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WATER QUALITY STANDARDS HANDBOOK

DRAFT CHAPTER 2: Designated Uses

EPA

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List of Acronyms and Abbreviations

BMPs	Best Management Practices
CFR	Code of Federal Regulations
CSO	Combined Sewer Overflow
CWA	Clean Water Act
DADM	Day Average of the Daily Maximum
DO	Dissolved Oxygen
EPA	U.S. Environmental Protection Agency
FCA	Financial Capability Assessment
GIS	Geographic Information System
HAU	Highest Attainable Use
LTCP	Long Term Control Plan
LQPI	Lowest Quintile Poverty Indicator
NPDES	National Pollutant Discharge Elimination System
PWS	Public Water Supply
TMDLs	Total maximum daily loads
UAA	Use Attainability Analysis
WQBELs	Water quality-based effluent limitations
WQS	Water quality standards

2 INTRODUCTION

The objective of the Clean Water Act (CWA) as stated in CWA Section 101(a) "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA Section 101(a)(2) further states, "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water be achieved…." In light of these objectives, CWA Section 303 requires that states and authorized Tribes[1] develop water quality standards (WQS) for navigable waters within their jurisdiction. Section 303(c)(2)(A) of the CWA further requires that new or revised WQS shall consist of designated uses and water quality criteria based on such uses and that such WQS shall protect the public health or welfare, enhance the quality of the water, and serve the purposes of the CWA.

Consistent with CWA Section 303(c)(2)(A), 40 Code of Federal Regulations (CFR) 131.3(i)) defines WQS as "provisions of State or Federal law which consist of a designated use or uses for the waters of the United States and water quality criteria for such waters based upon such uses." An antidegradation policy, the third component of WQS, along with an antidegradation implementation method per 40 CFR 131.12(b), provides a framework for maintaining and protecting water quality that has already been achieved.[2]

Designated uses establish the water quality goals for a waterbody, while criteria define the minimum conditions necessary to achieve those water quality goals. 40 CFR 131.10 requires states and authorized Tribes to specify appropriate water uses to be achieved and protected. These designated uses are to be established "taking into consideration the use and value of water for public water supplies, propagation of fish, shellfish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, including navigation."[3]

Designated uses are the foundation for the WQS program and, by extension, other key CWA requirements such as water quality-based effluent limitations (WQBELs) for point source dischargers in National Pollutant Discharge Elimination System (NPDES) permits under CWA Section 402, and total maximum daily loads (TMDLs) for waters not meeting applicable WQS under CWA Section 303(d). A "use" is a particular function of or activity in a water of the U.S. that requires a specific level of water quality to support it.[4] As a key component of the water quality management program under the CWA, designated

[1] Hereafter referred to as "states and authorized Tribes." "State" in the CWA and this document refers to a state, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. "Authorized Tribe" refers to those federally recognized Indian Tribes with authority to administer a CWA WQS program.

[2] The Supreme Court has held in *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700, (1994) that antidegradation requirements are also part of WQS. (511 U.S. 700 (1994)).

[3] CWA Section 303(c)(2)(A) and 40 CFR 131.2 and 131.10(a).

[4] *Water Quality Standards Regulatory Clarifications*, 78 Fed. Reg. 54522 (September 4, 2013).

uses drive the development and adoption of state and authorized Tribal criteria as well as other water quality-based decisions. For additional discussion on criteria, please see Chapter 3 of this Handbook. Thus, clear and accurate designated uses are essential in meeting the ultimate objective of CWA Section 101(a) to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.

CWA Section 101(a)(2) provides that, "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water be achieved…." Therefore, such uses must be protected unless shown to be unattainable.

> Resilience is the ability of waterbodies to recover after a disturbance, including climate change, and their capacity to maintain their ecological functions despite the disturbance.

Protecting water resources from changing conditions, such as increased water temperatures; more frequent and severe droughts; increases in extreme wet weather events; increased stormwater runoff due to growing urbanization; and water withdrawals for agricultural, industrial, and municipal purposes, depends on the ability to "maintain and restore," as well as enhance, the waterbody's resilience to stressors. However, past management strategies may not be adequate to mitigate the impacts of stressors to a waterbody.[5] Using WQS to maintain or build a margin of safety in water quality affords a waterbody increased resilience in the face of future stressors.

The WQS program provides a holistic approach to promote system resilience and facilitates efficient coordination and implementation of water quality management actions. This chapter presents ways in which the designation of uses can increase or maintain waterbody resilience to climate change. For example, section 2.2.2 of this chapter discusses how states and authorized Tribes should consider future drinking water needs in light of anticipated population growth so that waterbodies can be designated and protected for long-term use. Designating a waterbody for public water supply use can help safeguard a water supply that may be needed in the future if another water supply were lost due to drought, water quality issues, or climate change impacts.

WQS also provide a key opportunity to ensure that states, authorized Tribes, and dischargers are maximizing opportunities to improve water quality in areas used by overburdened and underserved communities. For example, when designating uses, it is critical that states and authorized Tribes reflect the desired condition of their waterbodies based on how the water is being used by the affected community, including overburdened and underserved communities who may often rely on local waters for food, recreation, economic opportunities and overall benefits to quality of life. States

[5] EPA. 2011. *Aquatic Ecosystems, Water Quality, and Global Change: Challenges of Conducting Multi-stressor Global Change Vulnerability Assessments*. EPA, Office of Research and Development. Washington, DC 20460. EPA/600/R-11/011F. August 2011. https://cfpub.epa.gov/ncea/global/recordisplay.cfm?deid=231508.

and authorized Tribes can obtain the information they need to determine whether and how to adopt or revise designated uses through meaningful public engagement. This chapter describes key areas where public input could be valuable when designating or revising uses.

It is important to note that while designated uses are not time-limited, they are also not "permanent." During each triennial review, states and authorized Tribes are required to conduct public hearings for the review of applicable WQS.[6] Consistent with 40 CFR Part 131, the designation or revision of designated uses is an iterative process, and designated uses are intended to be revisited when new information or science becomes available, or the facts of the situation change. This iterative process ensures that applicable WQS continually reflect the desired conditions and strive to achieve the CWA objectives while facilitating long-term planning for use of these waters. Note that if a waterbody does not include the uses specified in CWA Section 101(a)(2), 40 CFR 131.20(a) explicitly specifies that states and authorized Tribes shall reexamine whether the uses specified in 101(a)(2) are attainable at least on a triennial basis (i.e., at least once every three years). If new information indicates that uses specified in CWA Section 101(a)(2) are indeed attainable where those uses were not previously designated, the state or authorized Tribe is required to revise its WQS accordingly.[7]

The following section discusses the importance of designated uses and covers different categories of designated uses found in the CWA. It also summarizes federal requirements relevant to designated uses and briefly introduces existing uses.

6 CWA Section 303(c)(1) and 40 CFR 131.20.
7 40 CFR 131.20(a).

2.1 BACKGROUND

2.1.1 Designated Uses and Why They are Important

40 CFR 131.3(f) defines designated uses as "those uses specified in water quality standards for each water body or segment whether or not they are being attained." Designated uses represent each state's or authorized Tribe's water quality goals and expectations for its surface waters. Each designated use is protected by an associated level of water quality. Such designated uses can reflect a variety of goals for the waterbody such as recreation in and on the water, protection of human health and aquatic life, irrigation, agriculture, public water supply, and cultural uses of the waterbody.

Section 101(a)(2) of the CWA provides that "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish and wildlife and provides for recreation in and on the water be achieved..." Therefore, such uses must be protected unless shown to be unattainable. The U.S. Environmental Protection Agency's regulation at 40 CFR 131.10 provides a framework for how a state or authorized Tribe would demonstrate a use specified in CWA Section 101(a)(2) is not attainable. Please see section 2.3 for more discussion.

What are Designated Uses?

Designated uses are "those uses specified in water quality standards for each water body or segment whether or not they are being attained." Designated uses represent each state's or authorized Tribe's water quality goals and expectations for its surface waters. Each designated use is protected by an associated level of water quality. Such designated uses can reflect a variety of goals for the waterbody such as recreation in and on the water, protection of human health and aquatic life, irrigation, and agriculture.

Designated uses do not need to be currently attained to be designated, but rather can represent a state's or authorized Tribe's current or *future* management goals for a waterbody. For example, in anticipation of future population growth, a state or authorized Tribe may designate a waterbody for use as a public water supply. While the state or authorized Tribe does not currently use the waterbody as a source of drinking water, it anticipates the need to use the waterbody for such a use in the future based on projected population growth, and therefore, desires to protect water quality now for this future goal.

States and authorized Tribes have flexibility when establishing their designated uses as long as they meet the requirements of the CWA, 40 CFR Part 131, and other applicable legal requirements. The EPA has found that the clearer and more accurate the designated uses are in describing the water quality goals, the more effective those use designations can be in driving management actions necessary to restore, maintain, and protect water quality. Moreover, designated uses communicate to the public the state's or authorized Tribe's water quality goals for each of its waters. These designated uses are also essential to determine and implement actions necessary to restore and maintain water quality consistent with the objectives of the CWA.

Designated uses are also important because they inform the water quality criteria that states and authorized Tribes must adopt to protect their designated uses.[8] The CWA and 40 CFR Part 131 require establishing and reviewing designated uses and criteria protective of those designated uses through a public process, including a public hearing.[9] The criteria that a state or authorized Tribe adopts define the specific water quality conditions that will protect the designated use. These criteria are essential for determining whether the designated use provides for the protection required by CWA Section 101(a)(2). Clear and accurate designated uses and their associated criteria are foundational elements when implementing key CWA requirements, such as WQBELs for point source dischargers in NPDES permits under CWA Section 402 and TMDLs for waters not meeting applicable WQS under CWA Section 303(d).

Why are Designated Uses Important?

Designated uses communicate to the public the state's or authorized Tribe's water quality goals for each of its waters. These designated uses are essential to determine and implement actions necessary to restore and maintain water quality consistent with the objectives of the CWA.

Designated uses are also important because they inform the water quality criteria that states and authorized Tribes must adopt to protect their designated uses. These criteria are essential when implementing key CWA requirements, such as effluent limitations for point source dischargers in NPDES permits under CWA Section 402, and TMDLs for waters not meeting applicable WQS under CWA Section 303(d).

Determining the designated uses that appropriately reflect the potential for a waterbody involves balancing—within the boundaries established by the CWA and 40 CFR Part 131—environmental, scientific, technical, economic, and social considerations, as well as public input on the desired condition for the waterbody. The EPA can assist the state or authorized Tribe in evaluating these considerations when determining the appropriate designated uses for their waters.

[8] 40 CFR 131.2, 131.3(b), 131.5(a)(2), 131.6(c), and 131.11(a).
[9] CWA Section 303(c)(1) and 40 CFR 131.20(b).

Maintaining and protecting designated uses is essential for protecting fresh, coastal, and estuarine waterbodies. Sustainable communities and economic prosperity depend on the availability of clean water, which may be adversely affected by changing conditions such as extreme weather events, degraded water quality, and excessive water withdrawals.

2.1.2 Categories of Designated Uses in the CWA

The CWA contains two broad categories of uses: (1) uses specified in Section 101(a)(2), or "101(a)(2) uses," and (2) uses specified in Section 303(c)(2)(A) but not in Section 101(a)(2), or "non-101(a)(2) uses." Section 101(a)(2) of the CWA specifies an "interim goal" that, *wherever attainable*, water quality provides for the protection and propagation of fish, shellfish and wildlife, and recreation in and on the water. Section 303(c)(2)(A) of the CWA states that WQS "shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and…navigation." Thus "non-101(a)(2) uses," as defined by 40 CFR 131.3(q), would include public water supply, agricultural, industrial, and navigation uses or any other use "…unrelated to the protection and propagation of fish, shellfish, wildlife or recreation in or on the water."

States and authorized Tribes must take all of the uses specified in CWA Section 303(c)(2)(A) into consideration when designating uses for their waters. The term "wherever attainable" in CWA Section 101(a)(2) is Congress' recognition that it may not always be possible for a water to attain the uses specified in CWA Section 101(a)(2). However, Congress clearly intended that states and authorized Tribes move towards achieving the uses specified in CWA Section 101(a)(2) as an interim goal "wherever attainable." See section 2.3.1.1 of this chapter for discussion on how states and authorized Tribes may demonstrate that a use specified in CWA Section 101(a)(2) is not attainable (i.e., rebutting the presumption of attainability).

This section discusses the uses specified in Section 101(a)(2) of the CWA, subcategories of such uses, and non-101(a)(2) uses.

2.1.2.1 Uses Specified in Section 101(a)(2) of the CWA

In the EPA's regulation, the term "uses specified in section 101(a)(2) of the CWA" refers to those uses that provide for the protection and propagation of fish (including aquatic invertebrates), shellfish, and wildlife, and recreation in and on the water. States and authorized Tribes have used other terms for these uses, including aquatic life use, wildlife use, shellfish harvesting, and recreational uses.

In addition, the EPA has interpreted CWA Section 101(a)(2) to refer to protecting water quality not only so that fish, shellfish, and other aquatic life thrive but also to protect them as a food source. Thus, to be consistent with CWA Section 101(a)(2), states and authorized Tribes must ensure that applicable designated uses protect the aquatic organisms themselves and protect consumers of the aquatic organisms from pollutant

levels that result in unacceptable risk to human health when consuming aquatic life.[10] The EPA first articulated this interpretation in the *Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance; Final Rule* (1992) (referred to as the 1992 National Toxics Rule).[11] In that rule, the EPA specified that all waters designated for even minimal aquatic life protection (and therefore a potential consumption exposure route for humans) must be protective of human health from adverse effects associated with exposure to pollutants through fish consumption. The EPA also described its interpretation in the *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (2000) (referred to as the 2000 Human Health Methodology).[12] Most recently, the EPA discussed this interpretation in the 2015 preamble to the final rule when revising 40 CFR Part 131.[13]

In the past, the uses specified in CWA Section 101(a)(2) were commonly referred to as "fishable/swimmable" uses. However, this imprecise shorthand is not an accurate description of the full intent and scope of the national CWA objective to restore and maintain the physical, chemical, and biological integrity of the Nation's waters, nor of the CWA Section 101(a)(2) interim goal, which includes aquatic life and wildlife protection in addition to the more human-centric recreational uses. The EPA's regulation and this WQS Handbook purposefully use the terms "uses specified in CWA Section 101(a)(2)" or "uses that provide for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water" rather than "fishable/swimmable."

2.1.2.2 Subcategories of Uses Specified in Section 101(a)(2) of the CWA

The EPA refers to any use that reflects the subdivision of the uses specified in CWA Section 101(a)(2) into smaller, more homogenous groups as "subcategories of uses specified in section 101(a)(2) of the Act." States and authorized Tribes typically adopt subcategories to better represent the desired condition for the water. The EPA discussed in its preamble to the 2015 final rule revising 40 CFR Part 131 that a subcategory of a use specified in CWA Section 101(a)(2) is not necessarily less protective than a use specified in CWA Section 101(a)(2). For example, a state or authorized Tribe may choose to further divide its aquatic life use into a cold water aquatic life use and a warm water aquatic life use to accurately reflect the natural aquatic community and the different temperature needs of certain species in certain waters.[14] In this case, both uses, while subcategories of CWA Section 101(a)(2), still provide "for the protection and propagation of fish, shellfish and wildlife" when designated to accurately reflect the natural aquatic community for the water.

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10 Grubbs, G. H. and R.H. Wayland. EPA. 2000. Letter: EPA's Recommendations on the Use of Fish and Shellfish Consumption. Office of Water, Washington, DC 20460. https://www.epa.gov/sites/production/files/2015-01/documents/standards-shellfish.pdf.

11 https://nepis.epa.gov/Exe/ZyPDF.cgi/20003ZW7.PDF?Dockey=20003ZW7.PDF.

12 EPA. 2000. *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (2000). EPA, Office of Water, Office of Science and Technology. Washington, DC 20460. EPA 822-B-00-004. October 2000. https://www.epa.gov/sites/default/files/2018-10/documents/methodology-wqc-protection-hh-2000.pdf.

13 *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51027 (August 21, 2015). ("Based on the CWA section 303(c)(2)(A) requirement that WQS protect public health, the EPA interprets the uses under section 101(a)(2) of the Act to mean that not only can fish and shellfish thrive in a waterbody, but when caught, they can also be safely eaten by humans.")

14 Warm water" here refers to the naturally expected warm water and not a limited warm water aquatic life use.

In some cases, states and authorized Tribes will further divide their uses into subcategories that recognize different levels of protection. For example, a state or authorized Tribe may wish to further divide its recreation use category to provide options to designate primary contact recreation to protect for recreation in and on the water or secondary contact recreation to protect for recreation on the water where primary contact recreation is not attainable. While a primary contact recreation use still provides for "recreation in and on the water" consistent with CWA Section 101(a)(2), a secondary contact recreation use generally only provides for recreation on the water. In this case, the subcategory of secondary contact recreation use is less protective than the recreation use specified in CWA Section 101(a)(2).[15] Similarly, a subcategory of an aquatic life use that provides for protection but not propagation of aquatic life would only partially support the uses specified in CWA Section 101(a)(2). For example, a subcategory of an aquatic life use such as a "maintenance of resident fish and other aquatic life use" would provide for some protection of aquatic life use; however, it would not provide for the propagation specified in CWA Section 101(a)(2).

For purposes of a plain language discussion in this chapter, the EPA uses the term "101(a)(2) use" to refer to any use that provides for the uses specified in CWA Section 101(a)(2), including subcategories that provide for the uses specified in CWA Section 101(a)(2). Examples of subcategories that provide for the uses specified in CWA Section 101(a)(2) include, but are not limited to, warm water aquatic life use and cold water aquatic life use when designated to accurately reflect the natural aquatic community, as well as fish consumption use and primary contact recreation use.

The degree to which a state or authorized Tribe should refine or subcategorize their designated uses may depend upon the quality and quantity of the available monitoring and assessment data and the power of the data to distinguish between different subcategories. By refining aquatic life uses, for example, states and authorized Tribes can better organize and align their designated uses with the chemical, physical, or biological realities they observe in their surface waters and can assign appropriate, protective criteria. Designated uses refined in this way provide an objective benchmark to interpret monitoring and assessment data and determine the attainment status of these waters, making restoration efforts more effective.

Refined designated uses that are specific and accurate for the waterbody can help better direct and focus water resource management efforts and support good water quality even under the pressure of changing conditions such as climate change. For example, a state or authorized Tribe that invests in a long-term monitoring program could collect biological and physiochemical data to refine a broad use designation of aquatic life use into more ecologically meaningful subcategories that would then allow for the adoption of accurate criteria to protect those uses. Such ecologically meaningful categories could include a cold water, cool water, or warm water fishery; fish migratory waters/migration corridors; or fish spawning and rearing waters.

[15] *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51024 (August 21, 2015).

When refining designated uses, a state or authorized Tribe can include more detailed desired condition statements to the applicable WQS to directly address needs for restoration and maintenance of the physical, chemical, and biological integrity of waterbodies. In addition, states and authorized Tribes should focus on identifying vulnerable waters and designated uses most at risk from the negative impacts of climate change and develop tools to monitor and assess those waters and uses. Doing so could also strategically utilize use refinements to build resilience in the waters. States and authorized Tribes may also utilize their antidegradation requirements (see Chapter 4 of this Handbook) to further facilitate protection of designated uses to maintain and support waterbody resilience.

2.1.2.3 Uses Not Specified in Section 101(a)(2) of the CWA ("Non-101(a)(2) Uses")

In the EPA's regulation, the term "non-101(a)(2) uses" refers to those uses that are not related to the protection or propagation of fish, shellfish, wildlife, or recreation in or on the water (see 40 CFR 131.3(q)). These uses include those listed in CWA Section 303(c)(2)(A) but not in CWA Section 101(a)(2), such as public water supply, agriculture, industrial, and navigation. The EPA's definition for non-101(a)(2) uses is intended to clearly distinguish these uses from the uses specified in CWA Section 101(a)(2) as well as subcategories of 101(a)(2) uses, such as secondary contact recreation.

2.1.3 Summary of Federal Requirements for Assigning and Revising Designated Uses

The CWA determines the basic structure in place today for regulating pollutant discharges into waters of the U.S. CWA Section 303(c)(2)(A) specifies that WQS shall protect the public health or welfare, enhance the quality of water, and serve the purposes of the CWA. 40 CFR Part 131 interprets the CWA to ensure that states and authorized Tribes strive to meet the CWA goals when establishing WQS. Specifically, 40 CFR 131.10 outlines the requirements for states and authorized Tribes when specifying appropriate designated uses to be achieved and protected in their waters.

The 40 CFR 131.10 provisions applicable to designated uses are briefly described in plain language below and are discussed in more detail throughout this chapter:[16]

- 40 CFR 131.10(a) requires states and authorized Tribes to specify appropriate uses to be achieved and protected. States and authorized Tribes must take into consideration the use and value of the water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation when designating uses. This provision prohibits states and authorized Tribes from adopting waste transport or waste assimilation as a designated use for any waters of the U.S.
- 40 CFR 131.10(b) requires that states and authorized Tribes ensure attainment and maintenance of WQS of downstream WQS when designating uses and the criteria to protect those uses.
- 40 CFR 131.10(c) allows states or authorized Tribes to adopt subcategories of uses (e.g., to differentiate between cold and warm water fisheries).
- 40 CFR 131.10(d) specifies that uses are deemed attainable if they can be achieved by the imposition of effluent limits required under CWA Sections 301(b) (water quality-based) and 306 (technology-based) and cost-effective and reasonable best management practices (BMPs) for nonpoint source control.
- 40 CFR 131.10(f) allows states and authorized Tribes to adopt seasonal uses and criteria to protect the seasonal uses as an alternative to adopting uses requiring less stringent water quality criteria. However, such criteria shall not preclude the attainment and maintenance of a more protective use in another season.
- 40 CFR 131.10(g) provides that states and authorized Tribes may, as specified in 40 CFR 131.10(j), designate or remove a use that is not an existing use if they can demonstrate through a use attainability analysis (UAA) that one of six specified factors precludes attainment of the designated use. This provision also requires that states and authorized Tribes adopt the highest attainable use when revising designated uses based on a required UAA.

[16] Note that the plain language summary of the regulation does not supersede the regulatory language itself.

