-Puyallup-White		6192

Source: Washington State Department of Ecology, "Water Quality Assessment for Washington - 303(d)/305(b) Online Database," at: https://apps.ecology.wa.gov/ApprovedWQA/ApprovedPages/ApprovedSearch.aspx.



Source: Washington State Department of Ecology, "Water Quality Atlas - Map," at: https://apps.ecology.wa.gov/waterqualityatlas/wqa/map?CustomMap=y&BBox=-14338616,5395963,-12562831,6503994&RT=0&Layers=27&Filters=y,n,n,n,n,n,n&F1.2=Instream%20Flow

X. Wyoming

Table 9.1.2. Ranked summary statistics for the causes and sources of impairment for Wyoming's streams, including both Category 4 and Category 5 (2012 303(d) List) waters.

Causes and Sources of Wyoming's Impaired Streams			
Causes	**Miles**	**Sources**	**Miles**
E. Coli/Fecal Coliform	950	Unknown	1,166
Selenium	358	Natural Sources	477
Sediment	270	Livestock Grazing	389
Habitat Modification	176	Wildlife Grazing	18
Arsenic	120	Irrigated Crop Production	306
Chloride	99	Petroleum Production	170
Temperature	89	Municipal Stormwater	45
Manganese	64	Habitat Modification	54
Oil and Grease	47	Hardrock Mining	17
Flow Alterations	46	Municipal WWTPs	10
Ammonia	17	Hardrock Mining in MT	7
Copper	17		
Cadmium	12		
Silver	12		
pH	10		

9.4 Category 4 Surface Waters

Table 9.4. Table of Wyoming's surface waters which are impaired or threatened for a designated use and either a TMDL has been completed and approved by USEPA (4A); other pollution control measures are expected to address the impairment (4B); or pollution, not a pollutant is the source of impairment (4C). All category 4A waterbodies are hyperlinked to their respective TMDLs.

Bighorn River Basin					
Waterbody	**305(b) Identifier**	**Location**	**Class/Category**	**Miles/Acres**	**Cause(s) of Impairment**
Ocean Lake	WYBH100800050202_01	Within the Ocean Lake Wildlife Management Area	2ABww/4A	6075.8 ac.	Sediment
Grass Creek	WYBH100800070608_01	From an irrigation withdrawal in NENE S23 T46N R99W to a point 14.1 miles upstream	2AB/4C	14.1 mi.	Flow Alterations
Crooked Creek	WYBH100800100500_01	From the confluence with Bighorn Lake to a point 7.9 miles upstream	2AB/4C	7.9 mi.	Flow Alterations

North Platte River Basin					
Waterbody	**305(b) Identifier**	**Location**	**Class/Category**	**Miles/Acres**	**Cause(s) of Impairment**
Horseshoe Creek	WYNP101800080905_03	From the confluence with Spring Creek to a point 7.3 miles downstream	2AB/4C	7.3 mi.	Flow Alterations

Little Snake River Basin					
Waterbody	**305(b) Identifier**	**Location**	**Class/Category**	**Miles/Acres**	**Cause(s) of Impairment**
Haggarty Creek	WYLS140500030109_01	From the Ferris-Haggarty Mine downstream to the confluence with West Fork Battle Creek	2AB	5.6 mi.	Cadmium

Source: Wyoming Department of Environmental Quality, "2012 Integrated 305(b) and 303(d) Report," at: http://deq.state.wy.us/wqd/watershed/Program%20Documents/5.%20Water%20Quality%20Assessments%20&%20Integrated%20Report/Guidance/WY2012IR.pdf. (*Note*: There are more examples of 4c listings for flow alterations in the 2012 Integrated Reports' list of Category 4 Surface Waters.)