- 40 CFR 131.10(h) specifies that states and authorized Tribes may not remove designated uses if (1) they are existing uses unless a use with more stringent criteria is added, or (2) such uses can be attained by the imposition of effluent limits required under Sections 301(b) and 306 of the CWA and by implementing cost-effective and reasonable BMPs for nonpoint source control.
- 40 CFR 131.10(i) requires states and authorized Tribes to revise their WQS to reflect the uses that are actually being attained, when existing WQS specify designated uses "less than those which are presently being attained."
- 40 CFR 131.10(j) requires states and authorized Tribes to conduct a UAA whenever designating uses that do not include the uses specified in CWA Section 101(a)(2), when removing a use or subcategory of a use specified in CWA Section 101(a)(2), or when adopting a subcategory of a 101(a)(2) use that requires less stringent criteria than previously applicable.
- 40 CFR 131.10(k) specifies that a UAA is not required when designating uses that include the uses specified in CWA Section 101(a)(2), when designating a subcategory of a 101(a)(2) use that requires criteria at least as stringent as previously applicable, or when removing or revising a non-101(a)(2) use. To remove or revise a non-101(a)(2) use, the state or authorized Tribe must justify how its consideration of the use and value for the uses specified in 40 CFR 131.10(a) supports its action.

States and authorized Tribes may adopt any designated uses they deem appropriate for their specific waters as long as those uses are consistent with the CWA and 40 CFR Part 131 requirements.

In addition to 40 CFR 131.10, 40 CFR 131.20(a) also explicitly addresses designating and revising uses. Consistent with CWA Section 303(c)(1), 40 CFR 131.20(a) requires states and authorized Tribes to hold public hearings, at least once every three years, for the purpose of reviewing applicable WQS and to reexamine any waterbody segment with WQS that do not include CWA Section 101(a)(2) uses to determine if any new information has become available. If such new information indicates that the uses specified in Section 101(a)(2) of the Act are attainable, the state or authorized Tribe must revise its WQS accordingly. 40 CFR 131.20(b) requires states and authorized Tribes to hold one or more public hearings not only for the purpose of reviewing WQS as specified in 40 CFR 131.20(a) but also when revising WQS, such as when revising designated uses. Finally, CWA Section 303(c) requires the EPA to review and approve or disapprove any change to a designated use because it is considered a revision to WQS.

2.1.4 Existing Uses

In 1998, the EPA stated "Designated uses focus on the attainable condition while existing uses focus on the past or present condition."[17] Existing uses establish a minimum use and level of water quality that must be maintained to protect uses that have already been attained (i.e., the "floor").[18] A designated use, on the other hand, expresses the state or authorized Tribal goals or objectives (i.e., the highest attainable use) for a waterbody or set of waterbodies. The designated use may or may not have actually been attained in the waterbody.[19] The EPA's regulation at 40 CFR 131.10 links existing uses and designated uses to ensure that states and authorized Tribes designate appropriate water uses, reflecting both the existing and attainable uses of each waterbody.[20] Please see section 2.3.3.1 of this chapter for a more detailed discussion of existing uses, how to determine existing uses, and the relationship between existing uses and designated uses.

The following section discusses how to express designated uses and covers the uses specified in section 101(a)(2) of the CWA and subcategories of 101(a)(2) uses. It also discusses non-101(a)(2) uses, as well as seasonal uses and covers methods to establish designated uses.

17 *Water Quality Standards Regulation*, Advance Notice of Proposed Rulemaking, 63 Fed. Reg. 36,742, 36,748 (July 8, 1998).

18 See the preamble to the EPA's WQS regulation at 48 Fed. Reg. 51500, 51403 (November 8, 1983).

19 40 CFR 131.3(f).

20 *Water Quality Standards Regulation*, Advance Notice of Proposed Rulemaking, 63 Fed. Reg. 36742, 36748 (July 8, 1998).

2.2 EXPRESSING DESIGNATED USES

States and authorized Tribes have discretion in how to articulate the applicable designated uses for their waters. They are required to designate uses considering, at a minimum, the use and value of waters for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation, which includes CWA Section 101(a)(2) uses and non-101(a)(2) uses (see section 2.1.2 of this chapter). As discussed earlier, uses that provide for the protection and propagation of fish, shellfish and wildlife and protection of recreation in and on the water must be designated unless shown to be unattainable.

However, states and authorized Tribes do not need to be constrained by the wording or the use categories articulated in the CWA. Some states and authorized Tribes may choose to say they are adopting "designated uses" while others may say they are adopting "beneficial uses." States and authorized Tribes can also determine their own designated use categories. For example, to fulfill the requirement of the CWA to provide for recreation in and on the water, a state or authorized Tribe may adopt a "recreation in and on the water use," "recreation use," "water contact recreation use," or "whole body contact recreation use," while others may adopt regulatory language that specifies that the water quality of the identified waters "shall be suitable for primary contact recreation."

States and authorized Tribes have the discretion to adopt subcategories of uses as well as to determine the level of specificity of the subcategories.[21] As discussed in section 2.1.2.2 of this chapter, subcategories of 101(a)(2) uses may provide for the full support of the uses specified in CWA Section 101(a)(2) or only partial support of such uses. States and authorized Tribes may also adopt subcategories of non-101(a)(2) uses, if appropriate. Refining a designated use by adopting subcategories would help inform the specific water quality criteria that would protect the use.

Where the state or authorized Tribe already has use subcategories with associated CWA effective criteria, then those criteria will apply where the state or authorized Tribe designates such subcategories. If, on the other hand, the state or authorized Tribe is adopting a new use subcategory into its WQS, it must also adopt criteria to protect that designated use, consistent with 40 CFR 131.11.

[21] 40 CFR 131.10(c).

Overall, it is important to articulate designated uses in a way that adequately represents the desired condition for a waterbody and describes expected conditions within the waters of the state or authorized Tribe. Designated uses that lack precision in articulating the desired condition may result in difficulties determining the appropriate criteria to protect those uses. To increase specificity, states and authorized Tribes could, for example, choose to subcategorize aquatic life uses based on attainable habitat (e.g., cold water versus warm water fisheries), innate differences in community structure and function (e.g., high versus low species richness or productivity), or fundamental differences in important community components (e.g., warm water fish communities dominated by bass versus catfish). States and authorized Tribes may also wish to adopt more tailored designated uses to protect particularly unique, sensitive, or valuable aquatic species, communities, or habitats.

Data collected from biological surveys may assist states and authorized Tribes in refining aquatic life uses. Surveys can reveal consistent differences among aquatic communities inhabiting different waters with the same designated use across a spectrum of impacts to those communities. For example, states and authorized Tribes could use measurable biological attributes to divide one aquatic life use category into two or more aquatic life use subcategories reflecting variations in water quality (e.g., excellent, good, or fair conditions). For more information on how to use biological information to describe differences in aquatic life uses, please see the EPA's Biological Assessment – Technical Assistance Documents for States, Tribes, and Territories webpage.[22]

Once states and authorized Tribes have expressed their designated uses, they can be revised and further refined as additional information becomes available to capture incremental improvements over time, if and when they occur. Note that in accordance with CWA Section 303(c)(1) and 40 CFR 131.20(a), states and authorized Tribes must review their WQS at least once every three years to determine if there is new information indicating that uses specified in CWA Section 101(a)(2) are attainable where they were not before. See section 2.5.2 of this chapter for additional information on triennial reviews.

[22] https://www.epa.gov/wqc/biological-assessment-technical-assistance-documents-states-tribes-and-territories#all.

The EPA encourages states and authorized Tribes, when designating uses for a waterbody, to carefully consider the way the local community uses and values their waters by offering opportunities for public involvement. Doing so will likely lead to better and more informed decisions for the waterbody that are supported by the local community. Please see section 2.7 on coordination and collaboration with the EPA and stakeholders.

The following sections provide examples of how states and authorized Tribes can express and identify designated uses.

2.2.1 Uses Specified in Section 101(a)(2) and Subcategories of Such Uses

Section 2.1.2.1 describes the uses specified in CWA Section 101(a)(2). This section provides some examples of subcategories of recreation uses and aquatic life uses including subcategories that do and subcategories that do not fully support the uses specified in Section 101(a)(2) of the CWA (see section 2.1.2.2. of this chapter for further discussion).

2.2.1.1 Recreational Uses

As discussed earlier, CWA Section 101(a)(2) and the EPA's regulation expect states and authorized Tribes to protect recreation in and on the water unless the state or authorized Tribe demonstrates that such a use is not feasible to attain.

However, just as with any designated use, states and authorized Tribes have the discretion to subcategorize their recreation uses into smaller, more homogeneous groups to represent more specific desired conditions for the water. This can allow for the adoption of a more refined set of criteria that better define the water quality needed to support the specific use. The most common way states and authorized Tribes subcategorize recreational uses is to divide their recreational uses into "primary contact" recreation and "secondary contact" recreation uses. The subcategorization between primary contact recreation and secondary contact recreation is generally based on the amount of water ingestion associated with particular recreational activities. The EPA's *Recreational Water Quality Criteria* (2012) recommendations[23] describe primary contact recreation as "activities where immersion and ingestion are likely and there is a high degree of bodily contact with the water, such as swimming, bathing, surfing, water skiing, tubing, skin diving, water play by children, or similar water-contact activities." A designated use of primary contact recreation fully supports "recreation in and on the water" as specified in CWA Section 101(a)(2).

[23] EPA. 2012. *Recreational Water Quality Criteria*. EPA, Office of Water. Washington, DC 20460. EPA 820-F-12-058. 2012. https://www.epa.gov/sites/default/files/2015-10/documents/rwqc2012.pdf.

Secondary contact recreation generally refers to activities where immersion and ingestion are less likely and there is a low degree of bodily contact with the water, such as flat-water kayaking, fishing, boating, or canoeing. Some states and authorized Tribes have also referred to this type of recreation use as limited water contact, limited body contact, partial body contact, incidental contact, or limited contact recreation. A designated use of secondary contact recreation does not fully support "recreation in and on the water" as specified in CWA Section 101(a)(2). Thus, a first-time designation of secondary contact recreation use and secondary contact criteria would require a use attainability analysis (UAA) per 40 CFR 131.10(j)(1) demonstrating that attaining a primary contact recreation use consistent with CWA Section 101(a)(2) is not feasible. Similarly, removing a primary contact recreation use and adopting a secondary contact recreation use would require a UAA per 40 CFR 131.10(j)(2) because the criteria would be less stringent than previously applicable. 40 CFR 131.10(g) specifies the six factors states and authorized Tribes could use to make such a demonstration (see section 2.3.1.2 for a discussion of UAAs). States and authorized Tribes are encouraged to work with their EPA regional representatives when defining or reviewing their primary or secondary contact recreation designated uses.[24]

When subcategorizing recreational designated uses into primary and secondary contact recreation, it is important to note that some activities considered primary contact recreation in one scenario may not be considered primary contact recreation in another. For example, canoeing or kayaking could be considered primary contact activities when carried out in turbulent water where ingestion or immersion is likely, whereas canoeing or kayaking could be considered secondary contact activities when done on calm water where ingestion or immersion is less likely. Therefore, in order to adequately determine whether a waterbody should be designated for a primary contact recreation or secondary contact recreation use, states and authorized Tribes should consider the specific activities occurring in the water, the extent of exposure, and how much water ingestion is likely.

While there may be other acceptable approaches, see the next page for the main approach to subcategorizing recreational uses.

The EPA is aware of some instances where a state or authorized Tribe has designated a secondary contact recreation use with criteria to protect primary contact recreation in waters where primary contact recreation is attainable but there is concern that designating it as such would encourage recreation when and where it may not be physically safe. This approach still provides the protection specified in CWA Section 101(a)(2) for "recreation in and on the water" and would not require a UAA, consistent with 40 CFR 131.10(k)(2). The EPA addressed this issue in the preamble to the 1983 WQS Regulation, which states "even though it may not make sense to encourage use of a stream for swimming because of the flow, depth or the velocity of the water, the States

[24] The EPA has developed a recommended methodology for deriving criteria to protect secondary contact activities [see the EPA's White Paper "*An Approach for Applying EPA's 2012 Recreational Water Quality Criteria Recommendation to Non-primary Contact Exposure Scenarios*" (2022)].

and the EPA must recognize that swimming and/or wading may occur anyway. In order to protect public health, States must set criteria to reflect recreational uses if it appears that recreation will in fact occur in the stream."[25]

MAIN APPROACH TO SUBCATEGORIZING RECREATIONAL USES

Primary Contact Recreation

The default approach established by the CWA and the EPA's regulation is for a state or authorized Tribe to adopt a primary contact recreation designated use with criteria to protect primary contact recreation, thus providing for the protection of "recreation in and on the water," consistent with CWA Section 101(a)(2). Where a primary contact recreation use is not attainable, states and authorized Tribes may consider adopting a secondary contact recreation use.

Secondary Contact Recreation

A state or authorized Tribe may adopt a secondary contact recreation use with criteria to protect secondary contact recreation where primary contact recreation is not an existing use and is not attainable.[26, 27] Because this approach would not provide for the full protection of "recreation in and on the water" under CWA Section 101(a)(2), 40 CFR 131.10(j)(1) requires the state or authorized Tribe to conduct a UAA to demonstrate that primary contact recreation cannot be attained. 40 CFR 131.10(g) specifies six factors that states and authorized Tribes could use to demonstrate that attaining a use is not feasible (see section 2.3.1.2). In addition, 40 CFR 131.20(a) requires that the state or authorized Tribe re-examine waters with a secondary contact recreation use at least once every three years to determine if any new information has become available indicating that a primary contact recreation use is attainable. If so, the state or authorized Tribe is required to revise its WQS accordingly.

States and authorized Tribes may also consider adopting temporal uses that reflect variations over time in what the waterbody is expected to meet. An example of a temporal use would be a Combined Sewer Overflow (CSO) wet weather impacted use that provides for safe primary contact recreation at all times of the year except for a specified number of occurrences per year when CSOs are allowed to occur after construction of controls established in an approved Long Term Control Plan (LTCP) is completed. A CSO wet weather impacted use would not protect "recreation in and on the water" when CSOs are allowed to discharge. Therefore, just as with designating a secondary contact recreation use, removing a primary contact recreation use and adopting a CSO wet weather limited use would require a UAA consistent with 40 CFR 131.10(j)(2) because the criteria would be less stringent than previously applicable. 40 CFR 131.10(g) specifies the six factors states and authorized Tribes could use to make

[25] *Water Quality Standards Regulation*, 48 Fed. Reg. 51401 (November 8, 1983).
[26] 40 CFR 131.10(g), 131.10(h)(1), and 131.10(j).
[27] See section 2.3.3 of this chapter for a full description of when a designated use may not be removed or revised.

such a demonstration (see section 2.3.1.2 for a discussion of UAAs). The EPA encourages states and authorized Tribes to work with their EPA regional representatives when designating a temporal recreation use.

If a state or authorized Tribe using this approach wishes to subsequently adopt less stringent criteria to protect for secondary contact recreation instead of primary contact recreation, 40 CFR 131.10(j)(2) requires the state or authorized Tribe to conduct a UAA even if the state or authorized Tribe does not revise the name of the designated use. In other words, despite the retention of the secondary contact recreation use label, if the criteria protected primary contact recreation, then downgrading such a use by adopting less stringent secondary contact recreation criteria would require a UAA. It is important to note that where primary contact recreation has occurred in water quality that supports such a use, it is considered an existing use and 40 CFR 131.10(g) and 131.10(h)(1) prohibit removal of an existing use.

In addition to primary and secondary contact recreation uses, states and authorized Tribes may adopt other recreational uses, such as cultural and seasonal recreational uses (see section 2.2.3 for a discussion of seasonal uses).

2.2.1.2 Aquatic Life and Wildlife Uses

States and authorized Tribes may choose to provide for the protection and propagation of fish, shellfish, and wildlife by dividing their aquatic life uses into subcategories. As mentioned earlier, aquatic life uses include protecting consumers of the aquatic organisms from pollutant levels that result in unacceptable risk to human health when consuming aquatic life.[28] Some examples of aquatic life use subcategories include cold water aquatic life, warm water aquatic life, and shellfish harvesting. Examples of use subcategories for aquatic life uses include "warm water aquatic life use" and "cold water aquatic life use." This differentiation reflects a desire to discern differences between aquatic life that require cold water temperatures versus warm water temperatures.

Some coastal states have a use specifically to protect for oyster propagation. States and authorized Tribes may choose to adopt aquatic life use subcategories to protect, for example, aquatic flora, self-sustaining fish populations, and stocked fisheries.

To provide for protection and propagation of fish, shellfish, and wildlife, states and authorized Tribes may also choose to adopt a subcategory that explicitly provides for the protection and propagation of wildlife that primarily eats fish, such as waterfowl, shore birds, and other aquatic-dependent wildlife, from adverse effects when consuming contaminated aquatic life, particularly where pollutants are known to bioaccumulate.

Some states have chosen to adopt subcategories of aquatic life use specific to the temperature needs of various life stages. For example, because Pacific Northwest salmonids have multiple freshwater life stages with differing temperature needs, some

[28] Grubbs, G. H. and R.H. Wayland. EPA. 2000. Letter: EPA's Recommendations on the Use of Fish and Shellfish Consumption. Office of Water, Washington, DC 20460. https://www.epa.gov/sites/production/files/2015-01/documents/standards-shellfish.pdf.

states and authorized Tribes in the Pacific Northwest have adopted a series of aquatic life use subcategories that reflect the different temperature criteria necessary to support different life stages based upon the EPA Region 10's Pacific Northwest temperature guidance. See Tables 2-1 and 2-2 for an illustration of how subcategories specific for life stages with unique temperature requirements could be established.

TABLE 2-1: RECOMMENDED USES & CRITERIA THAT APPLY TO SUMMER MAXIMUM TEMPERATURES

SALMONID USES DURING THE SUMMER MAXIMUM CONDITIONS	CRITERIA
Bull Trout Juvenile Rearing	12°C (54°F) 7DADM
Salmon/Trout "Core" Juvenile Rearing*	16°C (61°F) 7DADM
Salmon/Trout Migration plus Non-Core Juvenile Rearing	18°C (64°F) 7DADM
Salmon/Trout Migration	20°C (68°C) 7DADM plus a provision to protect and, where feasible, restore the natural thermal regime

**Salmon adult holding prior to spawning, and adult and subadult bull trout foraging and migration may also be included in this use category.*

TABLE 2-2: OTHER RECOMMENDED USES & CRITERIA

SALMONID USES	CRITERIA
Bull Trout Spawning	9°C (48°F) 7DADM
Salmon/Trout Spawning, Egg Incubation, and Fry Emergence	13°C (55°F) 7DADM
Steelhead Smoltification	14°C (57°F) 7DADM

Notes: 1) "7DADM" refers to the Maximum 7 Day Average of the Daily Maximums; 2) "Salmon" refers to Chinook, Coho, Sockeye, Pink, and Chum Salmon; 3) "Trout" refers to Steelhead and Coastal Cutthroat Trout.

Source: EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperatures Water Quality Standards, EPA 910-B-03-002, April 2003 (See https://nepis.epa.gov/Exe/ZyPDF.cgi/P1004IUI.PDF?Dockey=P1004IUI.PDF)

2.2.2 Non-101(a)(2) Uses

The EPA's regulation at 40 CFR 131.3(q) defines a non-101(a)(2) use "as any use unrelated to the protection or propagation of fish, shellfish or wildlife, or recreation in or on the water." Non-101(a)(2) uses include uses specified in Section 303(c)(2)(A) of the CWA that are not also specified in CWA Section 101(a)(2). Examples of non-101(a)(2) designated uses include, but are not limited to, the following:

Public Water Supplies

The public water supply use category describes the desired condition for a waterbody to be suitable for supplying drinking water. Such waters can be either raw water supplies provided to a treatment plant for processing and treatment prior to distribution in public water systems, or they can include waters meant for direct consumption without treatment.

While a public water supply use is a non-101(a)(2) use, it can be critical to ensure communities have clean and safe drinking water. Therefore, it is important for states and authorized Tribes to review whether appropriate designated uses have been established to protect source water for public water supplies. This includes identifying waters with existing drinking water intakes that have not been designated as a public water supply use and designating them as such. States and authorized Tribes could also adopt public water supply designated uses upstream that serve to ensure attainment of a public water supply use in downstream waters.

> Non-101(a)(2) uses are distinct from subcategories of uses specified in Section 101(a)(2) of the Act. Non-101(a)(2) uses are uses unrelated to the protection and propagation of fish, shellfish, and wildlife or recreation in or on the water whereas subcategories of the uses specified in CWA Section 101(a)(2), regardless of the level of protection, still relate to such uses. See section 2.1.2.2 for further discussion.

As discussed in the introduction of this chapter, the WQS program provides a holistic approach to promote system resilience to various environmental stressors and facilitates efficient coordination and implementation of water quality management actions. One way to use designation of non-101(a)(2) uses to increase or maintain waterbody resilience is to consider future drinking water needs in light of an anticipated population growth so that waterbodies can be designated and protected for long-term use. Public water supply use designation can help safeguard a water supply that may be needed in the future if another water supply were lost due to drought, water quality issues, or other impacts. Potential impacts on the receiving water quality should also be considered in advance of implementing water reuse projects, which may become more common due to diminishing freshwater supplies. Additional information and technical resources for applying designated uses as a tool for protecting public water supplies can be found in the *Opportunities to Protect Drinking Water Sources and Advance Watershed Goals Through the Clean Water Act* (2014) toolkit for state, interstate, Tribal, and federal water program managers.

Agriculture

An agricultural use describes the desired condition for a waterbody to be suitable for irrigation of crops, consumption by livestock, support of vegetation for range grazing, and other uses in support of farming and ranching operations. Examples of use subcategories for the non-101(a)(2) use of agricultural use could be “irrigation” or “livestock watering."

Industry

An industrial use describes the desired condition for a waterbody to be suitable to provide water for use during the production process and/or to cool equipment used during the production process.

Navigation

A navigation use describes the desired condition for a waterbody to support navigation (i.e., the waterbody does not restrict nor prevent navigation).

Other Uses

States and authorized Tribes are to take into consideration the use and value of their waterbodies for other purposes per CWA Section 303(c)(2)(A) and 40 CFR 131.10(a). They may adopt other designated uses for their waterbodies along with criteria to protect those uses. For example, some states have adopted designated uses for aquifer protection and hydroelectric power. In addition, many authorized Tribes have adopted designated uses to protect cultural and traditional uses of their waters unrelated to the protection of recreation and aquatic life uses.

2.2.3 Seasonal Uses - 40 CFR 131.10(f)

40 CFR 131.10(f) allows states and authorized Tribes to adopt seasonal uses:

> *"States may adopt seasonal uses as an alternative to reclassifying a waterbody or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season."*

Some states and authorized Tribes adopt seasonal aquatic life uses to protect sensitive organisms or aquatic life stages (e.g., salmonid early life stage, fish migration or spawning). Seasonal use designations may also be appropriate for streams that lack adequate water volume to support protection and propagation of aquatic life year-round but can attain that use during seasons with higher rainfall leading to higher stream flows.

Some states and authorized Tribes adopt seasonal recreation uses. Recreation, especially primary contact recreation, may only occur for a portion of the year due to climatic conditions (e.g., where and when surface waters may turn to ice or water becomes too cold and limits recreation in the water). For example, states and authorized Tribes may specify the specific months of the year (i.e., the season) that will be protected by a less stringent recreation use, such as secondary contact recreation, to protect for incidental exposure when primary contact recreation does not occur.

Pursuant to 40 CFR 131.6(b), any WQS revision submitted to the EPA that adopts a seasonal use must include the methods and analyses conducted to support the WQS revision, including the determination of the specific seasons. Such a determination could consider historical ambient air and water temperatures, hazard information (e.g., ice formation), and data supporting the seasons to protect sensitive organisms or aquatic life stages. Any adoption of a seasonal use must meet the requirements at 40 CFR 131.10, including the EPA's requirements at 40 CFR 131.10(h)(1) specifying that a use cannot be removed if it is an existing use and 40 CFR 131.10(i) specifying that designated

uses protect the uses presently being attained (see sections 2.3.3.1 and 2.5.1 for additional discussion). When adopting a seasonal use, the EPA recommends states and authorized Tribes to work closely with their EPA regional counterparts to ensure that any such adoption is consistent with the EPA's implementing regulation at 40 CFR Part 131.

2.2.4 Methods to Establish Designated Uses

There is no standardized way to designate uses, nor does the CWA or 40 CFR Part 131 specify how a state or authorized Tribe must designate uses. In fact, states and authorized Tribes have discretion in how to designate their uses. However, use designations and revisions must be consistent with the CWA and 40 CFR Part 131 and must be reviewed and approved by the EPA before they become effective for CWA purposes.

States and authorized Tribes typically choose one of two ways to designate uses: (1) a designational system where the state or authorized Tribe specifically designates the uses that apply to each waterbody, or (2) a classification system where the state or authorized Tribe identifies a group of designated uses that are to be protected by certain classes and assigns classes to each waterbody. States and authorized Tribes may also establish default designations in combination with either the designational or classification systems.

2.2.4.1 Designational System

In a designational system, states and authorized Tribes assign specific designated uses to individual waterbodies. Such an approach provides flexibility for states and authorized Tribes to choose any combination of designated uses to appropriately protect their waters. For example, a state or authorized Tribe may designate one waterbody for primary contact recreation and aquatic life use, another waterbody for secondary contact recreation and aquatic life use, and a third waterbody for primary contact recreation and limited aquatic life use. In such a system, a state or authorized Tribe may designate multiple uses to each of its waters. When removing a use for a specific waterbody in a designational system, the state or authorized Tribe would only revise the designated use it deems needs revision, consistent with 40 CFR 131.10 (see section 2.3 of this chapter for a discussion of designating, revising, and removing uses).

2.2.4.2 Classification System

In a classification system, states and authorized Tribes identify a specific set of designated uses to be protected within a particular class. Typically, when states and authorized Tribes establish these classes, they group uses that typically co-occur. Thus, one class might include primary contact recreation, cold water aquatic life use, shellfish harvesting, and public water supply. Another might only include secondary contact recreation and limited warm water aquatic life use. States and authorized Tribes have the flexibility to create combinations and permutations of classes. When removing a class

in a classification system, the state or authorized Tribe would reassign the entire class to one that reflects the new set of uses. A UAA would be required when the new class reflects criteria less stringent than previously applicable.

When reclassifying a waterbody from one classification to another, it is important to evaluate the documentation necessary to support all of the designated use revisions. For example, if the waterbody is in a class that currently includes designated uses for cold water aquatic life and public water supply and the proposed change is to a class that includes warm water aquatic life and no public water supply, the documentation supporting the reclassification must address both the aquatic life use revision and the removal of the public water supply use.

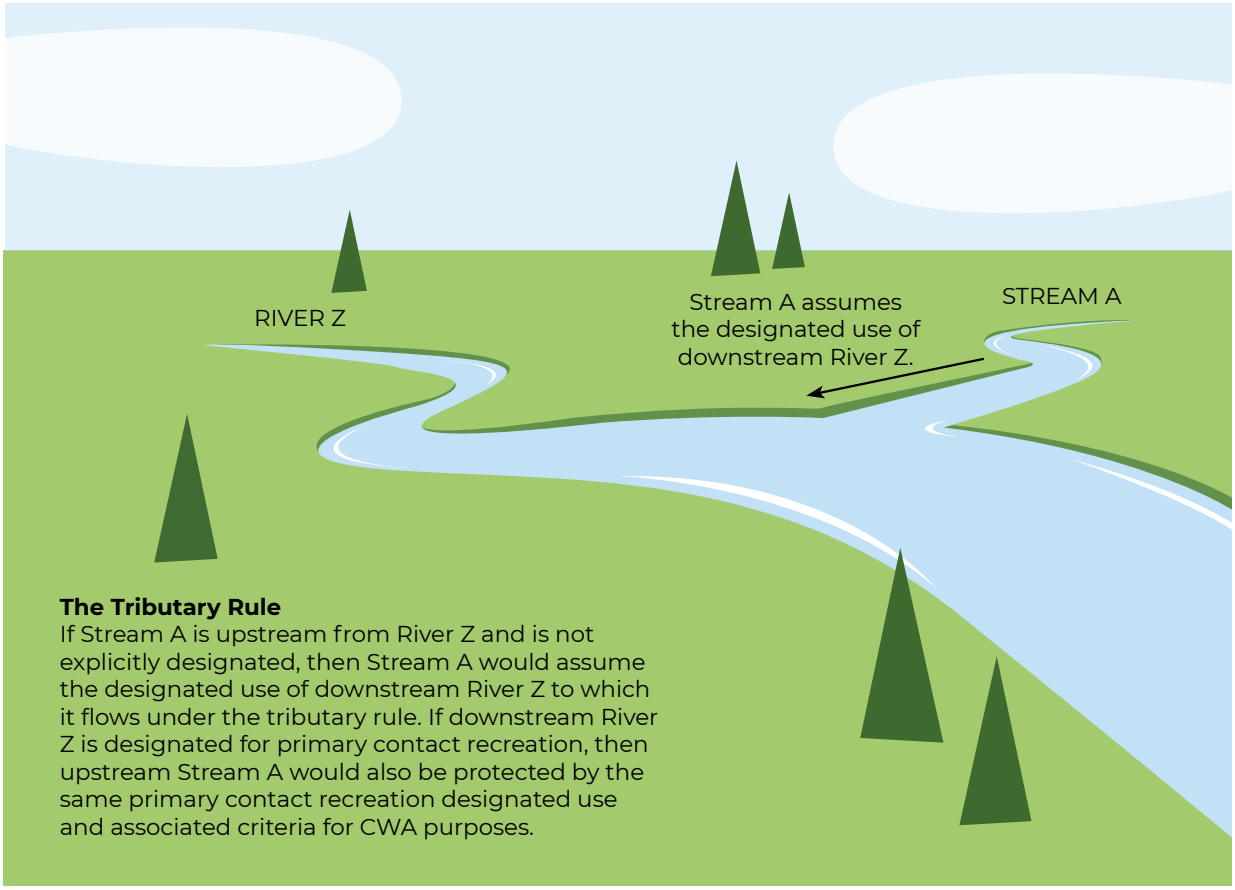
2.2.4.3 Default Designations

Both the designational and the classification system require that states or authorized Tribes explicitly designate uses or classes to specific waters. However, some states and authorized Tribes find that designating a use for all individual waters in their jurisdiction is too burdensome and may unnecessarily delay protection of those waters. In order to alleviate this burden but still make every effort to ensure all waters of the U.S. are assigned designated uses and criteria to protect those uses, states and authorized Tribes may include default designations for those waterbodies that have not been explicitly designated. There are many ways that states and authorized Tribes can provide default designations.

Example methods include a Tributary Rule, a Lake and Impoundment Rule, a Blanket Use Designation, and a Basin Approach.

Tributary Rule

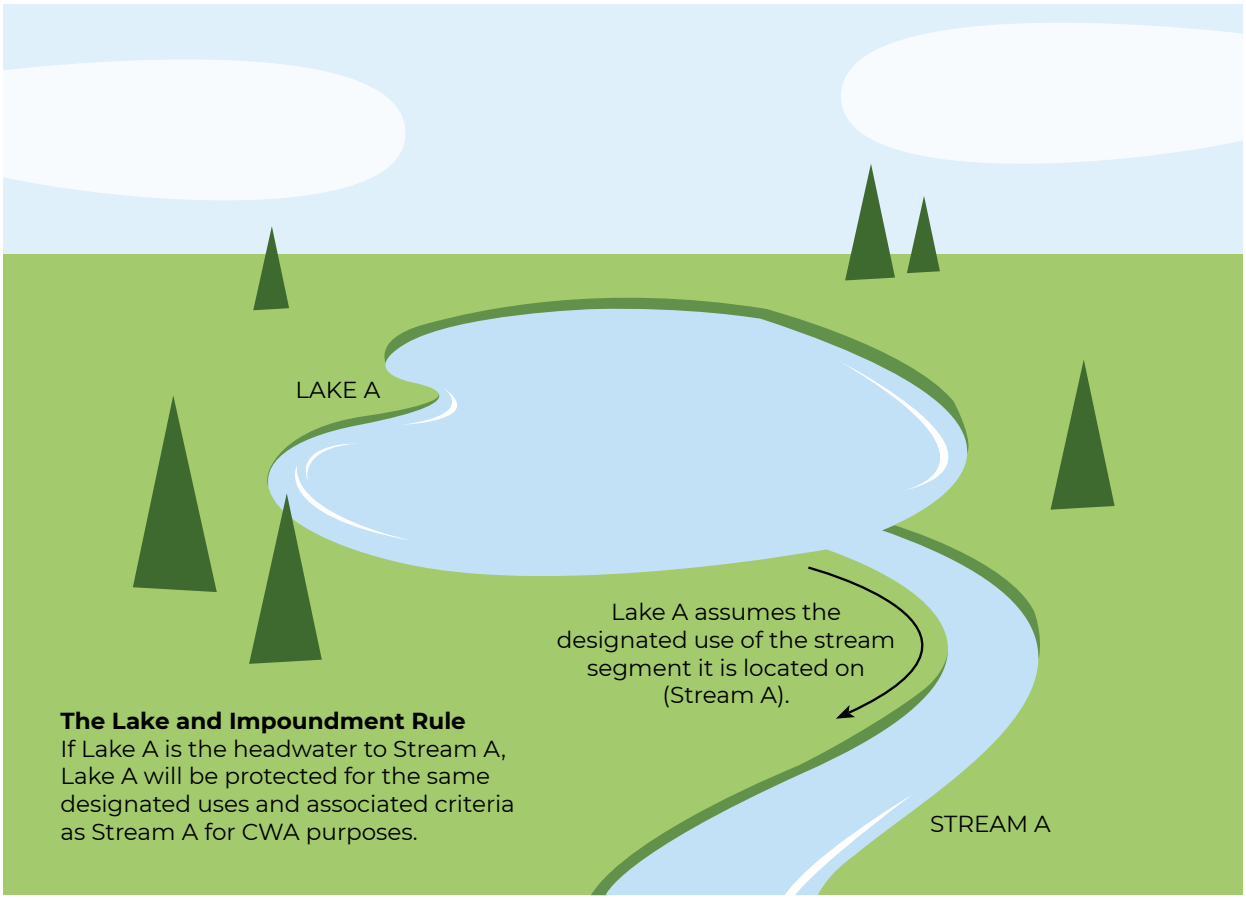
Some states and authorized Tribes have regulations which allow them to apply the designated use of a larger downstream water to its smaller upstream undesignated tributaries. States and authorized Tribes often refer to such a regulation as a "tributary rule." For example, if "Stream A" is upstream from "River Z" and is not explicitly designated, then "Stream A" would assume the designated use of downstream "River Z" to which it flows under the tributary rule. If downstream "River Z" is designated for primary contact recreation, then upstream "Stream A" would also be protected by the same primary contact recreation designated use and associated criteria for CWA purposes. States and authorized Tribes generally use the tributary rule on smaller waters where there are no NPDES permitted point source dischargers. A state or authorized Tribe could use its tributary rule to derive permit limits for waters with NPDES permitted point source dischargers, but the EPA recommends that the state or authorized Tribe specifically designate uses for those tributaries, consistent with 40 CFR 131.10, to ensure clarity for NPDES permit writers.



The Tributary Rule
If Stream A is upstream from River Z and is not explicitly designated, then Stream A would assume the designated use of downstream River Z to which it flows under the tributary rule. If downstream River Z is designated for primary contact recreation, then upstream Stream A would also be protected by the same primary contact recreation designated use and associated criteria for CWA purposes.

Lake and Impoundment Rule

With a "lake and impoundment rule" that some states and authorized Tribes have adopted, an undesignated lake or impoundment will take on the designated use of a stream segment on which it is located. For example, if "Lake A" is the headwater to "Stream A," "Lake A" will be protected for the same designated uses and associated criteria as "Stream A" for CWA purposes. Just as with a tributary rule, the EPA recommends that states and authorized Tribes specifically designate uses for those lakes or impoundments on which there may be an NPDES permitted point source discharger. The EPA does not recommend the use of this approach on streams designated for cold water aquatic life uses. Doing so could lead to situations where such lakes and impoundments would be designated as cold water aquatic life uses but unable to meet the associated criteria, such as for temperature and dissolved oxygen, because they don't have the same characteristics as for cold water aquatic life uses streams.



The Lake and Impoundment Rule
If Lake A is the headwater to Stream A, Lake A will be protected for the same designated uses and associated criteria as Stream A for CWA purposes.

Blanket Use Designation

Some state and authorized Tribes adopt language that universally designates waters for a particular use and its associated criteria. States and authorized Tribes have used different language to do this. Examples include:

- "Until a specific designated use is assigned to an undesignated water, such waters are presumed to support protection and propagation of fish, shellfish and wildlife, and recreation in and on the water."
- "Any surface waters of the state or authorized Tribe not included in Table X are to be protected for recreation in and on the water, salmon spawning, industrial use, public water supplies and navigation."
- "All surface waters of the state or authorized Tribe are designated for recreation in and on the water, salmon spawning, industrial use, public water supplies, and navigation unless specifically designated in Table X."

Basin Approach

A "basin approach" is similar to the blanket use designation, but states and authorized Tribes designate the same uses for all waters within a particular basin. Therefore, there are no undesignated waters within that basin. For example, a state or authorized Tribe might adopt language that says: "All waters within Basin A will support protection and propagation of fish, shellfish and wildlife, and recreation in and on the water unless demonstrated otherwise through a UAA."

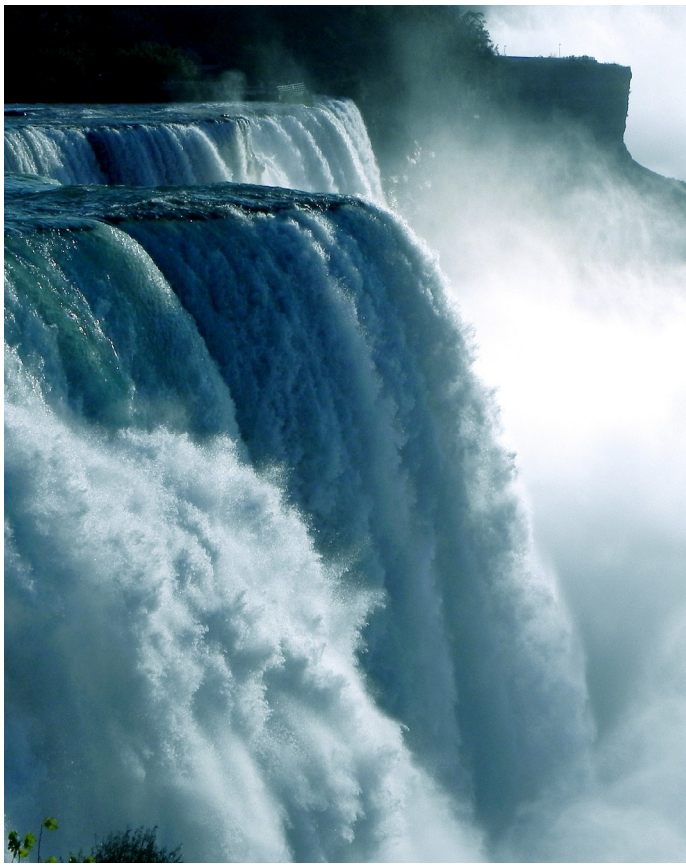
In all four default designation methods, the state or authorized Tribe chooses to broadly protect waters for certain designated uses without considering the conditions or expectations of each specific water. Consistent with Section 510 of the CWA, 40 CFR 131.4 provides states and authorized Tribes the discretion to develop WQS more stringent than required by 40 CFR Part 131. However, states and authorized Tribes must, at a minimum, ensure that they designate 101(a)(2) uses or demonstrate through a UAA that 101(a)(2) uses cannot be attained for the waterbody consistent with 40 CFR 131.10(g).

If a state or authorized Tribe is looking to adopt a specific use for waters previously covered by a default designation, it must determine if a UAA is needed. As discussed in more detail in section 2.3.1.2, the EPA's regulation requires a UAA in two instances:

1. 40 CFR 131.10(j)(1) requires a UAA when a state or authorized Tribe designates uses for the first time that do not include the uses specified in CWA Section 101(a)(2).
2. 40 CFR 131.10(j)(2) requires a UAA when a state or authorized Tribe removes a designated use that is specified in CWA Section 101(a)(2), removes a sub-category of such a use, or designates a sub-category of such a use that requires less stringent criteria than previously applicable.

40 CFR 131.10(k) provides parallel provisions indicating when a UAA is not required, including:

1. 40 CFR 131.10(k)(1) clarifies that a UAA is not required when designating uses for the first time that include the uses specified in CWA Section 101(a)(2).
2. 40 CFR 131.10(k)(2) clarifies that a UAA is not required when designating a subcategory of a use specified in CWA Section 101(a)(2) that requires criteria at least as stringent as previously applicable.



While none of the default designation methods involve specifically designating specific uses for waters based on case-specific facts, each method results in the adoption of a designated use and its associated criteria to each of those waters. Thus, there is a designated use and associated criteria "previously applicable." As noted above, 40 CFR 131.10(j)(2) and 131.10(k)(2) specify that whether or not a UAA is required when removing or designating a use or a subcategory of a 101(a)(2) use depends upon whether the criteria would become more or less stringent than the previously applicable criteria. Therefore, a UAA is not required when a state or authorized Tribe is adopting a specific 101(a)(2) use for waters previously covered by a default designation if the designated use carries with it the same or more stringent criteria than previously applicable. Conversely, a UAA is required if a state or authorized Tribe is adopting a specific use for waters previously covered by a default designation if the designated use carries with it criteria that are less stringent than previously applicable.

This is clarified here because the EPA took a different position on the tributary rule in its *Response to Comments, Water Quality Standards Revisions, Chapter 3 Issue Category 5: Designated Uses* (2015) (hereafter referred to as "2015 Response to Comments").[29] The EPA stated that specifically designating a tributary formerly protected by a state's tributary rule is a "first time designation." The EPA's concern was that, under a tributary rule, UAAs performed for downstream waters could be applied when specifically designating a use for upstream tributaries, even if the presumption of attainability had never been rebutted for that tributary itself. However, in taking the position that using a tributary rule "does not actually designate the use" for upstream tributaries, the EPA unintentionally created an inconsistency with how a tributary rule is treated under the regulation compared with the other default designations, as well as ambiguity as to the "previously applicable criteria" under 40 CFR 131.10(j)(2). Upon further consideration,

[29] The EPA's *Response to Comments, Water Quality Standards Regulatory Revisions, Chapter 3 Issue Category 5: Designated Uses*. Docket # EPA-HQ-OQ-2010-0606. August 2015. pg. 3-101.

all four default designation approaches, including a tributary rule, must be treated consistently and in accordance with the plain text of the regulation. The regulation at 40 CFR 131.10 does not differentiate between scenarios in which the use and criteria were designated explicitly or by default.

Regardless of which default designation approach a state or authorized Tribe uses, all four methods result in the adoption of a designated use and criteria to protect the designated use. Therefore, once a state or authorized Tribe chooses to explicitly designate a use for a specific waterbody that was previously protected by a tributary rule or other default designation, it would be inappropriate to consider it a "first time designation." Rather, it is a revision to the applicable designated use and criteria and whether a UAA is required depends on 40 CFR 131.10(j), including whether the revision results in requiring "less stringent criteria than previously applicable" where the "previously applicable" criteria are those criteria associated with the default designation.

The following section covers how to designate, revise, and remove designated uses. It discusses the rebuttable presumption of attainability as well as UAAs and use and value demonstrations. It also goes over when a designated use may not be removed and discusses existing uses, as well as best management practices related to a use removal.

2.3 DESIGNATING, REVISING, AND REMOVING USES

2.3.1 Uses Specified in CWA Section 101(a)(2) and Subcategories of Such Uses

Where a state or authorized Tribe believes that the uses specified in CWA Section 101(a)(2) are not attainable, it can evaluate and identify the stressors preventing the waterbody from attaining the use, evaluate what can be done to address the identified stressors, and then determine if those stressors align with any of the factors found at 40 CFR 131.10(g). The term "attainable" refers to whether the designated use is attainable now or in the future. Therefore, just because a waterbody is not currently attaining its designated use does not necessarily mean that the designated use cannot be attained in the future. In addition, where a designated use is an existing use as defined by 40 CFR 131.3(e), it cannot be removed, as specified in 40 CFR 131.10(h)(1).

2.3.1.1 Rebutting the Presumption of Attainability

CWA Section 101(a)(2) states the national goal, "*wherever attainable* [emphasis added]," of "water quality which provides for the protection and propagation of fish, shellfish and wildlife, and recreation in and on the water." As the EPA discussed in the preamble to its 2015 final rule revising 40 CFR Part 131,[30] the EPA's WQS regulation, particularly 40 CFR 131.10(j) and 131.10(k), interprets and implements this statutory provision by requiring that WQS protect the 101(a)(2) uses *unless* states and authorized Tribes show those uses are unattainable through a UAA, effectively creating a rebuttable presumption of attainability.[31] By including the language "wherever attainable" in Section 101(a)(2) of the CWA, Congress recognized that the uses specified in CWA Section 101(a)(2) may not be attainable in every waterbody. The EPA's regulation at 40 CFR 131.10(j) specifies the conditions under which states and authorized Tribes must conduct a UAA, whereas 40 CFR 131.10(k) specifies when a UAA is not required. In a UAA, a state or authorized Tribe must demonstrate that attaining the designated use is not feasible due to one of the six factors[32] specified in 40 CFR 131.10(g). Unless a state or authorized Tribe conducts a UAA and

30 *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51024 (August 21, 2015).

31 The EPA's 1983 regulation and "the rebuttable presumption stemming there from" have been upheld as a "permissible construction of the statute" (Idaho Mining Association v. Browner, 90 F. Supp. 2d 1078, 1097-98 (D. Idaho 2000)).

32 States and authorized Tribes may choose to identify more than one factor that affects the feasibility of attaining the designated use. However, to be consistent with the EPA's regulation and to demonstrate the need for the use revision, the state or authorized Tribe must demonstrate that at least one factor would preclude the attainment of the designated use on its own.

rebuts this presumption of attainability, the EPA's regulation requires states and authorized Tribes to designate 101(a)(2) uses that provide for the "protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

It is important to note that this presumption does not mean that the 101(a)(2) uses are automatically applicable and effective for CWA purposes absent designation by the state or authorized Tribe. Rather, it establishes a clear principle that applies when states and authorized Tribes are determining whether and how to designate, revise, or remove uses through their formal WQS adoption process.

A state or authorized Tribe would have to either designate 101(a)(2) uses or rebut the presumption of attainability through a required UAA for the waters to be designated with uses that are less protective than the 101(a)(2) uses. While the term "rebuttable presumption" is not found in the CWA or in 40 CFR Part 131, the concept is a long-standing interpretation of 40 CFR 131.10(j) that was upheld in *Idaho Mining Association v. Browner*[33] and articulated in promulgating federal WQS for Idaho[34] and Kansas.[35]

It is important to stress that states and authorized Tribes have the primary role in evaluating the attainability of their uses. However, any resulting change to a designated use is considered a revision to WQS, which requires a public hearing and the EPA's review and approval or disapproval pursuant to CWA Section 303(c) to ensure any such revision is made consistent with the CWA and the EPA's implementing regulation.

2.3.1.2 Use Attainability Analysis (UAA)

A UAA is a structured scientific assessment of the factors impacting the attainment of a designated use. Such factors may be physical, chemical, biological, and economic as described in 40 CFR 131.10(g). The purpose of a UAA is to provide supporting documentation when assessing the attainability of a designated use and to help determine the highest attainable use (HAU) for a waterbody. A UAA must be based on one of the six factors found at 40 CFR 131.10(g), which are discussed in detail later in this section. When a UAA is conducted, it is part of the supporting analysis for the associated WQS revision that must be submitted to the EPA consistent with 40 CFR 131.6 and made available to the public prior to the public hearing, consistent with 40 CFR 131.20(b).

[33] 90 F. Supp. 2d 1078, 1097-98 (D. Idaho 2000).

[34] See Water Quality Standards for Idaho; Final Rule (1997), https://www.gpo.gov/fdsys/pkg/FR-1997-07-31/html/97-19797.htm. This federal rule, which was withdrawn in 2008 following the state's adoption of WQS consistent with the CWA and 40 CFR Part 131, promulgated use designations for five waterbodies in Idaho. "In designating beneficial uses, EPA is relying on the rebuttable presumption implicit in the CWA and EPA's regulation at 40 CFR Part 131, that in the absence of data to the contrary, 'fishable' uses are attainable."

[35] See Water Quality Standards for Kansas; Final Rule (2003), https://www.govinfo.gov/content/pkg/FR-2003-07-07/html/03-16924.htm. This federal rule promulgated designated uses for a large number of waterbodies in Kansas. "For the remaining two waters identified in public comments as potentially rebutting the presumption of primary contact recreation, EPA staff attempted to collect additional information. However, these waters are located entirely on property that had no access points available to the EPA staff that performed the use attainability analyses. Because these waters could not be assessed in a manner consistent with the requirements of 40 CFR 131.10(g), EPA is using the rebuttable presumption to promulgate a use designation of primary contact recreation for these two waters."

The Six Factors Found at 40 CFR 131.10(g):

1. Naturally occurring pollutant concentrations prevent the attainment of the use; or
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or
3. Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or
5. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
6. Controls more stringent than those required by Sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

Although states and authorized Tribes can provide analysis of multiple factors, the regulation requires that one of the six 40 CFR 131.10(g) factors on its own be met in its entirety to serve as the basis for a UAA when demonstrating that attaining a designated use is not feasible. A state or authorized Tribe cannot use portions of different factors together if at least one factor is not fully satisfied. UAAs provide a mechanism to conduct a sound scientific assessment of the factors impacting attainment of the designated use to ensure the uses of a waterbody are appropriately designated. UAAs establish a record to support the decision when states and authorized Tribes adopt a new or revised WQS for a waterbody. UAAs may be conducted by any individual or entity but are submitted to the EPA by the state or authorized Tribe as part of a WQS revision package. The EPA does not approve or disapprove UAAs. Rather, UAAs provide the technical basis for a decision by the state or authorized Tribe when adopting a new or revised designated use. UAAs also provide a mechanism to explain the designated use adoption or revision to the public. Per 40 CFR 131.10(k)(1), states and authorized Tribes are not required to conduct a UAA to designate a 101(a)(2) use and thus there is no requirement to demonstrate that a 101(a)(2) use is attainable before adoption.

The EPA encourages states and authorized Tribes to work with their appropriate EPA regional office regarding use revisions and UAAs before submitting the WQS revision for CWA Section 303(c) review. The EPA can provide early assistance and help address any policy and technical questions that may arise. Early collaboration between states and authorized Tribes and the EPA before any WQS revisions are proposed will significantly facilitate the UAA and WQS review processes.

The EPA's UAA webpage provides resources on UAAs, including example UAAs developed by states. While the examples may not be relevant for all situations because UAAs are case specific, they are useful references that can be considered when developing a UAA.[36] The EPA's *Improving the Effectiveness of the Use Attainability Analysis (UAA) Process, Memorandum from Ephraim S. King (2006)* highlights five key points on UAAs and emphasizes that designating the right uses is critical for effective WQS management. These five points are:

1. Getting the uses right requires both a useful set of designated uses and an effective process for conducting credible and defensible UAAs,
2. A credible UAA can result in a change in a designated use in either direction,
3. There is nothing wrong with changing designated uses after completion of a credible UAA,
4. The UAA process should be better integrated with TMDL development, and
5. Improved public communication leads to improved public acceptance.

When a UAA is Required (40 CFR 131.10(j))

A UAA is required whenever:

- 40 CFR 131.10(j)(1): The state or authorized Tribe designates for the first time, or has previously designated for a waterbody, uses that do not include the uses specified in Section 101(a)(2) of the Act.
  - For example, a UAA would be required if a state or authorized Tribe adopts for the first time a "limited warm water fishery use "where there was previously no aquatic life use designated.
- 40 CFR 131.10(j)(2): The state or authorized Tribe wishes to remove a designated use that is specified in Section 101(a)(2) of the Act, to remove a subcategory of such a use, or to designate a subcategory of such a use that requires criteria less stringent than previously applicable.
  - For example, a UAA would be required if a state or authorized Tribe revises its warm water aquatic life use to be a zinc-limited warm water aquatic life use where the zinc criterion is changing from 2 mg/L to 5 mg/L. This is because the zinc criterion is becoming less stringent than was previously applicable to protect the warm water aquatic life use.

[36] https://www.epa.gov/wqs-tech/use-attainability-analysis-uaa.

When a UAA is not Required (40 CFR 131.10(k))

A UAA is not required whenever:

- 40 CFR 131.10(k)(1): The state or authorized Tribe designates for the first time, or has previously designated, uses that include the uses specified in Section 101(a)(2) of the Act.
  - For example, if a state or authorized Tribe adopts a use protecting natural cold water aquatic life or natural warm water aquatic life for the water for the first time, a UAA would not be required because both would be subcategories fully supporting the uses specified in CWA Section 101(a)(2).
- 40 CFR 131.10(k)(2): The state or authorized Tribe designates a subcategory of a use specified in Section 101(a)(2) of the Act that requires criteria at least as stringent as previously applicable.
  - For example, if a state or authorized Tribe replaces a general "aquatic life use" with a "cold water aquatic life use," which requires more stringent temperature criterion than previously applicable (and all other parameters remain the same), a UAA would not be required.
- 40 CFR 131.10(k)(3): The state or authorized Tribe wishes to remove or revise a designated use that is a non-101(a)(2) use. In this instance, the state or authorized Tribe must submit documentation justifying how its consideration of the use and value of water for the uses listed in 40 CFR 131.10(a) appropriately supports the state's or authorized Tribe's action.
  - For example, a UAA is not required to remove a public water supply use. The state or authorized Tribe could provide documentation evaluating the potential to use the waterbody as a future source of drinking water (e.g., is there an existing drinking water intake?) and whether the community might need the waterbody as a future drinking water source based on expected population growth. It is important to note that while a UAA is not required to remove a non-101(a)(2) use, it may be a useful tool to justify how the consideration of the use and value of the waters appropriately supports the state's or authorized Tribe's action. Please see section 2.3.2 of this chapter for further discussion of non-101(a)(2) uses.

How to Conduct a UAA

A UAA must provide an adequate scientific assessment supporting the resulting designated use revision. This includes information on whether the current designated use is attainable or why it is not attainable. The EPA has approved use revisions supported by UAAs that range from simple to complex. The EPA expects that a UAA will be sufficiently detailed and will lay out the data, analyses, and logic to support the resulting use revision and allow for a fully informed review by the public and the EPA. The level of detail is case-specific and will depend on factors such as, but not limited to:

- The characteristics of the waterbody,
- The type and size of the waterbody (e.g., Chesapeake Bay vs. small tributary),
- The designated use being changed, as well as the relative degree of change from the current use designation,
- Any attainability issues related to pollution sources from within or across jurisdictional boundaries of states and authorized Tribes,
- The value of the waterbody to the community,
- Presence of unique ecological features or critical habitat for endangered or threatened species,
- Quantity and quality of available data,
- The 40 CFR 131.10(g) factor(s) being used, and
- The analysis to determine the HAU.

If a state or authorized Tribe can identify multiple waters with similar characteristics and constraints on attainability, the state or authorized Tribe may conduct a "categorical" UAA for these waters. This approach may reduce data collection needs by allowing a single UAA analysis to reflect the attainability evaluation of multiple waters. To use such an approach, however, it is necessary to have enough information about each individual waterbody to reliably show that the categorical UAA applies. As an example, a state in the Arid West part of the country conducted a categorical UAA to revise multiple waters from primary contact recreation to secondary contact recreation due to insufficient flow using 40 CFR 131.10(g)(2). This state provided data to demonstrate that the waterbodies were similar in their physical characteristics and in the factor that was precluding attainment in order to be considered categorically. The public was an integral resource for obtaining sufficient information to reliably include waters in the categorical UAA. For example, the public provided feedback to indicate whether recreation took place on different impacted waterbodies and whether children's play and wading was observed as well as any other relevant information.

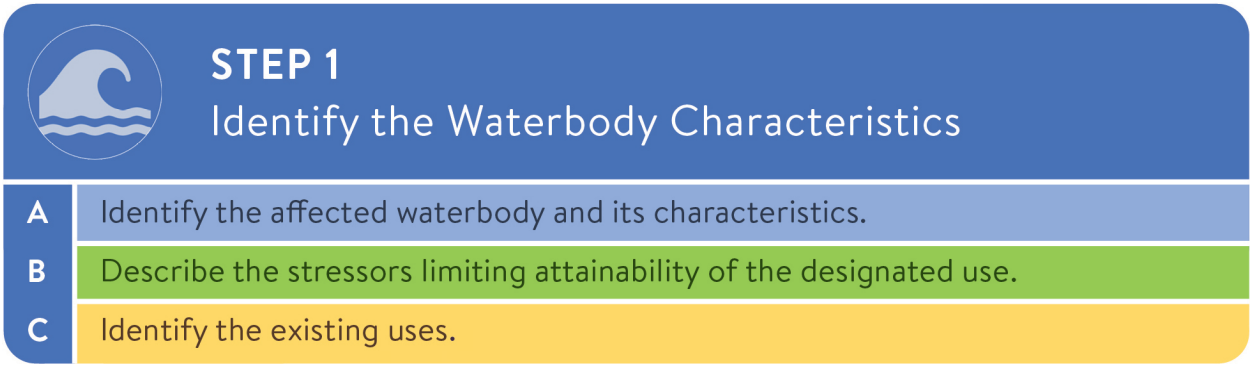
To obtain constructive feedback on the designated use revision from the public, states and authorized Tribes should make the following information available to the public in advance of the public hearing and comment period:

- The characteristics and constraints of each affected waterbody,
- The intent of the use revision,

- The UAA,
- Any specific information the state or authorized Tribe is asking the public to provide, and
- Any specific format the state or authorized tribe needs the information in to ensure proper quality assurance and quality control (e.g., specify if the state or authorized Tribe wishes the public to provide location data, name of the waterbody, time of day of observation, etc.).

The following discussion (see the EPA's Use Attainability Analysis and the Use Revision Process webpage) guides states and authorized Tribes through the steps of a UAA by providing questions they should address as they conduct a UAA, recognizing that there may be other issues or relevant questions that a site-specific UAA should address and that going through the UAA process diagram does not guarantee the EPA's approval.[37] Please refer to section 2.3.3.1 on existing uses prior to engaging in the UAA steps.

Step 1. Identify the Waterbody Characteristics



Step 1A. Identify the affected waterbody and its characteristics.

States and authorized Tribes should gather information on the waterbody to understand its characteristics. It is important to ensure that data and information gathered for the purposes of a UAA reflect representative conditions, taking into account climatic considerations. For example, collecting data under extreme conditions (e.g., during drought or flood conditions) would not be representative of the typical characteristics of the site. Relevant maps and photographs can be useful to supplement the data and information collected.

[37] https://www.epa.gov/wqs-tech/use-attainability-analysis-and-use-revision-process.

In **Step 1A**, Important Questions to Ask are:

- What waterbody is affected?
- What are the applicable designated uses?
- What is the designated use with attainability concerns?
- What are the applicable criteria for the designated use in question?
- Are any of the applicable narrative or numeric criteria for the designated use in question being exceeded?
- What is the geographic scale of the water quality problem?
- Are there spatial or temporal variations within the waterbody?

Step 1B. Describe the stressors limiting attainability of the designated use.

States and authorized Tribes should gather current and historical data and information to identify what potential stressors are limiting attainability of the designated use and their sources. The analysis should evaluate what effect the stressors have on the attainability of the designated use, both currently and in the future.

In **Step 1B**, Important Questions to Ask are:

- Are the stressors specific pollutants? If so, what are they and their sources?
- Are the stressors habitat-related?
- Are the stressors natural or anthropogenic?
- If multiple stressors are identified, which have the greatest influence on attainability of the designated use?
- What stressors are controllable and why (or why not)? Documenting this is useful to help prioritize resources.

Step 1C. Identify the existing uses.

As discussed in section 2.1.4 of this chapter, it is important for states and authorized Tribes to identify the existing use when conducting a UAA in order to ensure that any adoption of the HAU continues to protect the existing use. An existing use cannot be removed when revising a designated use unless a use with more stringent water quality criteria is added. If the currently applicable designated use is an existing use, then the designated use may not be removed, consistent with 40 CFR 131.10(g) and 131.10(h)(1). However, if the currently applicable designated use is not an existing use, then a user may proceed through the steps to revise the designated use as long as the HAU continues to protect the existing use (see Step 2B for discussion on identifying the HAU).

In **Step 1C**, Important Considerations are:

- Gathering current and historical water quality monitoring data and information on the waterbody's uses. This includes information such as records, photographs, interviews with town residents or residents adjacent to the waterbody on the public's use of the waterbody.
  - When did the use-limiting stressors begin?
  - When did they begin to affect the waterbody?
- What are the uses that have actually occurred and what level of water quality has been attained to support those uses on or after November 28, 1975?
- Where data may be limited, inconclusive, or insufficient regarding whether the use has occurred or the water quality has been attained, states and authorized Tribes have flexibility to evaluate the strength of the available data and information to decide if the uses are indeed existing.

Step 2. Analyze the Data

STEP 2
Analyze the Data

A	Identify feasible activities and/or controls to address the stressors and determine if the designated use and criteria are attainable.
B	Identify the highest attainable use.

Step 2 involves analyzing the data gathered in Step 1 to identify feasible activities and/or controls to address the stressors and their sources, and to determine whether the impacted designated use and its associated criteria are attainable.

Step 2A. Identify feasible activities and/or controls to address the stressors and determine if the designated use and criteria are attainable.

To identify potential courses of action, states and authorized Tribes should determine what available activities and/or controls exist to address the stressors identified in Step 1 (e.g., through an alternatives analysis). The state or authorized Tribe should then evaluate whether any of the alternatives are feasible and, if not, which 40 CFR 131.10(g) factor precludes attainment of the use.

In **Step 2A**, Important Questions to Ask are:

- What activities and/or controls to address the stressors have already been tested, implemented, and/or require further study?
- Is the applicable designated use and criteria attainable after implementing various activities and/or controls already underway?
- If not, are there any additional activities and/or controls, such as those found in an integrated plan, watershed plan, or TMDL, to address the stressors that could mitigate the waterbody impacts and to what degree?
- Which of these activities and/or controls would result in attaining the applicable designated use and criteria?
    - Are there known methods (activities and/or controls) to remedy any of the identified stressors?
    - Have any such activities and/or controls already been implemented in other situations? If so, for how long and to what level of success?
    - Has the state or authorized Tribe done an alternatives analysis to evaluate and compare the activities and/or controls that could remedy any of the identified stressors? If not, consider conducting such an analysis. Although not required, it would facilitate determining which activities and/or controls could attain the designated use and whether such activities and/or controls are feasible.
- Are any of these activities and/or controls feasible for this situation/analysis? Is any additional information needed to make this determination? If so, identify how to obtain that information and whether that information can be obtained for this analysis.
- If there are no feasible activities and/or controls that could be implemented to attain the applicable designated use and criteria, identify which factor at 40 CFR 131.10(g) precludes attainment of the designated use and criteria.

UAAs not only address the current conditions in a waterbody, but also provide a prospective analysis of future attainability of designated uses. When conducting a UAA and soliciting input from the public, states and authorized Tribes need to consider not only what is currently attained, but also what may be attainable in the future should gains in water quality be realized. The EPA recommends that this prospective analysis includes:

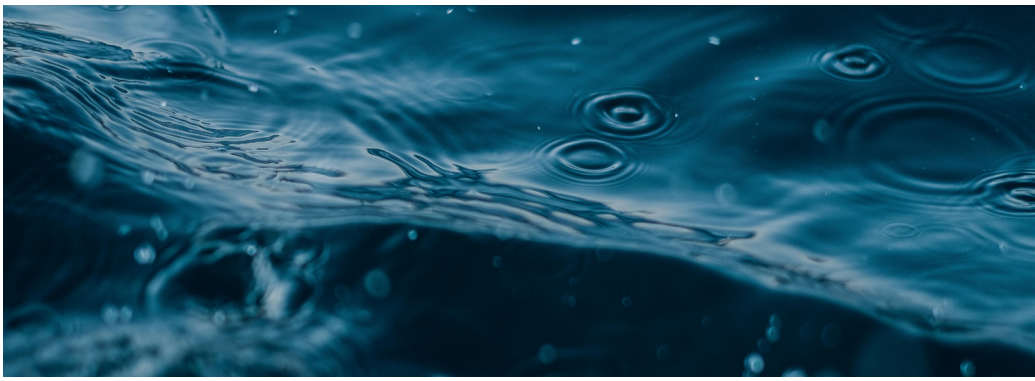
- Identifying the current condition in light of the information obtained in Step 1,
- Characterizing the natural condition for a waterbody,

- Evaluating the effectiveness of BMPs addressing the stressors and associated water quality improvements,
- Examining the efficacy of treatment technology from engineering studies to reduce pollutant loadings, and
- Using water quality models, loading calculations, and other predictive tools[38] to determine the future expectations for a waterbody.[39]

In conducting UAAs where monitoring data are scarce or nonexistent, other types of information may be useful such as sanitary surveys for determining sources of bacteria, information on land use, and anecdotal information related to water quality.

When conducting a UAA, states and authorized Tribes must provide data, information, and analyses demonstrating that one of the six factors at 40 CFR 131.10(g) precludes attainment of the currently applicable designated use. For example, 40 CFR 131.10(g)(2) lays out low-flow conditions as a stressor that may affect use attainability. The UAA must demonstrate that the low-flow conditions "prevent attainment of the use," not just that low-flow conditions exist. The first five factors listed at 40 CFR 131.10(g) specifically say that the condition either "precludes" or "prevents" attainment of the use. The sixth factor is unique in that it is linked to the social and economic impact on the surrounding community.

Consideration of a waterbody's "natural condition" is important because it is referred to in three of the 40 CFR 131.10(g) factors: "naturally occurring pollutant concentrations" (40 CFR 131.10(g)(1)), "natural... flow conditions or water levels" (40 CFR 131.10(g)(2)), and "physical conditions related to the natural features of the waterbody" (40 CFR 131.10(g)(5)). In addition, some states and authorized Tribes have specific use classifications based on protecting biological communities as they "naturally occur." A "natural condition" is a condition without human caused impacts. Because it may be difficult to find a completely "natural" waterbody that is free from influence from any human activity, the "natural condition" is typically determined using conditions least affected by human activities as the point of reference, as long as those least affected conditions are believed to be a reasonable approximation of the natural condition. Waters where activities such as urbanization, agricultural practices, hydrologic modification, and atmospheric deposition have a significant measurable or predicted effect on a designated use should not be used as a natural point of reference.



[38] The EPA's Water Data and Tools webpage at https://www.epa.gov/waterdata provides access to several specialized models and tools to aid the public and water quality managers.

[39] *Water Quality Standards Regulatory Revisions.* 80 Fed. Reg. 51025 (August 21, 2015).

The Six 131.10(g) Factors

The state or authorized Tribe must demonstrate, through a UAA, that attaining a 101(a)(2) use or a subcategory of such a use is not feasible because of one of the six 131.10(g) factors:

1

Factor 1

40 CFR 131.10(g)(1) (referred to as Factor 1): Naturally occurring pollutant concentrations prevent the attainment of the use.

While the EPA recognizes that few waters are absent of human influence, this factor is intended for states and authorized Tribes to use when they can provide documentation that a naturally occurring level of a pollutant precludes attainment of the designated use because the natural levels would continue to exceed the criteria that protect the applicable designated use even if any anthropogenic sources of that pollutant were removed. Neither Section 303 of the CWA nor 40 CFR Part 131 require states and authorized Tribes to implement controls to reduce the natural levels of pollutants in order to protect the designated use. Furthermore, neither Section 303 of the CWA nor 40 CFR Part 131 require states and authorized Tribes to maintain designated uses that protect a level beyond what is naturally expected. The EPA explicitly stated this position in the preamble to its 2015 final rule revising 40 CFR Part 131, noting, "The CWA does not require states and authorized tribes to adopt designated uses to protect a level beyond what is naturally occurring in the waterbody. Therefore, a state's or authorized tribe's determination of the HAU must take into consideration the naturally expected condition for the waterbody or waterbody segment."[40] For example, this factor may be relevant if a waterbody has naturally occurring low dissolved oxygen levels which would preclude attainment of a designated warm water aquatic life use that requires higher dissolved oxygen. This would indicate that the warm water aquatic life use designation is not appropriate for this particular waterbody and a different use would more accurately reflect the desired condition for the waterbody.

It is important to note that, in some cases, it is possible for naturally occurring pollutant concentrations to cause exceedances of the criteria, but the designated use is still being attained. This situation may warrant site-specific criteria. For additional information regarding developing site-specific criteria, see Chapter 3 of this Handbook, section 3.5.2.

[40] *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51025 (August 21, 2015).

2 *Factor 2*

40 CFR 131.10(g)(2) (referred to as Factor 2): Natural, ephemeral, intermittent or low-flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met.

Factor 2 consists of two related clauses. The first is "natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use," and the second is "unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met." Reading 40 CFR 131.10(g)(2) in its entirety, this factor would not apply to situations that result in high flow conditions. Although the first part of the clause separately specifies "low" flow conditions, the second clause clarifies that for this factor to be considered as the basis for demonstrating a use is not attainable, a state or authorized Tribe must evaluate whether the applicable flow conditions in the first clause (i.e., natural flow conditions, ephemeral flow conditions, intermittent flow conditions, or low-flow conditions) can be compensated for by a sufficient volume of effluent flow. Thus, Factor 2 applies to situations where the absence of sufficient flow makes a designated use unattainable. Factor 2 requires a state or authorized Tribe to consider whether this insufficient flow may be addressed by effluent discharges.

For example, an effluent discharge creates a perennial flow in what naturally would be an ephemeral or intermittent water and the augmented flow now supports certain fish species or life stages. In this situation, because the insufficient flow can be addressed by the effluent discharge, a state or authorized Tribe may not use Factor 2 to remove the applicable aquatic life use to obtain less stringent requirements, such as for NPDES permit limitations. However, if this same discharger wishes to stop discharging, nothing in the EPA's WQS regulation requires the discharger to continue discharging to maintain the aquatic life use supported by the perennial waterbody, especially when removing the discharge would restore the waterbody to its natural chemical, physical, and biological integrity consistent with CWA Section 101(a). In such cases, states and authorized Tribes should work closely with the EPA to determine the appropriate path forward.

Giving meaning to only the first clause of Factor 2 could allow a state or authorized Tribe to remove a designated use in circumstances where higher flows or water levels preclude attainment of a designated use, without consideration of whether those higher flows or water levels could be addressed in a way that would still enable uses to be met. For example, reading the first clause alone and applying Factor 2 to high flow conditions could allow a state or authorized Tribe to remove a recreational use where the use is impacted by CSOs without consideration of whether those CSOs can or will be addressed through controls, such as those required by a LTCP. This reading of 40 CFR 131.10(g)(2) would be inconsistent with the goals and requirements of the CWA, including those at CWA Section 101(a)(2) to provide for the protection and propagation of fish, shellfish, and wildlife and provide for recreation in and on the water, wherever attainable.

Consideration of high flows might be relevant to other factors at 40 CFR 131.10(g) such as 40 CFR 131.10(g)(3) (Factor 3) or 40 CFR 131.10(g)(4) (Factor 4). However, similar to how Factor 2 requires consideration of whether insufficient flow conditions or water levels can be compensated for by effluent discharges, Factor 3 and Factor 4 would require an evaluation of whether those high flow conditions could be remedied or restored, respectively.

Factor 2 may be used to demonstrate that it is not feasible to attain a recreational use if there is not enough flow to support such a use and it is not an existing use. Additional information is provided in the section titled "Additional Considerations When Evaluating the 40 CFR 131.10(g) Factors for Recreation Uses" below.

3

Factor 3

40 CFR 131.10(g)(3) (referred to as Factor 3): Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.

Factor 3 can be used to demonstrate the need for a designated use revision where "human caused conditions or sources of pollution [that] prevent the attainment of the use." First, to show that "human caused conditions or sources of pollution prevent the attainment of the use," the state or authorized Tribe should:

1. Evaluate the different sources of the human caused conditions or pollution (including point, nonpoint, and legacy sources),
2. Determine the extent to which the condition or pollution is anthropogenic (to address how the conditions or sources of pollution are "human caused"), and
3. Characterize the impact of the condition or pollution on the designated use (to address how such conditions or sources of pollution "prevent the attainment of the use").

Second, the state or authorized Tribe must show that the human caused conditions or sources of pollution might preclude attainment of the designated use because they either "cannot be remedied," or "would cause more environmental damage to correct than to leave in place."

To show human caused conditions or sources of pollution "cannot be remedied," there are two key principles:

1. "Cannot be remedied" means neither the state or authorized Tribe nor any discharger(s) can remedy the human caused conditions or sources of pollution in the waterbody. The state or authorized Tribe is responsible for demonstrating that the human caused condition or source(s) of pollution cannot be remedied after taking into consideration controls for the different, contributing sources of pollution. Before any change to the designated use of a waterbody is adopted, the state or authorized Tribe needs to determine whether there are actions that it could take to remedy all or portions of the human caused condition or source(s) of pollution; and
2. The state, authorized Tribe, or discharger would need to consider whether any pollutant reduction options implemented alone or together (whether at the same time or sequentially) would remedy the condition or source(s) of pollution.[41] Options to consider would include installing pollutant control technology, minimizing the pollutant from entering the effluent or the waterbody directly and relocating or eliminating the discharge. The state, authorized Tribe, or discharger should also consider the associated time frame needed to implement such remedies.

The state's or authorized Tribe's Factor 3 "cannot be remedied" demonstration should evaluate the following types of available information:[42]

- Monitoring data to determine the current ambient conditions,
- Data or maps showing the geographical extent of the pollution,
- Engineering studies and literature on the relevant pollutant reduction options and BMPs that could be implemented, and documentation that none of the options or practices, if implemented, would result in attaining the applicable designated use and criterion.

To show the human caused condition or sources of pollution "would cause more environmental damage to correct than to leave in place," one application of this factor could be where controlling the pollutant would itself cause environmental damage. For example, dredging a waterbody to remove contaminated sediment may be needed to attain the designated use. However, doing so may stir up the pollutant in the sediment and release the pollutant into the water column, thus causing more environmental damage to the waterbody for a period of time as compared to leaving the contaminated sediment in place. Whether such a scenario justifies a use revision using this portion of Factor 3 would be determined on a case-by-case basis based on the site-specific circumstances.

[41] Pollutant reduction options include both pollutant control technologies and pollution prevention and source reduction measures.

[42] *Water Quality Standards Regulatory Clarifications*, 78 Fed. Reg. 54535 (September 4, 2013).

A different application of this factor could involve waters impacted by CSOs. Where CSO communities have or will achieve significant reductions in their CSOs in accordance with their approved Long Term Control Plan but monitoring indicates that the community still cannot achieve the WQBEL necessary to protect the recreation use, states may believe there are more environmentally beneficial alternatives to additional CSO controls. On January 19, 2024, the EPA issued a memo[43] to provide considerations for the EPA's review of CSO-related revisions to a state's[44] recreational uses and associated bacteria criteria based on a demonstration that "[h]uman caused conditions or sources of pollution prevent the attainment of the use and … would cause more environmental damage to correct than to leave in place." This memo does not limit what factors a state could pursue to support a WQS use revision in a CSO impacted waterbody. Rather this memo describes how the EPA regions could advise states wishing to use this aspect of Factor 3 for CSO impacted waters and how to evaluate a related WQS submission. Specifically, the EPA's review would evaluate, among other things, whether (1) clear and measurable data show implementing specified non-CSO control alternatives would have a greater environmental benefit to the recreation use than only controlling CSOs, (2) such non-CSO control alternatives would not occur if the community were required to implement additional CSO controls, and (3) the non-CSO control alternatives will, in fact, be implemented if the EPA approves the WQS revision.

The EPA recommends that states and authorized Tribes coordinate with the relevant EPA regional WQS contact if pursuing the "would cause more environmental damage" aspect of Factor 3.

The state's or authorized Tribe's Factor 3 "environmental damage" demonstration should include, among other things, consideration and evaluation of the following types of available information:[45]

- Monitoring data to determine the current ambient water quality conditions,
- Data or maps showing the geographical extent of the pollution within the same waterbody,
- Engineering studies and literature of the relevant pollutant reduction options and BMPs that could be implemented in the waterbody,
- Description, with supporting information from the scientific literature, of the environmental impacts to the waterbody associated with the pollutant reduction options and BMPs, and
- A comparison of the environmental impacts to the ecosystem and/or public health to the benefits of attaining the designated use and associated criteria, in the same geographic area of that waterbody.

[43] Nagle, D.G. EPA. 2024. Memorandum: CSO Temporal Recreation Uses or WQS Variances based on 40 CFR 131.10(g)(3). Office of Science and Technology, Washington DC., https://www.epa.gov/system/files/documents/2024-02/cso-temp-recreational-memo-1-19-2024.pdf.

[44] This memo is directed to states and territories only because there are no Tribes with responsibility for CSOs. For simplicity, the term "states," as used in this memo, includes any territories with responsibility for CSOs.

[45] *Water Quality Standards Regulatory Clarifications*, 78 Fed. Reg. 54535 (September 4, 2013).

4 Factor 4

40 CFR 131.10(g)(4) (referred to as Factor 4): Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use.

If a state or authorized Tribe suspects that hydrologic modifications on a waterbody segment may be the reason why a designated use is not attainable, it would need to demonstrate that such hydrologic modifications preclude the attainment of the designated use. Examples of hydrologic modifications include dams, impoundments, in-water and out-of-water construction, water diversions, channelization, embankments, and dredging.

There are two clauses for a state or authorized Tribe to consider when determining if this factor precludes attainment of the designated use. First, the state or authorized Tribe should evaluate whether it is "feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use." The state or authorized Tribe considers the following question: Is it feasible to remove the dam, diversion or hydrologic modification to restore the waterbody to its original condition (i.e., to the condition that existed prior to the presence of the dam, diversion, or hydrologic modification), and would doing so result in attainment of the designated use? If yes, then Factor 4 would not preclude attainment of the designated use. If no, then Factor 4 may preclude attainment of the use and the state or authorized Tribe should evaluate the second clause of this factor to affirmatively determine whether this factor precludes attainment of the designated use. Please note that a state or an authorized Tribe could choose to evaluate the second clause prior to the first clause.

In the second clause, the state or authorized Tribe evaluates whether it is "feasible… to operate such modification in a way that would result in the attainment of the use." The state or authorized Tribe considers the following question: Would making adjustments to the structure or operation of the dam, diversion, or hydrologic modification result in attainment of the designated use? If yes, then Factor 4 would not preclude attainment of the designated use. If no, then the state or authorized Tribe may be able to demonstrate that Factor 4 precludes attainment of the designated use.

One example of where Factor 4 might apply is where a waterbody is hydrologically modified by being highly channelized through concrete lining. In such a case a state or authorized Tribe may be able to demonstrate that the hydrologic modification precludes attainment of a primary contact recreation during and immediately after rainfalls where the channelization creates swift moving water that is unsafe for swimming. Moving to the second clause of the factor, the state or authorized Tribe may also be able to demonstrate that it is not feasible to operate the modification in a manner that would attain the use since doing so would require removing the entire concrete lining of the waterbody.

Factor 5

40 CFR 131.10(g)(5) (referred to as Factor 5): Physical conditions related to the natural features of the waterbody, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like unrelated to water quality, preclude attainment of aquatic life protection uses.

Factor 5 refers to natural physical features of a waterbody that may preclude the attainment of the aquatic life designated use. If, for example, fish or macroinvertebrates need a particular substrate that a waterbody lacks for spawning or rearing to ensure suitability of their habitat, a state or authorized Tribe may be able to demonstrate that Factor 5 precludes attainment of the aquatic life use.

In explaining why Factor 5 is limited for use only to remove aquatic life protection, the EPA's 1983 preamble to the final rule said: "Physical factors may be important in evaluating whether uses are attainable. However, physical limitations of the stream may not necessarily be an overriding factor. Common sense and good judgement play an important role in setting appropriate uses and criteria. There are instances where non-water quality related factors preclude the attainment of uses regardless of improvements in water quality. This is particularly true for fish and wildlife protection uses where the lack of a proper substrate may preclude certain forms of aquatic life from using the stream for propagation, or the lack of cover, depth, flow, pools, riffles or impacts from channelization, dams, diversions may preclude particular forms of aquatic life from the stream altogether."[46]

Please see "Additional Considerations When Evaluating the 40 CFR 131.10(g) Factors for Recreation Uses" later in this section for a discussion on how states and authorized Tribes may consider other factors to determine whether recreation is attainable in the waterbody given non-water quality impacts.

[46] *Water Quality Standards Regulation*, 48 Fed. Reg. 51401 (November 8, 1983).

6 Factor 6

40 CFR 131.10(g)(6) (referred to as Factor 6): Controls more stringent than those required by CWA Sections 301(b) and 306 would result in substantial and widespread economic and social impact.

This factor allows states and authorized Tribes to justify the need for a designated use revision when "[c]ontrols more stringent than those required by Sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact."[47] While this factor is often used to demonstrate the need for a WQS variance (see the Draft WQS Variances chapter of this Handbook), it may also be used in specific circumstances to demonstrate that a designated use is not feasible to attain. In *Upper Missouri Waterkeeper v. EPA*, the Ninth Circuit Court of Appeals held that "the EPA's regulations reasonably interpret the Clean Water Act as allowing consideration of compliance costs when the agency approves water quality standards and variance requests."[48]

The EPA's guidance on considering economics for WQS decisions, including application of Factor 6, is found in two main documents: *Interim Economic Guidance for Water Quality Standards: Workbook* (1995)[49] (hereafter referred to as "1995 Interim Economic Guidance") and *Clean Water Act Financial Capability Assessment Guidance* (2024)[50] (hereafter referred to as "FCA Guidance"). The 1995 Interim Economic Guidance provides guidance to the public and private sectors on the types of information that a state or authorized Tribe should consider when determining whether the cost of implementing pollutant reduction options to meet permit requirements derived from the designated use and criterion "would cause substantial and widespread economic and social impact" to the affected community and/or discharger. The FCA Guidance supplements the public sector sections of the 1995 Interim Economic Guidance with additional indicators and analyses for low-income residents, an Expanded Economic Impact Matrix, and recommendations to consider when making WQS decisions. The FCA Guidance does not revise the recommended methodology in the private sector sections

47 40 CFR 131.10(g)(6).

48 *Upper Missouri Waterkeeper v. EPA*, 15 F.4th 966, 974 (9th Cir. 2021). The Ninth Circuit reasoned that while the agency "could perhaps have interpreted" the CWA Section 101(a)(2) goal that water quality that provides for the protection of aquatic life and recreation be achieved "wherever attainable" to refer only to technological feasibility, "it seems far more plausible that Congress used the term in the sense reflected in EPA's regulation—as including an assessment of whether achieving the necessary water quality is *economically* feasible, given the costs that would be imposed on the affected communities." The Court explained that under the EPA's regulation, "compliance costs may be considered only when designating the *uses* to be protected by water quality standards. Once those uses have been designated, States must adopt water quality *criteria* adequate to protect those uses, 'based on sound scientific rationale'." *Id.* at 972, n.1. See also *Mississippi Comm'n on Nat. Res. v. Costle*, 625 F.2d 1269, 1277 (5th Cir. 1980), upholding the EPA's determination that "while economic factors are to be considered in designating uses, those factors are irrelevant to the scientific and technical factors considered in setting criteria to meet those uses."

49 EPA. 1995. Interim Economic Guidance for Water Quality Standards: Workbook. EPA, Office of Water. Washington, DC 20460. March 1995. EPA-823-95-002. https://www.epa.gov/system/files/documents/2024-01/interim-economic-guidance-water-quality-standards-workbook-1995.pdf.

50 EPA. 2024. *Clean Water Act Financial Capability Assessment Guidance*. EPA-800-B-24-001. EPA, Office of Water, Washington, DC 20460. March 2024. https://www.epa.gov/system/files/documents/2023-01/cwa-financial-capability-assessment-guidance.pdf.

of the 1995 Interim Economic Guidance. The EPA's Economic Guidance for Water Quality Standards webpage also provides spreadsheet tools for the public and private sector analyses to help guide the user through the steps to successfully implement the FCA Guidance and 1995 Interim Economic Guidance.[51]

It is important to note that a Factor 6 evaluation is not a cost-benefit analysis. It only determines if meeting WQS would cause substantial and widespread economic and social impact in a specific circumstance.

While the analyses and metrics described in the 1995 Interim Economic Guidance and the FCA Guidance may be considered in evaluating requests for designated use revisions, including a change to a less stringent use subcategory, the EPA recommends caution in doing so because the analyses and metrics do not include a temporal component. To that end, the EPA recommends states and authorized Tribes first explore whether there are other factors under 40 CFR 131.10(g) that preclude attainment of the designated use when considering a revision to a designated use. These other factors involve evaluating environmental conditions that are less likely to change over time and are more likely to impact all segments of a community evenly, as opposed to evaluating economic conditions that are dynamic and more likely to be unevenly distributed within a community.

To meet the requirements of Factor 6, the cost of additional pollutant controls must be both substantial and widespread. The EPA recommends first performing an analysis to determine if the cost of additional pollutant controls would result in a substantial impact. If the analysis suggests the cost would have a substantial impact, then the state or authorized Tribe should perform a separate analysis to determine if the substantial impact would be widespread.

For public sector dischargers (e.g., publicly owned wastewater treatment facilities), a "substantial impact" refers to the economic impact on the community, taking into

[51] https://www.epa.gov/wqs-tech/economic-guidance-water-quality-standards.

consideration socioeconomic conditions, if the discharger is required to implement additional pollutant controls necessary to comply with WQS. For private sector dischargers, a substantial impact refers to significant changes to the discharger's business viability if required to implement additional pollutant controls necessary to comply with WQS.[52]

The 1995 Interim Economic Guidance suggests a series of financial tests to help determine whether additional pollutant control costs could result in a substantial impact. For the public sector, first calculate a municipal preliminary screener, which evaluates the impact that the cost of additional pollutant controls would have on a household and thus "screens" for situations where additional analyses may not be warranted. A secondary test further evaluates the potential for a substantial impact by examining indicators related to the community's ability to obtain financing and the community's socioeconomic health.

For the private sector, the 1995 Interim Economic Guidance recommends evaluating several indicators related to the potential impact of pollutant control measures on profit, liquidity, solvency, and leverage. Profit is the income to the owner(s) of a company; liquidity is a measure of how easily a company can pay its short-term bills; solvency is a measure of a company's ability to meet its fixed and long-term obligations; and leverage is a measure of how much money a company is capable of borrowing.

Section III of the FCA Guidance recommends an expanded multi-step approach for public sector entities to determine if requiring additional pollutant controls could result in a substantial impact. In addition to the Initial Economic Impact analyses recommended in the 1995 Interim Economic Guidance, the FCA Guidance recommends states and authorized Tribes:

- **Calculate a Lowest Quintile Poverty Indicator (LQPI) Score:** Evaluate a set of six socioeconomic statistics from the Census Bureau to help identify low income and/or economically disadvantaged communities and incorporate that information into the assessment of economic impacts.
- **Perform a Financial Alternatives Analysis:** Investigate a variety of potential funding sources and alternative financial mechanisms that could minimize financial impacts to residents living in overburdened and/or low-income communities so that these residents also enjoy the benefits of infrastructure investments and improved water quality.
- **Combine the analysis recommended in the 1995 Interim Economic Guidance with the additional analyses recommended in the FCA Guidance:** Combining the analytical results from the 1995 Interim Economic Guidance with the additional analytical results recommended in the FCA Guidance using the expanded Economic Impact Matrix.

[52] EPA. 1995. *Interim Economic Guidance for Water Quality Standards: Workbook*, EPA 823-B-95-002. EPA, Office of Water, Washington, DC 20460. March 1995. https://www.epa.gov/system/files/documents/2024-01/interim-economic-guidance-water-quality-standards-workbook-1995.pdf.

Finally, the FCA Guidance provides recommendations on how to interpret the combined analytical results to determine if additional pollution controls necessary to meet WQS would result in a substantial economic impact.

"Widespread impacts" for both public and private dischargers refer to how a substantial impact could affect the community or surrounding area. The 1995 Interim Economic Guidance recommends evaluating potential changes to various socioeconomic indicators of a community to determine if a substantial impact is likely to also be widespread. For example, a decrease in household income, a decrease in commercial development, lower property values, or an increase in unemployment could negatively affect the ways in which people in a community live, work, play, relate to one another, and organize their activities. For many public wastewater treatment facilities, the cost of additional pollutant controls is passed directly onto households and businesses through increases in wastewater treatment rates. Although low-income segments of a community would disproportionally experience substantial adverse economic impact, a significant community-wide increase in wastewater treatment rates would likely have broad impact on the economic wellbeing throughout the community. Therefore, if a state or authorized Tribe can demonstrate that the additional cost to a publicly owned wastewater treatment facility would be funded by a large proportion of households and businesses in the community, it is reasonable to conclude that such an impact to the community would be widespread.

When evaluating widespread impacts for private entities, a state or authorized Tribe should assess current economic conditions to determine how the substantial impact to the business would impact the surrounding community. Widespread impacts include, but are not limited to, a decrease in tax revenue due to reduced operation or closure of a facility, increased unemployment, lower property values, lower economic activity due to worker relocation, and the loss of future community economic development opportunities.

When determining whether the cost of additional pollutant controls necessary to meet WQS would result in substantial and widespread economic and social impacts, a state or authorized Tribe should evaluate a variety of pollutant reduction options and their financial impacts. Some pollutant reduction options may not result in attaining the designated use, but nonetheless have the potential to reduce the pollutant loadings to the waterbody. Such an analysis can help the state or authorized Tribe determine the HAU when considering a revision to the designated use (See step 2 below for additional information on determining the HAU).

One key recommendation in the FCA Guidance is to conduct certain additional analyses or actions when considering revisions to designated uses based on economic impacts (i.e., through Factor 6). As described in the FCA Guidance, the metrics and thresholds in the 1995 Interim Economic Guidance and the FCA Guidance are based on an analysis of financial and economic data that reflect conditions during a particular period of time and are dynamic—i.e., a "snapshot" of financial and socioeconomic data. As such, the metrics

and analyses of the FCA Guidance are most appropriate for evaluating requests for WQS variances under Factor 6 because the time-limited nature of a WQS variance ensures that changes in financial conditions would be considered if and when there is a request for a subsequent WQS variance or at the time of reevaluation for a WQS variance with a duration longer than five years. See the Draft WQS Variances chapter of this Handbook for additional information on WQS variances.

When states and authorized Tribes choose to pursue a use revision based on Factor 6, the FCA Guidance recommends conducting an expanded multi-step approach to evaluate economic impacts as described in Section III.d of the FCA Guidance. Further, there are additional analyses and actions the EPA recommends when considering a revision to a designated use based on Factor 6:

1. A trend analysis of the LQPI Score (see Section II.a.3 of the FCA Guidance) over the most recent 10-year period to ensure that the prevalence and severity of poverty is representative of the community's low-income households over time; and
2. An evaluation of up-to-date economic information (including consideration of future debt capacity) when evaluating an initial request.[53]

As described in the FCA Guidance, federal funding initiatives and programs, such as the State Revolving Fund loans and Water Infrastructure Finance and Innovation Act, provide, in total, billions of dollars for state, local, territorial, and Tribal governments to pursue infrastructure needs related to clean water. The EPA works with communities to identify funding sources and financing strategies that can be used to reduce costs to complete necessary projects. In addition, the EPA encourages state, local, and Tribal

[53] States and authorized Tribes should also use up-to-date economic information (including consideration of future debt capacity) when conducting triennial reviews to determine whether the uses specified in Section 101(a)(2) of the CWA are attainable at the time of the triennial review.

governments to evaluate opportunities to more equitably support overburdened and under-resourced communities, including low-income communities and communities with environmental justice concerns, in funding and financing necessary water infrastructure improvements.

Additional Considerations When Evaluating the 40 CFR 131.10(g) Factors for Recreation Uses

In order to determine whether recreational uses are attainable, including recreation by children, states and authorized Tribes should evaluate several different considerations that may limit recreation. Such considerations may include water quality levels (e.g., indicator bacteria concentrations), flow, depth, and air and water temperature, as well as any hydrologic modifications. These considerations may also depend on or be related to others such as flow velocity, the location of the waterbody (e.g., its proximity to residential areas, schools, or parks), the degree to which the public has access, whether the use is encouraged by the state, authorized Tribe, or local community (e.g., sponsored events that use the waterbody for recreational activities), and public safety.

40 CFR 131.10(g) does not include a factor allowing the remoteness of a waterbody, lack of public access, or public safety to be the sole basis for determining whether a recreation use is unattainable. However, these considerations can be important in determining whether a factor listed in 40 CFR 131.10(g) is truly preventing the attainment of the use. For example, the presence of a hydrologic modification (Factor 4) may not necessarily mean that a recreation use is unattainable. If there are features that facilitate and encourage public access to the waterbody, these features may increase the potential for people to find a way to recreate in these waters (e.g., a streamside bike or walking path in a developed area) despite the hydrologic modification. On the other hand, while recreational activities such as rafting and kayaking might occur when flow and velocity are high, the hazardous conditions and risk to public safety related to periodic high flows and velocities due to channelization of a waterbody may indicate a recreation use is unattainable during those times.

If the state or authorized Tribe considers the physical nature of a waterbody, such as its physical features, location, public access, or safety, as contributing to the inability of a waterbody to attain its designated use, the state or authorized Tribe must do so in the context of the appropriate 40 CFR 131.10(g) factor. The EPA has seen states and authorized Tribes typically consider these aspects in the context of flow (Factor 2), human caused conditions that cannot be remedied (Factor 3), or hydrologic modifications (Factor 4) when determining attainability of a recreation use. As a reminder, in determining whether the factor actually precludes the recreation use, the EPA expects states and authorized Tribes to evaluate whether what is limiting the designated use is correctable or is likely to change in the future.

As described in the discussion on Factor 5, the EPA's 1983 preamble provided information on why Factor 5 is limited to aquatic life uses. The preamble continued to address how physical factors may affect recreation: "EPA recognizes that while physical factors also

affect the recreation uses appropriately designated for a waterbody[,] States need to give consideration to the incidental uses which may be made of the waterbody. Even though it may not make sense to encourage use of a stream for swimming because of the flow, depth or the velocity of the water, the States and EPA must recognize that swimming and/or wading may occur anyway. In order to protect public health, States must set criteria to reflect recreational uses if it appears that recreation will in fact occur in the stream."[54] Building on this quote from the 1983 preamble, the EPA explained in the *Water Quality Standards Regulation, Advance Notice of Proposed Rulemaking* (1998) (the 1998 ANPRM)[55] that "based on prudent public health considerations, the use protection question was not to be judged wholly on an analysis of the waterbody's suitability for swimming, but rather on whether or not swimming *would actually occur* [emphasis added]."

In the 1998 ANPRM, the EPA further provided that "physical factors alone would not be sufficient justification for removing or failing to designate a primary contact recreation use." For example, low flow may prevent swimming by adults, but if the waterbody is in an area where children could play, immerse themselves in the water, or ingest the water, that is an indication that low flow may not prevent attainment of primary contact recreation. Instead, "EPA's suggested approach to the recreational use question has been for states and authorized tribes to look at a suite of factors such as, the actual use, existing water quality, water quality potential, access, recreational facilities, location, safety considerations, and physical conditions of the waterbody in making any use attainability decision."[56] Therefore, in determining whether physical factors would prevent attainment of primary contact recreation, states and authorized Tribes should analyze multiple types of information to determine whether the recreational activities would actually occur despite the water quality or physical condition.

54 *Water Quality Standards Regulation*, 48 Fed. Reg. 51401 (November 8, 1983).
55 *Water Quality Standards Regulation*, 63 Fed. Reg. 36756 (July 7, 1998).
56 Ibid.

Example Scenario-Recreational Use Revision Based on Factor 2

A state wants to revise its designated uses from primary contact recreation to secondary contact recreation due to low flow and insufficient water levels through a UAA based on Factor 2. The state conducted a UAA that identified low-flow channels (ephemeral, small intermittent, and small perennial streams) with insufficient flow to support full body immersion. These low-flow channels were designated for secondary contact recreation unless the low flow occurred in areas easily accessible by small children. The state did not change the designated use of those low-flow channels that have a higher likelihood of being used by small children since they are more likely to have a level of exposure to the water equivalent to primary contact recreation in accessible low flow channels.

The state used geographic information systems (GIS) datasets and field surveys to evaluate flow and determined that certain waters have low flow and water levels. The state then used field surveys and GIS data, plus information from public comments, to confirm their decisions of where low flow and water levels prevent primary contact recreation. The state evaluated input on whether the water is near recreational facilities, parks, or schools such that children or hikers can still use the waters for primary contact recreation. Where analysis of such data confirmed that low-flow conditions and water levels in certain streams in the state prevent the attainment of primary contact recreation, the state adopted the HAU of secondary contact recreation for those waters as required by the EPA's regulation.

If the EPA determines that the analysis and the underlying data (including public comments) provide sufficient information to show that the low-flow conditions of those waterbodies actually prevent attainment of a primary contact recreation use, then the EPA can approve the WQS change. If the EPA determines that the information provided was insufficient to make that demonstration, then the EPA can disapprove the WQS change.

The EPA acknowledges that the previous version of this chapter of the WQS Handbook (updated 2012) includes the following statement about the use of "physical factors" in evaluating recreation uses: "Physical factors, which are important in determining attainability of aquatic life uses, may not be used as the basis for not designating a recreational use consistent with the CWA section 101(a)(2) goal. This precludes states and authorized tribes from using 40 CFR 131.10(g) Factor 2 (pertaining to low flows) and Factor 5 (pertaining to physical factors in general)." The EPA recognizes that these statements could be read to categorically prohibit states and authorized Tribes from using Factor 2 when designating or removing recreational uses. Such a reading is not supported by the language in 40 CFR 131.10(g)(2) and is inconsistent with the EPA's long-standing position that Factor 2 can be used to remove any use specified in CWA Section 101(a)(2), including a recreation use. Unlike the regulatory text of Factor 5, which explicitly states it is limited to aquatic life uses, Factor 2 does not include any such textual limitation. The regulatory language in 40 CFR 131.10(g)(2) and the 1983 preamble

discussion noted in this section provide that the EPA did not intend to make Factor 2 categorically unavailable for recreational use revisions. Consistent with 40 CFR 131.10(g)(2), the EPA will evaluate recreational use revisions based on Factor 2, including the consideration of "physical factors," on a case-by-case basis. Therefore, the EPA includes this discussion here to clarify the prior WQS Handbook statements.

Step 2B. Identify the HAU

The HAU is defined at 40 CFR 131.3(m) as the "modified aquatic life, wildlife, or recreation use that is both closest to the uses specified in Section 101(a)(2) of the Act and attainable, based on the evaluation of the factor(s) in 40 CFR 131.10(g) that preclude(s) attainment of the use and any other information or analyses that were used to evaluate attainability. There is no required highest attainable use where the State demonstrates the relevant use specified in Section 101(a)(2) of the Act and sub-categories of such a use are not attainable."

Important considerations for **Step 2B** include the following:

- Based on previous steps, determine which activities and/or controls could address the stressors to the waterbody and reverse the impacts to some degree, thereby improving water quality conditions, even if the waterbody is not attaining the currently applicable designated use and criteria. Consider how changes in precipitation impact the effectiveness of these activities.
- When determining the HAU, consider changes in precipitation as a result of climate change that could lead to unattainability of the designated use.
- Determine the use and the associated criteria that could be attainable with implementation of these feasible activities and/or controls despite the impact of the identified factor or stressor. Use the analysis done to document why this is the highest attainable use.

Once a state or authorized Tribe has rebutted the presumption of attainability by demonstrating through a required UAA that a 101(a)(2) use or a subcategory of a 101(a)(2) use is not attainable, 40 CFR 131.10 requires the state or authorized Tribe to adopt the HAU.[57] The purpose of the HAU requirement is to establish designated uses that continue to serve the purpose of the CWA by making progress towards water quality protecting the 101(a)(2) uses, even where such uses are demonstrated to be unattainable. In addition, to ensure that any designated use revision does not remove an existing use, consistent with 40 CFR 131.10(g) and 131.10(h)(1), the HAU must ensure the existing use is maintained and protected. This concept of the HAU is fundamental to the WQS program. Adopting a designated use that is less than the HAU could result in assigning a level of protection lower than what is needed to protect the aquatic life and/or recreation use that the waterbody can attain. Not only would this be contrary to the objectives of the CWA, but this could, in turn, adversely impact aquatic ecosystems and the health of the public recreating in and on such waters. For example, a state or

[57] An HAU is not required for changes to non-101(a)(2) uses. Section 2.3.2 of this chapter discusses use and value demonstrations for changes to non-101(a)(2) uses.

authorized Tribe may be able to demonstrate that a particular aquatic life use designation is unattainable; however, if some less sensitive aquatic organisms are able to survive at the site under current or attainable future conditions, the objective of the CWA is not served by simply removing the aquatic life use designation and applicable criteria without determining whether there is some alternate aquatic life use subcategory that is feasible to attain.[58]

How to Determine the HAU

When adopting the HAU, the state or authorized Tribe should adopt a different use within the same broad CWA Section 101(a)(2) use category if such a use is attainable. For example, if a state or authorized Tribe removes a warm water aquatic life use, then the HAU would be a modified version of the aquatic life use, such as a "limited warm water aquatic life use." States and authorized Tribes are not required to determine whether one broad use category is a better use than another (e.g., to determine that a recreation use is better than an aquatic life use).

The EPA added the phrase "based on the evaluation of the factor(s) in 40 CFR 131.10(g) that preclude(s) attainment of the use and any other information or analyses that were used to evaluate attainability" to the HAU definition to clarify that the HAU is the attainable use that results from the process of determining what is not attainable through a UAA. For example, where the state or authorized Tribe demonstrates that a designated use cannot be attained due to substantial and widespread economic and social impacts, the state or authorized Tribe would then determine the HAU by considering the designated use closest to the 101(a)(2) use that is attainable without incurring costs that would cause substantial and widespread economic and social impact consistent with Factor 6.

In explaining the HAU further, the EPA's 2015 preamble explained that "although the HAU definition includes terms such as 'highest' and 'closest to,' … it does not necessarily mean that the use with the most numerically stringent criteria must be designated as the HAU. The CWA does not require states and authorized tribes to adopt designated uses to protect a level beyond what is naturally occurring in the waterbody. Therefore, a state's or authorized tribe's determination of the HAU must take into consideration the naturally expected condition for the water body or waterbody segment." For example, certain Pacific Northwest states apply criteria to protect different life stages of salmonids. While the different life stages are supported by different optimal temperature criteria, the designated use with the most numerically stringent optimal temperature threshold may not be required as the criterion at all times and locations under 40 CFR 131.11(a) to protect the HAU if the life stage that that temperature criterion protects does not naturally occur in that waterbody or waterbody segment or at certain times of the year.[59]

[58] *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51025 (August 21, 2015).
[59] Ibid.

The HAU definition at 40 CFR 131.3(m) also specifies "there is no required highest attainable use where the State demonstrates the relevant use specified in section 101(a)(2) of the Act and sub-categories of such a use are not attainable." Although the EPA expects such situations to be rare, 40 CFR Part 131 does not prohibit states and authorized Tribes from removing a 101(a)(2) designated use or a subcategory of such a use altogether where the state or authorized Tribe can demonstrate that the waterbody does not support any aquatic life or recreation, in which case there is no required HAU to be adopted.[60]

When identifying the HAU, states and authorized Tribes need to consider a number of factors in addition to the existing use, such as the current use that is attained, as well as the uses that may be attainable in the future. For example, if fish are observed utilizing a waterbody on a transient, temporary basis, it may be reasonable to expect similar occurrences in the future, and therefore, a modified aquatic life use designation may be attainable and appropriate. Other information and data that can inform a state's and authorized Tribe's determination of the HAU can come from engaging the public and the process to establish TMDLs (see section 2.5.1 of this chapter).

Options for Identifying and Adopting the HAU

How detailed a state or authorized Tribe wishes to be with its designated uses is solely at the discretion of the state or authorized Tribe, as long as the adopted designated use reflects the HAU consistent with 40 CFR 131.10(g). Notably, in some cases, designating more specific subcategories may better communicate the state's or authorized Tribe's desired condition for a waterbody to the public.

The EPA's intent is for a state or authorized Tribe to have the flexibility to choose its preferred approach for articulating the HAU. In the preamble to its 2015 final rule revising 40 CFR Part 131 (see 80 FR 51025), the EPA stated "The preamble to the proposed rule also provided several examples of how states and authorized tribes can articulate the HAU. These examples include using an existing designated use framework, adopting a new statewide sub-category of a use, or adopting a new sub-category of a use that uniquely recognizes the limiting condition for a specific water body (e.g., aquatic life limited by naturally high levels of copper)." States and authorized Tribes are not required to develop new use categories or subcategories to meet the HAU requirement. However, where a state or authorized Tribe does not already have a designated use in their current regulatory designated use scheme that would protect the HAU, the state or authorized Tribe will need to find an approach to identifying the new designated use that meets the requirements of the CWA and 40 CFR Part 131.

[60] *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51025 (August 21, 2015).

1. Use a refined designated use structure that is already adopted into state or authorized Tribal regulation.

A state or authorized Tribe with a refined designated use structure could consider adopting the "next best" attainable use that already exists in that structure as the designated use protective of the HAU. For example, consider a state with the following four aquatic life uses: exceptional, high, modified, and limited aquatic life use, each with an associated dissolved oxygen (DO) criterion that protects the designated use. The state determines through a UAA that a particular stream cannot attain the designated "high aquatic life use" and associated DO criterion due to a low head dam and resulting impoundment. Because the dam cannot be removed or operated in such a way as to attain the DO criterion needed to protect the expected biological community at the site, the state conducts a UAA to demonstrate that Factor 4 precludes attainment of the use. The UAA documents that the "modified aquatic life use" reflects the HAU that can be attained despite the hydrologic modification. The state, therefore, adopts the "modified aquatic life use" and associated DO criterion.[61]

2. Revise the current designated use structure to include subcategories of uses.

Some states or authorized Tribes may not have a refined designated use structure adopted into their regulations and instead have a general use category expressed as a "general aquatic life use," "fish and wildlife use," "recreation use," and so on. These states and authorized Tribes may find that, upon determining that such a general use category is not attainable, there would be no other designated use in the state's or authorized Tribe's use structure to accommodate the requirement to adopt the HAU. As a result, the state or authorized Tribe may consider revising its current designated use framework to include subcategories and adopt criteria to protect those uses. For example, a state or authorized Tribe may be able to adequately demonstrate, consistent with Factor 2, that intermittent flows generally preclude attainment of certain species or lifestages typically found in a perennial stream. However, intermittent streams can still provide essential habitat for other aquatic life (e.g., aquatic invertebrates) and provide spawning habitat for salmonids and other fish species. Such an aquatic life use is likely attainable if not already attained. Therefore, the state or authorized Tribe could refine its designated use structure by adopting an "intermittent stream aquatic life use" and the associated criteria to protect the waterbody for these aquatic life purposes.[62]

As another example, some states and authorized Tribes have chosen to refine their use categories to reflect the various biological communities that might be expected in a waterbody. A state or authorized Tribe could refine its designated use structure based on the composition and structure of the aquatic life expected for each use with associated biological criteria adopted into regulation. Incorporating such refinements into designated uses allows the state or authorized tribe to tailor its use designations to reflect the actual biological community expected.[63] For additional information, including

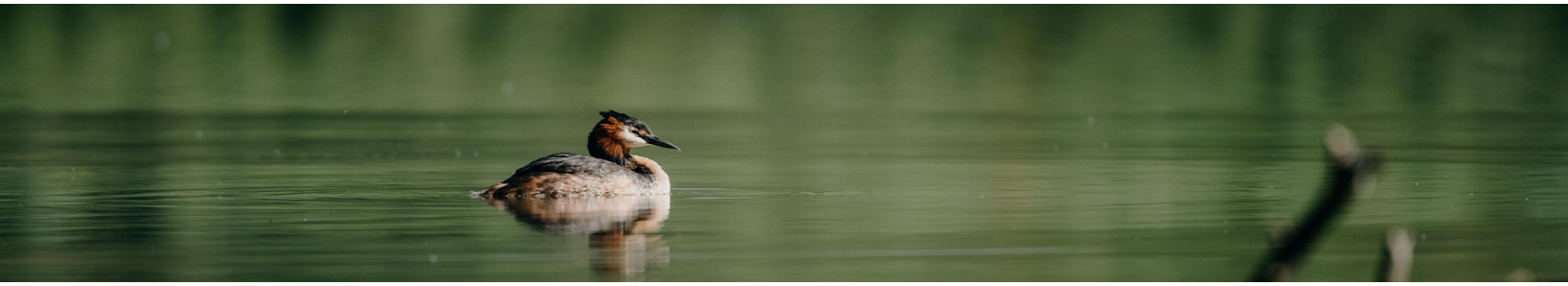
61 *Water Quality Standards Regulatory Clarifications*, 78 Fed. Reg. 54524 (September 4, 2013).
62 Ibid.
63 Ibid.

technical assistance documents and case studies, on using biological information to describe incremental differences in aquatic life expectations and biological criteria, please see the EPA's *Biological Water Quality Criteria* webpage.[64]

3. Designate a location-specific use and adopt criteria to protect that use.

A state or authorized Tribe may determine that a designated use is unattainable for a specific parameter (e.g., altered pH due to highly mineralized geology or high bacteria levels due to CSO overflows) or for a suite of parameters in a specific location. In such situations, the state or authorized Tribe could adopt a use that more accurately reflects the location-specific expectations, such as a "pH-limited aquatic life use," a "habitat-limited aquatic life use," or a "minerals-limited aquatic life use." The state or authorized Tribe would then adopt a new set of criteria to protect that designated use and adopt all the same criteria levels that were protective of the original use, except for the parameter or parameters limiting the location-specific use. Such an approach would not require a state or authorized Tribe to add the location-specific use in its statewide or Tribal-wide designated use structure, but it could do so later if it finds that other waters will fall into the same category.[65] In addition, such an approach would ensure that the state or authorized Tribe retains criteria for those parameters that can still be met, thus enhancing resiliency of the water to future stressors that could facilitate future efforts to restore the water to the 101(a)(2) uses.

States and authorized Tribes are not limited to these approaches. They may implement alternative approaches that align with their specific needs as long as the new designated use protects the HAU and is otherwise consistent with the CWA and 40 CFR 131.10.[66] Adopting an HAU and criteria to support the HAU under this approach should not be confused with "site-specific criteria" discussed at 40 CFR 131.11(b)(1)(ii). A site-specific criterion is designed to protect the current unchanged designated use, but the criterion value may be different from the statewide or otherwise applicable criterion because it is tailored to account for site-specific conditions that may cause the concentration of that parameter to have a different effect in one site than in other sites. By contrast, the criteria supporting a newly established HAU, even when adopting a location-specific use as described in this section, are designed to protect a different aquatic life community expected in the waterbody.[67] For additional discussion on site-specific criteria please refer to Chapter 3 of this Handbook.



64 https://www.epa.gov/wqc/biological-water-quality-criteria.
65 *Water Quality Standards Regulatory Revisions.* 78 Fed. Reg. 54524 (September 4, 2013).
66 Ibid.
67 Ibid.

Step 3: Draft the UAA and Regulatory Language

STEP 3
Draft the UAA and Regulatory Language

A	Document the findings from Steps 1 and 2 - this is the Use Attainability Analysis (UAA).
B	Draft regulatory language for the use revision based on that UAA information.

The EPA strongly recommends that states and authorized Tribes work with the EPA as they conduct the UAA (i.e., as they go through Steps 1 and 2) and consider getting informal review from the EPA on the draft UAA developed under Step 3 prior to the public hearing.

Step 3A. Document the findings from Steps 1 and 2 to develop the Use Attainability Analysis (UAA).

In **Step 3A**, document the findings of Steps 1 and 2 as follows:

- Explain how the state, authorized Tribe, or territory evaluated the attainability of the designated use.
- Document the stressors which limit the attainability of the designated use.
- Document the existing uses and the data used to determine the existing uses.
- Name the feasible activities and/or controls that would address the stressors impacting the attainability of the designated use and the extent to which they would address the stressors.
- Explain why the feasible activities and/or controls would not lead to attainment of the designated use.
- Identify and demonstrate which 131.10(g) factor precludes attainment of the designated use.
- Explain how the state, authorized Tribe, or territory determined the highest attainable use.

Step 3B. Draft regulatory language for the use revision based on that UAA information.

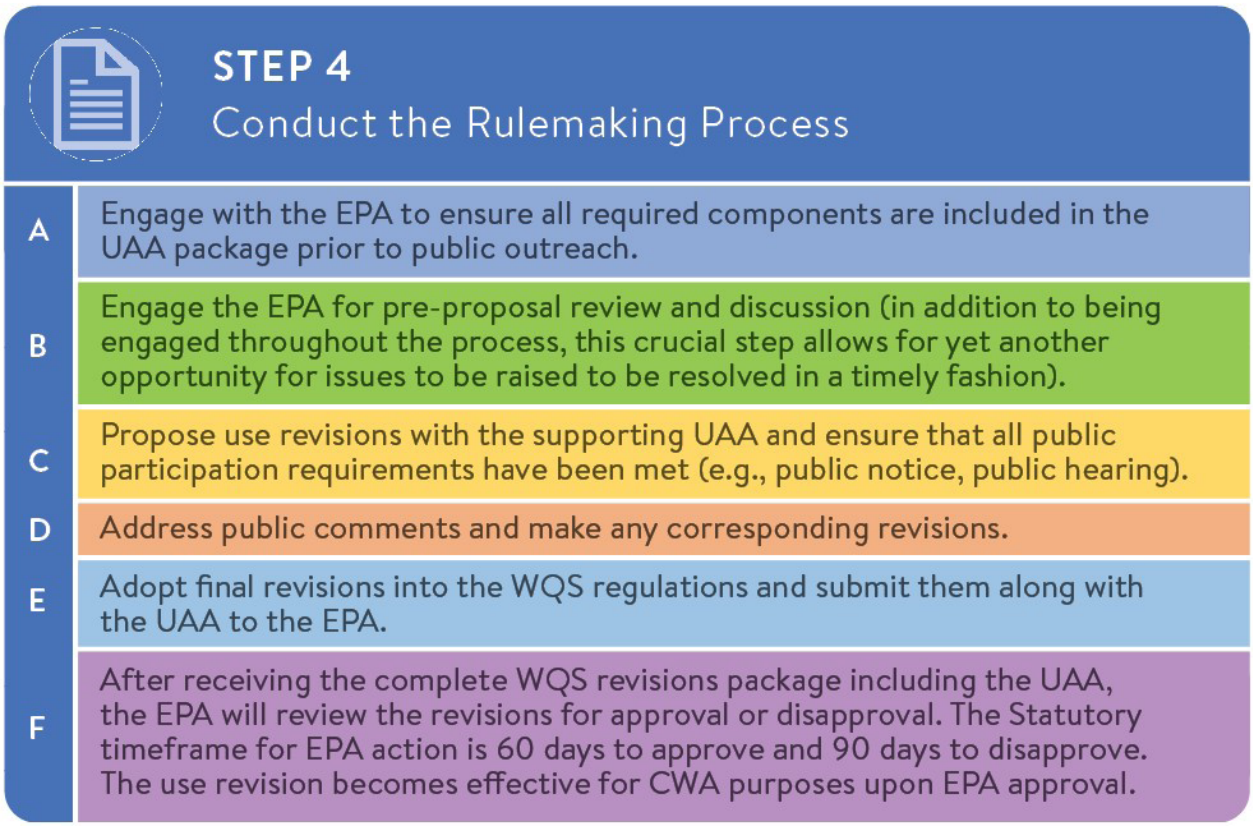
Once the information gathered is documented, the next step would be to draft the regulatory language.

In **Step 3B**, the state or authorized Tribe drafts the regulatory language needed to revise the designated use and adopt the HAU:

- Replace the unattainable designated use with the HAU.

Step 4: Conduct the Rulemaking Process

See Section 2.6 of this chapter for a full discussion of the regulatory approach for a designated use revision, as summarized in Step 4.



2.3.1.3 UAA Protocol

A state or authorized Tribe may benefit from developing its own UAA protocol. A UAA protocol is a methodology states and authorized Tribes develop for themselves or anyone else to follow when conducting a UAA. UAA protocols can be helpful because they streamline the UAA process by establishing a set of procedures and guidelines

to consistently and efficiently obtain the information needed for the UAA, including resources on data sources, methods, and analysis steps. Specifically, the UAA protocol should describe:

- How the state or authorized Tribe will obtain information needed to inform a decision to remove or revise designated uses and adopt the HAU where appropriate consistent with 40 CFR 131.10. This can include guidance for field assessment procedures, such as field surveys, interview forms, and fillable field data sheets, and
- A standardized process for how outside interested parties can engage in the UAA process and provide data that a state and authorized Tribe can use when making decisions on designated use revisions.

A UAA protocol may also increase public acceptance as it allows the state or authorized Tribe to transparently lay out its UAA process for the public. Thus, the EPA encourages states and authorized Tribes to develop UAA protocols. States and authorized Tribes have the discretion to develop these UAA protocols as guidance or to include them as binding parts of their WQS regulations. If a state or authorized Tribe does adopt a UAA protocol as a binding provision, it would be considered a general policy under 40 CFR 131.13 that the EPA would act on under CWA Section 303(c). It is important to note that the EPA's approval of any UAA protocol does not convey automatic approval to any designated use revision adopted in accordance with such UAA protocols. The EPA will review each designated use revision independently to determine and document whether it is consistent with other applicable requirements.

Regardless of how a state or authorized Tribe chooses to develop its UAA protocol, the EPA can offer technical assistance and feedback on the information needed to provide a robust UAA and encourages close coordination with the relevant EPA regional office.

The EPA recommends that states and authorized Tribes make their UAA protocols available on the state's or authorized Tribe's website to ensure full transparency in how it intends to evaluate its designated uses.

2.3.2 Non-101(a)(2) Uses

2.3.2.1 Use and Value Demonstration to Remove or Revise a Non-101(a)(2) Use

Non-101(a)(2) uses are separate and distinct from 101(a)(2) uses and subcategories of such uses; however, they are also important to protect public health or welfare and enhance water quality. 40 CFR 131.10(k)(3) specifies that when revising or removing a non-101(a)(2) use, the state or authorized Tribe "…must submit documentation justifying how its consideration of the use and value of water" for those uses "appropriately supports" its action. The EPA refers to this documentation as a "use and value demonstration." This regulatory language regarding consideration of use and value is based on CWA 303(c)(2)(A). Congress directly addressed when states and authorized Tribes are required to designate 101(a)(2) uses by establishing a national goal to provide for protection of 101(a)(2) uses "wherever attainable" but did not include similar language regarding non-101(a)(2) uses. Thus, the EPA's regulation only requires a UAA when a state or authorized Tribe designates for the first time a use that does not include a 101(a)(2) use or wishes to remove 101(a)(2) uses or subcategories of such uses. To remove non-101(a)(2) uses, states and authorized Tribes must still submit documentation showing their consideration of the use and value of such uses consistent with CWA Section 303(c)(2)(A). Since UAAs include a consideration of the use and value along with an evaluation of factors affecting attainability, 40 CFR 131.10(k)(3) says that the requirements to conduct a use and value demonstration "…may be satisfied through a use attainability analysis." When revising or removing either 101(a)(2) or non-101(a)(2) uses, states and authorized Tribes must still protect existing uses (see section 2.3.3.1 for a more detailed discussion on existing uses).

While the factors in 40 CFR 131.10(g) may be helpful to guide the consideration of non-101(a)(2) uses, a state or authorized Tribe is not limited to using these attainability factors when making decisions about designating or removing non-101(a)(2) uses. The consideration of the use and value of a waterbody for non-101(a)(2) uses must take into account the requirement in CWA Section 303(c)(2)(A) that WQS "shall be such as to protect public health or welfare, [or] enhance the quality of water."

2.3.2.2 Preparing a Use and Value Demonstration to Remove or Revise a Non-101(a)(2) Use

The EPA encourages states and authorized Tribes to work closely with the EPA when developing a use and value demonstration to remove or revise a non-101(a)(2) use. State and authorized Tribal WQS actions must also be consistent with other relevant provisions in 40 CFR 131.10, including downstream protection (40 CFR 131.10(b)) and existing uses of the water (40 CFR 131.10(h)(1)). The EPA recommends that states and authorized Tribes consider a suite of factors in conducting a use and value demonstration to remove or revise a non-101(a)(2) use, including, but not limited to:

- Relevant descriptive information (e.g., identification of the designated use that is under consideration, location of the waterbody, overview of land use patterns, available water quality data and/or stream surveys, information on the physical condition of the waterbody, information from public comments and/or public meetings, anecdotal information, other relevant information),
- Attainability information (such as the 40 CFR 131.10(g) factors, if applicable),[68]
- Value and/or benefits (including environmental, social, cultural, and/or economic) associated with either retaining or removing the use, and
- Whether the WQS holistically protect the remaining designated uses after removal of the non-101(a)(2) use and associated criteria.

Use and Value Demonstration Example

Consider a state that designated a public water supply (PWS) use for all its waters; however, for a small waterbody, the state determines that such a PWS use is not appropriate. The state would first need to determine if PWS is an existing use per 40 CFR 131.10 and 131.3(e). This would entail evaluating whether there is information indicating that the waterbody, on or after November 28, 1975, was used for PWS (e.g., presence of a PWS intake) and whether the water quality supported a PWS use. If PWS is not an existing use, the state would then evaluate the site-specific facts to determine if there is use and value in retaining the PWS use for that waterbody. If the state determines that there is no use and value in retaining the PWS for that waterbody, then the state may consider removing the PWS use. Supporting documentation could include information that the nearby population uses an alternative PWS, and projected population trends suggest that the current supply is sufficient to accommodate future growth. The state must make the supporting documentation available prior to any public hearing and submit it to the EPA with the WQS revision package.[69]

[68] Note that states and authorized Tribes can consider attainability as part of the use and value demonstration but they are not required to demonstrate that a non-101(a)(2) use is unattainable based on the factors at 40 CFR 131.10(g).

[69] The EPA's Response to Comments, Water Quality Standards Regulatory Revisions, Chapter 3 Issue Category 5: Designated Uses. Docket # EPA-HQ-OW-2010-0606. August 2015. pg. 3-83.

As discussed in the 2015 Response to Comments,[70] there may be impacts to 101(a)(2) uses in specific instances if a state or authorized Tribe removes a non-101(a)(2) use and/or associated criteria. The EPA's definition of a non-101(a)(2) use at 40 CFR 131.3(q) is a use that is "unrelated to the protection and propagation of fish, shellfish, wildlife or recreation in or on the water." The fact that a criterion for a parameter or constituent meant to protect a non-101(a)(2) use also impacts the protection and propagation of fish, shellfish, wildlife, or recreation in or on the water does not mean that the non-101(a)(2) use is a 101(a)(2) use (or a subcategory of such a use). 40 CFR 131.11(a) requires states and authorized Tribes to adopt criteria that protect the designated use and that contain sufficient parameters or constituents to protect the designated use. A 101(a)(2) use is specifically intended to protect aquatic life and recreation. However, a state or authorized Tribe may be required under 40 CFR 131.11(a) to adopt new or revised criteria for a 101(a)(2) use where sound science shows that removing a non-101(a)(2) use and/or associated criteria would result in the state or authorized Tribe no longer having criteria with sufficient parameters or constituents to protect the 101(a)(2) use.[71]

[70] The EPA's *Response to Comments, Water Quality Standards Regulatory Revisions, Chapter 3 Issue Category 5: Designated Uses*. Docket # EPA-HQ-OW-2010-0606. August 2015. pg. 3-83.

[71] Note that when the state or authorized Tribe already has applicable criteria sufficient to protect the 101(a)(2) use from the effects of the parameter in question, the state or authorized Tribe would not be required under 40 CFR 131.11(a) to adopt any additional WQS revisions as a result of an action on the same parameter associated with a non-101(a)(2) use.

Removing Non-101(a)(2) Uses That May Impact 101(a)(2) Uses

Continuing with the previous example, a state may choose to remove a PWS use from a waterbody, along with the associated numeric criterion for pollutant X that was established to protect that PWS use. For purposes of this example, however, assume sound science indicates that the same pollutant X is toxic to aquatic life and the current PWS criterion for pollutant X prevents toxicity to the aquatic life in that waterbody.

In the context of this example, the EPA interprets 40 CFR 131.11(a) to mean that if sound science shows that:

1. The numeric pollutant X criterion protecting the PWS use also protects aquatic life, AND
2. The criteria currently adopted by the state to protect its aquatic life use does not contain sufficient parameters or constituents to protect aquatic life in that waterbody from the effects of pollutant X,

then before the EPA could approve the removal of the PWS use, the state must either:

a. Adopt a new or revised criterion for pollutant X with sufficient parameters or constituents to protect the aquatic life use in that waterbody in the same action, OR
b. Conduct a UAA demonstrating that the aquatic life use is unattainable in the waterbody affected by the removal of the non-101(a)(2) use and identify the HAU, such as a pollutant X-limited aquatic life use.[72]

However, if sound science shows that the numeric pollutant X criterion protecting the PWS use does not protect aquatic life, then:

1. Removing the pollutant X criterion protecting the PWS use would not remove protection for the aquatic life use consistent with 40 CFR 131.11(a),
2. There would be no concerns with removing the PWS use as long as the state or authorized Tribe meets the regulatory requirements to remove a non-101(a)(2) use, AND
3. 40 CFR 131.11(a) would require the state or authorized Tribe to adopt a pollutant X criterion to protect the aquatic life use.

Where sound science is not sufficient to support the development of a numeric pollutant X criterion to protect the aquatic life use, the state or authorized Tribe should work with its EPA regional contact to determine how best to protect the aquatic life use.

[72] The EPA's *Response to Comments, Water Quality Standards Regulatory Revisions, Chapter 3 Issue Category 5: Designated Uses*. Docket # EPA-HQ-OW-2010-0606. August 2015. pg. 3-83.

2.3.3 When A Designated Use May Not Be Removed or Revised

2.3.3.1 Existing Uses

40 CFR 131.10(g) and 131.10(h)(1) are clear that states and authorized Tribes may not remove designated uses if they are existing uses as defined in 40 CFR 131.3(e) unless a use requiring more stringent criteria is added. It is important to note that while 40 CFR 131.10(g) only applies when removing or revising a 101(a)(2) use, 40 CFR 131.10(h)(1) applies when removing or revising any designated use, regardless of whether it is a 101(a)(2) use, a subcategory of 101(a)(2) use, or a non-101(a)(2) use.

The EPA reiterated key points on existing uses in the 2013[73] and 2015[74] final revisions to 40 CFR Part 131 after having addressed a broad spectrum of existing use questions in its 2008 letter to the State of Oklahoma.[75]

40 CFR 131.3(e) defines existing uses as "... those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."[76] Existing uses are relevant to 40 CFR 131.10(g) and 40 CFR 131.10(h) for designated uses, and 40 CFR 131.12(a)(1) for antidegradation, which:

1. Prohibit removal of a designated use that would also remove an existing use,[77] regardless of whether it is a 101(a)(2) use or a non-101(a)(2) use, unless a use requiring more stringent criteria is added (40 CFR 131.10(h)(1)), and
2. Require the maintenance and protection of existing instream water uses and the level of water quality necessary to protect existing uses when implementing a state's or authorized Tribe's antidegradation policy (40 CFR 131.12(a)(1) or "Tier 1").[78] See Chapter 4 of this Handbook for additional discussion on existing uses in the context of antidegradation requirements and Tier 1 protection.

Thus, the regulation at 40 CFR 131.10(g) and 131.12(a)(1) defines existing uses as the "floor" or baseline conditions that must be maintained and protected in a waterbody.[79] In the 2015 preamble to the Final Rule,[80] the EPA explained that "existing uses are known to be 'actually attained' when the use has actually occurred and the water quality necessary to support the use has been attained." Unlike designated uses, which may be goals for the waterbody not yet attained, existing uses reflect those uses that were

73 *Water Quality Standards Regulatory Clarifications*, 78 Fed. Reg. 54522 (September 4, 2013).
74 *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51027 (August 21, 2015).
75 D. Keehner. 2008. Letter: Mr. Derek Smithee, State of Oklahoma Water Resources Board. Questions and Answers on EPA's Existing Use Policy. Office of Water, Washington, DC 20460. https://www.epa.gov/sites/default/files/2014-10/documents/existinguse-smithee-letter.pdf.
76 The EPA promulgated the initial federal WQS regulation related to existing uses on November 28, 1975. *Water Quality Standards*, 40 Fed. Reg. 55334 (Nov. 28, 1975).
77 40 CFR 131.10(g).
78 40 CFR 131.12(a)(1).
79 See the preamble to the EPA's WQS regulation at 48 Fed. Reg. 51,500, 51,403 (Nov. 8, 1983).
80 *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51027 (August 21, 2015).

actually attained in the waterbody, and it is critical for states and authorized Tribes to identify the existing use for the waterbody in question using site-specific data on use and water quality. Identifying the existing use (e.g., in the UAA) and identifying it as specifically as possible using the available data will ensure that states and authorized Tribes clearly recognize the use "actually attained," which must be maintained and protected. Section 2.1.4.1 of this chapter discusses how states and authorized Tribes should determine their existing uses.

Waterbody uses typically relate to a distinct purpose (e.g., recreation, public water supply) or function (e.g., supporting an aquatic ecosystem). The EPA's regulation relating to the protection of existing uses requires states and authorized Tribes to maintain and protect the uses that have been "actually attained," and not specific water quality parameters which may have attained levels more protective than necessary to support these uses.[81] In nearly all cases, a waterbody will have actually attained some degree of use related to aquatic life, wildlife, and/or human activity (e.g., recreation, fishing, agricultural water supply, etc.) on or after November 28, 1975. For example, while the water quality for a particular waterbody may not have supported a diverse aquatic community since November 28, 1975, it is likely that the water quality in the waterbody supports or has supported some less diverse community of organisms. The EPA considers such uses actually attained on or after November 28, 1975 to be "existing uses."

The existing use may change over time as water quality improves to support improved uses. However, if the water quality declines over time, the existing use is still the "highest degree" of or "best" use related to aquatic life, wildlife, and/or human activity that has been actually attained since November 28, 1975, even if it does not reflect the currently attained use and water quality.

Identifying accurate existing uses ensures that when a state or authorized Tribe revises its designated use, it is still maintaining and protecting the uses actually attained on or after November 28, 1975, consistent with the overall objective of the CWA to restore and maintain the physical, chemical, and biological integrity of the nation's waters.[82]

For this same reason, while the federal regulation requires states and authorized Tribes to adopt appropriate designated uses (40 CFR 131.10(a)) and to ensure that removing a designated use does not remove an existing use (40 CFR 131.10(g) and 131.10(h)(1)), it does not require states and authorized Tribes to explicitly adopt the existing uses for each waterbody in their WQS regulation. Adopting existing uses into the legally binding WQS regulations could remove the dynamic nature of existing uses, making it difficult for states and authorized Tribes to recognize improvements in existing uses over time. This could, in turn, complicate the ability of a state or authorized Tribe to ensure it is continually implementing WQS in a manner that will maintain the physical, chemical,

[81] In the 1982 preamble to the proposed rule for the WQS regulation, the EPA stated that the first tier of antidegradation applies to uses, not specific parameters. For example, if a stream actually achieved a warm water fishery use and achieved a dissolved oxygen level of 7.0 mg/L, the state or authorized Tribe would only be required under the existing use regulation to maintain the dissolved oxygen levels sufficient to support the warm water fishery existing use, which may be less stringent than 7.0 mg/L.

[82] CWA Section 101(a).

and biological integrity of the nation's waters. It is important to note that even where a state or authorized Tribe adopts existing uses into rule where the existing use improves over time, the state or authorized Tribe would still be required to protect the improved existing use, regardless of the existing use adopted into rule.

Rather than adopt existing uses into their WQS regulation, states and authorized Tribes typically document the existing uses in the relevant UAA itself, as described in the UAA Process Diagram in section 2.3.1.2 of this chapter, or as part of the documentation prepared during an antidegradation review (See Chapter 4 of this Handbook). Doing so ensures that the state or authorized Tribe is transparent regarding the existing use at that point in time but still allows the state or authorized Tribe to determine a different existing use if water quality improves.

The regulation at 40 CFR 131.10(g) and 133.10(h)(1) prohibiting removal of an existing use is not intended to apply to a situation where the state or authorized Tribe wishes to remove a designated use where the removal would improve the condition of a waterbody (i.e., facilitates attainment of a use closer to those supported by minimally impacted conditions).[83] The intent of the regulation is to further the objective of the CWA to restore and maintain the integrity of the waters, not to prevent actions that make the waterbody more like its minimally impacted condition.[84] For example, if revising a designated use would lead to water quality improvements resulting in a pollution-tolerant aquatic community being replaced by a more diverse aquatic community, the loss of the pollution-tolerant community is a necessary step towards restoring a waterbody to its minimally impacted condition and is not a prohibited removal of an existing use. Similarly, if a state or authorized Tribe stocks trout (a cold water species) into a natural warm water fishery, the existing use provision would not prevent removal of that stocked trout fishery use because a natural warm water fishery is closer to the minimally impacted condition. The EPA provided another example in the preamble to the 2013 proposed rule that "...if a warm water fishery exists behind a dam, the existing use provision would not prevent the state from removing that dam because doing so would likely restore the natural cold water aquatic ecosystem."[85]

[83] See 40 CFR 131.10(h). States or authorized Tribes may remove existing uses where the state or authorized Tribe is adding a use requiring more stringent criteria.

[84] *Water Quality Standards Regulatory Clarifications*, 78 Fed. Reg. 54523 (September 4, 2013).

[85] Ibid.

How to Determine an Existing Use

While there are some situations where it would be reasonable to describe existing uses of a waterbody using the same categories employed for designating uses (see section 2.2 of this chapter), it would be beneficial for a state or authorized Tribe to more specifically describe its existing use to best be able to maintain and protect unique attributes of a waterbody that are not adequately described using a broadly defined designated use category. Considering available biological data along with any available chemical data may help states and authorized Tribes more specifically describe the existing aquatic life use for a waterbody.

"The EPA recognizes…that all the necessary data may not be available to determine whether the use actually occurred or the water quality to support the use has been attained. When determining an existing use, the EPA provides substantial flexibility to states and authorized tribes to evaluate the strength of the available data and information where data may be limited, inconclusive, or insufficient regarding whether the use has occurred and the water quality necessary to support the use has been attained. In this instance, states and authorized tribes may decide that based on such information, the use is indeed existing."[86] In other words, states and authorized Tribes have discretion in determining the existing use where data may be limited, inconclusive, or insufficient, although the EPA encourages that they still consider the quantity, quality, and reliability of the different types of all available data for the historical period of record to describe the existing use as accurately and completely as possible and resolve any apparent discrepancies based upon that evaluation. However, where data are available on both actual use and water quality, the EPA expects that states and authorized Tribes will consider and evaluate all available data, including sources beyond state and authorized Tribal data such as available data from federal agencies and publications to determine the existing use. If the state or authorized Tribe does not ultimately use such available data to determine the existing use, the EPA expects the state or authorized Tribe to acknowledge and explain its basis for not using the available data to determine the existing use, including how not using certain data is consistent with the existing use definition and requirements in the EPA's regulation.

[86] *Water Quality Standards Regulatory Revisions*, 80 Fed. Reg. 51027 (August 21, 2015).

Example Existing Use Scenario Where Data are Unavailable or Inconclusive

Consider the following scenario describing how a state or authorized Tribe might proceed where data are unavailable or inconclusive.

A state is considering removing a primary contact recreation use that is not currently being attained and is therefore evaluating the existing use before deciding whether to proceed with its UAA. While it has information that people are actually swimming in the waterbody, it does not have any data to determine the level of water quality that has been attained in that waterbody on or after November 28, 1975.

1. If there is no reason to believe that there has ever been a water quality problem (e.g., no nearby sources of bacteria), then it would be reasonable for the state to determine that the water quality needed to support primary contact recreation was attained on or after November 28, 1975 and thus the existing use is primary contact recreation.
2. If there is reason to believe a nearby source may have been limiting the water quality on or after November 28, 1975, the state should conduct a UAA to determine if primary contact recreation is attainable or not.
    a. If primary contact recreation is deemed attainable, the state must retain primary contact recreation use as the designated use consistent with CWA Section 101(a)(2), even if it is unclear whether that primary contact recreation use is the existing use.
    b. If a primary contact recreation use is not attainable, based on one of the factors at 40 CFR 131.10(g), and site-specific data leads the state to determine that primary contact recreation use is not an existing use, then the state may remove the primary contact recreation designated use and designate the highest attainable recreation use in its place if all other requirements at 40 CFR Part 131 are met.

The following summarizes how to determine existing uses.

1. Where available historical data indicate that a use has actually occurred and the water quality to support it has been attained on or after November 28, 1975, that is the existing use (see scenarios 1 and 2 that follow).
2. Where available historical data indicate that the water quality attained was sufficient to support a use on or after November 28, 1975 but data show that the use has not actually occurred, the federal regulation would not require states and authorized Tribes to determine the use is an existing use. The next step would be for the state or authorized Tribe to evaluate whether or not the designated use can be attained before proceeding with a use removal[87] (see scenarios 3 and 4 that follow).

[87] Note that when the water quality has been attained in a waterbody but the use has not occurred, any evaluation of attainability would need to focus on factors unrelated to water quality that limit the use from occurring.

3. Where available historical data are limited, inconclusive, or insufficient regarding the actual use or water quality attained, states and authorized Tribes should consider the quantity, quality, and reliability of the different types of available data to describe the existing use as accurately and completely as possible and to resolve any apparent discrepancies based upon that evaluation. In this instance, states and authorized Tribes may decide that based on such information the use is existing.[88]

Describing the existing uses of a waterbody in terms of both actual use and water quality attained provides the most comprehensive means of describing the baseline conditions or "floor" that must be protected. It is important to have a high degree of confidence when identifying the existing use because a state or authorized Tribe may not remove an existing use when revising designated uses, regardless of whether the existing use remains attainable. This is also important because the EPA's antidegradation provisions at 40 CFR 131.12 require protection of existing instream uses with any CWA authorization of a lowering of water quality. (see Chapter 4 of this Handbook for more information on antidegradation).

Existing Use Scenario 1-CSO Impacted Water

Since November 28, 1975, people have occasionally recreated in Waterbody A, which is impacted by CSOs that predate November 28, 1975. While water quality may be sufficient to support full primary contact recreation most of the time, the number of indicator bacteria is likely to exceed the water quality criteria established to support primary contact recreation during heavy rainfall events that trigger CSO events.

Is primary contact recreation an existing use in this scenario?

In this example, historical water quality data may show that bacteria levels fluctuated above and below the state or authorized Tribal criterion for the protection of primary contact recreation and that exceedances correlated with the occurrence of CSO events. In addition, data regarding the type, timing, and frequency of recreation may show that some recreation (swimming or kayaking) occurs regularly in the waterbody even after a CSO discharge when the bacteria levels make it unsafe for primary contact recreation.

Based on the available data for this example, the existing use may be described as a primary contact recreation use at times not affected by CSOs and high risk recreation at times when CSOs are occurring. This existing use recognizes that people are recreating in a waterbody with a higher risk of getting sick from pathogens during CSOs than the risk present when the water is able to support primary contact recreation. Primary contact recreation is a use specified in CWA Section 101(a)(2). Once the state or authorized Tribe has determined that revising the recreational designated use will not remove an existing use, the state or authorized Tribe must conduct a UAA if it wishes to change its currently designated recreational use to a recreational use that would require less stringent criteria than previously applicable (40 CFR 131.10(j)(2)).

[88] *Water Quality Standards Regulatory Revisions.* 80 Fed. Reg. 51027 (August 21, 2015).

Existing Use Scenario 2-Hard Rock Mining

Hard rock mining has affected Mountain Stream B since before November 28, 1975, eliminating trout and other native fish as well as impairing the benthic invertebrate community within 20 stream miles of the mining district. Between 1990 and 2000, the state undertook a major remediation effort on a particular waterbody which resulted in a significant reduction in most metal concentrations. However, year-round concentrations of cadmium and zinc remain well above the state's acute and chronic numeric criteria adopted to protect the trout stream use classification. The state found that, with the significant reduction in most metals, the benthic invertebrate community fully recovered and the trout and other native fish returned to the remediated segment. However, the state also found that the number of fish per acre was still less than those at similar reference sites and the length and weight index showed these trout were in poorer condition than those in reference streams.

Is trout fishery an existing use in this scenario?

Despite the inferior condition of the trout, the lower species numbers, and the fact that the water quality was exceeding some of the criteria adopted to protect a trout fishery use classification, the return of the trout was enough to encourage the public to fish and thus establish a successful trout fishery use. In this example, the existing use may be described as a trout fishery adversely impacted by high cadmium and zinc concentrations. It is likely that maintaining the water quality improvements for the most limiting water quality parameters (cadmium and zinc) is especially important to maintain the existing use because revisions to these parameters are likely to correlate with changes in the trout population.

Existing Use Scenario 3-Shellfish Community

Waterbody C is designated as a shellfish harvesting use and has a healthy shellfish community that is propagating and thriving in a biologically suitable habitat, and the water quality is sufficient to support both this healthy shellfish community and shellfish consumption by humans. However, there is no available historical information indicating that humans have harvested the shellfish since November 28, 1975. Therefore, the state is considering whether to remove the shellfish harvesting designated use.

Is shellfish harvesting an existing use in this scenario?

Because data show that the water quality is sufficient to fully support a healthy shellfish community and a shellfish community actually exists, the existing use may be described as "a healthy shellfish community." Although the available historical data are lacking or inconclusive on whether shellfish are actually being harvested and consumed, the state may determine whether the existing use includes “shellfish harvesting” by evaluating the quantity, quality, and reliability of the different types of available data that may inform whether shellfish harvesting could have occurred.

As discussed in section 2.1.2.1, the EPA interprets CWA Section 101(a)(2) to refer to protecting water quality not only so that fish, shellfish and other aquatic life thrive, but also to protect them as a food source. Therefore, a shellfish harvesting use is a CWA 101(a)(2) use. If a state or authorized Tribe is considering removing a designated shellfish harvesting use under 40 CFR 131.10(j)(2), it must conduct a UAA to demonstrate that shellfish harvesting is not feasible to attain due to one of the six factors in 40 CFR 131.10(g). It is important to note that if water quality is sufficient to support shellfish harvesting, it may be difficult to demonstrate that the shellfish harvesting use is not feasible to attain, even if no harvesting has or is occurring. However, 40 CFR 131.10(g) does provide for situations where factors other than water quality affect the attainability of a use.

Existing Use Scenario 4-Public Water Supply (PWS)

Since November 28, 1975, Waterbody D has met the human health criteria to support its designated use as a source of PWS. However, there has never been a drinking water intake because the waterbody has never been used as a source of drinking water.

Is PWS an existing use in this scenario?

The EPA would expect the state or authorized Tribe to look at the available historical data and information on both water quality and actual use to determine if it is an existing use. If data are clear that the water quality attained was sufficient to support a PWS use, but no PWS use actually occurred due to the lack of a drinking water intake, then the federal regulation would not require the state or authorized Tribe to determine that the PWS is an existing use. Per 40 CFR 131.10(k)(3), a state or authorized Tribe would need to conduct a use and value demonstration to remove the PWS use (see section 2.3.2.1).

The EPA recognizes that when states and authorized Tribes initially designated uses, they may have designated certain waters or all state and authorized Tribal waters for PWS even though state, authorized Tribal, and local governments never actually used these waters as PWS sources since November 28, 1975. However, in such cases, if data indicates that the water quality would support a PWS use, states and authorized Tribes may find it prudent to retain the PWS designation to protect the water from future stressors and preserve the water as a source of public water in the future. The EPA strongly supports and recommends such an approach. In addition, where the data does not currently support a PWS use, states and authorized Tribes, particularly those in arid climates, may wish to consider retaining or designating a PWS use to restore waters in a manner that would create a valuable future PWS source.

Relationship Between Existing Uses and Designated Uses

As discussed in section 2.1.4 of this chapter, a state or authorized Tribe may adopt an existing use as the designated use where it is the HAU. However, where it is not, states and authorized Tribes must consider designating uses based on the potential of a waterbody to attain a use, and not simply base the use designation on what has been attained (i.e., the existing use).[89]

In implementing WQS regulations, it is important to consider both the distinction and linkage between designated and existing uses. The following is a somewhat simplified scenario to illustrate how they relate to one another.

Although it is important to recognize that the regulatory roles and requirements for existing and designated uses differ, decisions about each are not made in isolation. In the example below, the aquatic community assessments not only helped to identify improvements in the current condition of Blue Lake, but also helped identify the stressors limiting attainment of a higher use. Information about the limiting stressors, therefore, was used to evaluate whether the naturally expected condition would be attainable. As illustrated in the example on the next page, there is a link between existing and designated uses, and information about the current condition can be used to inform future attainability decisions.

[89] 40 CFR 131.10 and 131.12.

Example - Relationship Between Existing Uses and Designated Uses

Blue Lake is a relatively small, natural lake. It is fed by tributary streams and has an outlet stream that connects it to a larger watershed. Beginning in the 1960s, Blue Lake served as a summer retreat and was surrounded by small summer homes with onsite septic systems. Over time, as popularity for the vacation spot increased, the area around it grew, and the small summer community around Blue Lake became incorporated into a larger urban area. The resulting urban nonpoint source pollution, hydrologic modifications to the watershed (increased impervious surfaces), and failure of onsite septic systems caused high nutrient and sediment loadings, organic enrichment, and low dissolved oxygen levels in Blue Lake. This led to an increase in nuisance algae blooms and loss of submerged aquatic vegetation. The state conducted a biological assessment in 1974, which documented poor water quality and that the aquatic community was comprised of low numbers of tolerant invertebrate and fish species. Based on this information, the state designated Blue Lake as a severely limited warm water aquatic life use.

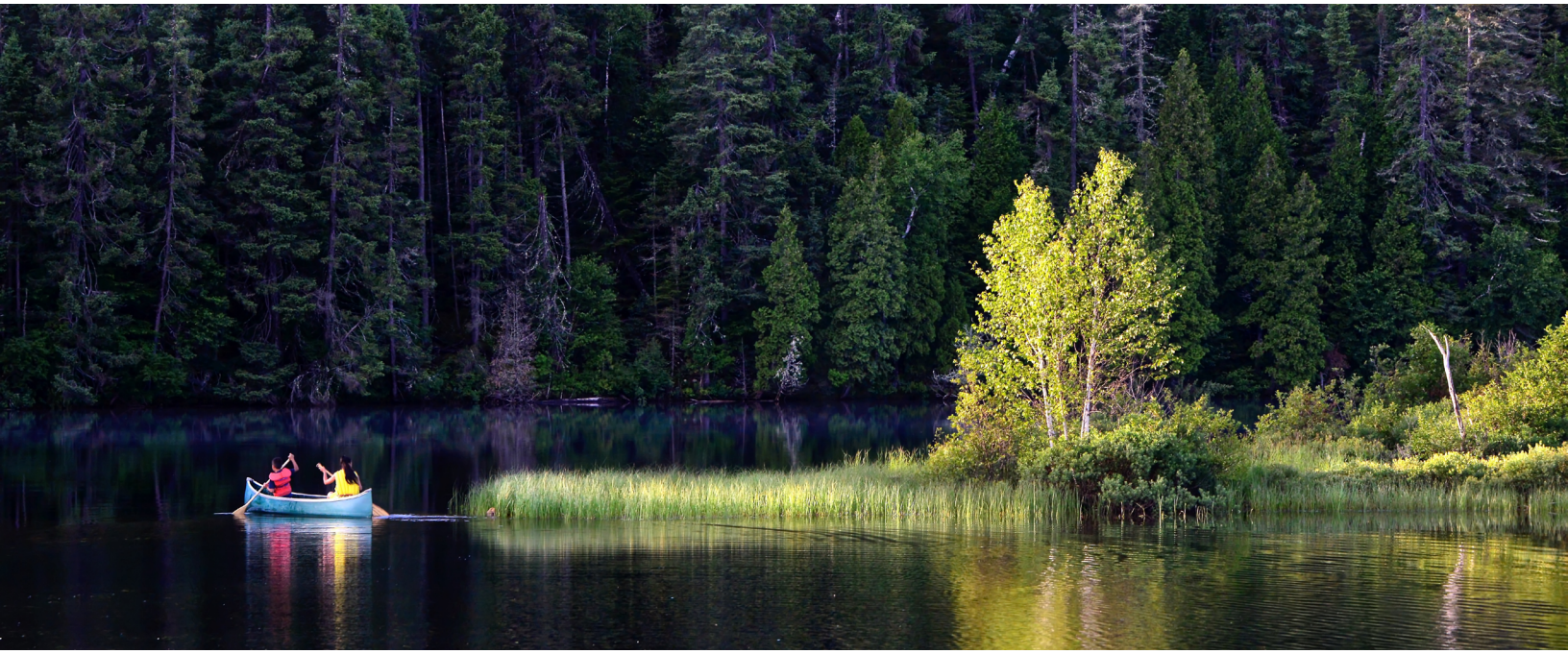
During the 1980s and 1990s, the community reduced pollutant loadings to Blue Lake, and water quality and biological conditions improved. Although pollutant loadings from urban stormwater remained, connecting the homes to a community water and sewer system significantly reduced the organic enrichment and nutrient loadings to Blue Lake. State monitoring data showed an increase in water clarity and reduced algal turbidity, chlorophyll a, and nutrients. Biological assessment data showed a return of expected submerged aquatic vegetation and an improved invertebrate community (rating as a fair quality aquatic community). This information documented the improved condition and helped the state define the existing use as a limited warm water aquatic life use reflecting that it was no longer "severely limited." However, the fish community still lacked a variety of species expected for this type of lake, and water quality still did not meet the criteria for the state's warm water aquatic life use category.

In response to the improved conditions, the state conducted a UAA in 2000 as a part of its triennial review to determine the HAU that should be designated. The UAA demonstrated that implementing a stormwater management program would likely result in attainment of a warm water aquatic life designated use, although it would take several years. The state expects the projected improved water quality levels to support a good quality aquatic community. Despite the fact that the existing use is still a limited warm water aquatic life use and that it will take some time to see improvements, the state determined that a warm water aquatic life designated use was now the HAU and is the appropriate long-term objective for the water. The state revised its WQS from a severely limited aquatic life use to a warm water aquatic life use. See section 2.3 of this chapter for a discussion of the HAU.

2.3.3.2 Effluent Limits and Cost-Effective/Reasonable Best Management Practices (40 CFR 131.10(d) and 40 CFR 131.10(h)(2))

CWA Section 301(b) and 306 specify requirements to control effluent discharges from point sources into waters of the U.S. and establish standards of performance for the control of such discharges, respectively. 40 CFR 131.10(h)(2) specifies that states and authorized Tribes may not remove designated uses if "such uses will be attained by implementing effluent limits required under section 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control." 40 CFR 131.10(d) provides that "at a minimum, uses are deemed attainable if they can be attained by the imposition of effluent limits required under sections 301(b) and 306 of the Act and cost-effective and reasonable best management practices for nonpoint source control." Therefore, states and authorized Tribes must evaluate whether the designated use could be attained by implementing technology-based effluent limitations for point sources and cost effective and reasonable BMPs for nonpoint sources before pursuing a designated use revision.

Nonpoint sources can have a significant impact on whether the designated use and associated criteria for the waterbody are attainable. Many federal, state, Tribal, territorial, and local programs have been successful in mitigating nonpoint source pollution through cost-effective BMPs, community involvement programs, university partnerships, and modeling and technological tools. It is important to note that 40 CFR 131.10(d) and 131.10(h)(2) do not require states and authorized Tribes to implement cost-effective and reasonable BMPs for nonpoint sources. States and authorized Tribes continue to have full discretion on whether to regulate nonpoint sources. However, where implementing cost-effective and reasonable nonpoint source controls would lead to attainment of the designated use, the state or authorized Tribe cannot remove or revise the designated use.



2.3.4 Specific Considerations for Effluent-Modified Waters

The EPA recognizes that some states and authorized Tribes in the Arid West have special challenges when it comes to designated and existing uses as the region's climate may result in limited water supplies. This area of the country tends to have waters where the flow is heavily influenced by the discharge of effluent. Such waters are often referred to as "effluent-modified waters" or "effluent-dominated waters."

> A naturally ephemeral stream is a stream channel that carries flow for a short duration as the result of, and only during, precipitation events, and that has a channel bottom that is always above the groundwater table under normal hydrologic conditions. An example would be a dry wash that only flows with water after a storm or for a limited time following snow melt.

For the purposes of this document, an "effluent-modified water" is a stream that would be a naturally ephemeral stream without the presence of wastewater effluent but has continuous or periodic flows for all or a portion of its reach as the result of the permitted discharge of wastewater. An "effluent-dominated water" is a stream that would be either intermittent or perennial without the presence of wastewater effluent, but whose flow for the majority of the year is primarily composed of the discharge of treated wastewater.

> An intermittent stream is a stream whose channel bottom is alternately above and below the groundwater table for different portions of the year. An intermittent stream does not maintain a perennial surface flow, although permanent pools of standing water may be present at points along the stream. An example would be a stream that generally carries flow for the spring and summer months but is mostly dry during portions of the fall and winter.

The CWA provisions relating to WQS and 40 CFR Part 131 do not distinguish between effluent-modified or effluent-dominated waters and other types of waterbodies. If such waters result in the ability to support 101(a)(2) uses, states and authorized Tribes must protect those uses by designating the 101(a)(2) uses as it would in any other type of waterbody. In addition, once a state or authorized Tribe has designated a use for an effluent-modified or effluent-dominated water, the state or authorized Tribe must follow the same requirements of 40 CFR 131.10 to revise such designated uses.

However, there is no requirement under the CWA provisions relating to WQS or 40 CFR Part 131 that would compel a discharger to discharge in order to protect an existing or designated use. Whether states and authorized Tribes have such authority is a matter of state and authorized Tribal law. As discussed earlier under Factor 2, if a discharger ceases to discharge into the water such that the water reverts to its original condition and can no longer support the applicable designated use, the state or authorized Tribe may then pursue a use revision by conducting a UAA. Where the designated use cannot be attained due to the resulting natural, ephemeral, intermittent, or low-flow conditions or water levels, the state or authorized Tribe may consider whether 40 CFR 131.10(g)(2) precludes attainment of the designated use. As discussed in section 2.3.3.1 of this chapter, the EPA's prohibition on removing existing uses is intended to further the objective in CWA Section 101(a) to "restore and maintain the chemical, physical and biological integrity" of the nation's waters, not to prevent actions to make the water more like its minimally impacted condition. Therefore, the provision at 40 CFR 131.10(h)(1) would not prevent a state or authorized Tribe from removing a designated use that was only attainable due to the presence of an effluent discharge when removing that designated use will reflect the minimally impacted condition for that waterbody.[90]

The following section discusses protection of downstream waters to include considerations in adopting designated uses and criteria as well as available tools to address downstream protection.

[90] The EPA's *Response to Comments, Water Quality Standards Regulatory Revisions, Chapter 3 Issue Category 5: Designated Uses*. Docket # EPA-HQ-OQ-2010-0606. August 2015. Pg. 3-37.

2.4 PROTECTION OF DOWNSTREAM WATERS (40 CFR 131.10(B))

Pursuant to CWA Sections 303 and 101(a), the federal regulation at 40 CFR 131.10(b) requires that "In designating uses of a waterbody and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters." This provision requires states and authorized Tribes to consider the WQS of downstream waters and ensure that their WQS provide for the attainment and maintenance of downstream WQS during the establishment of designated uses and water quality criteria in upstream waters.[91] The EPA interprets the term "downstream" to include both intra- and interstate waters, as well as waters that form a boundary between adjacent jurisdictions.

Designated uses and criteria that provide for attainment and maintenance of downstream WQS are important because they may help avoid situations where downstream waterbody segments become impaired due, either in part or exclusively, to individual or multiple pollution sources located in upstream waterbody segments. Designated uses and criteria that provide for the attainment and maintenance of downstream WQS may help support a more equitable use of any assimilative capacity available to upstream and downstream pollution sources and/or jurisdictions and may facilitate restoration of downstream waters. Furthermore, consideration of downstream protection prevents the shifting of responsibility for pollution reductions from upstream sources or jurisdictions to downstream sources or jurisdictions.[92] In addition, designated uses and criteria that provide for attainment and maintenance of downstream WQS facilitate consistent and efficient implementation and coordination of water quality-related management actions (e.g., water quality monitoring and assessment, development of TMDLs and other watershed-based restoration and protection plans, and NPDES permitting).

The EPA provided additional information about protecting downstream uses in *Protection of Downstream Waters in Water Quality: Frequently Asked Questions* (2014).[93] For additional information and tools to facilitate efforts to protect WQS, see the EPA's *Protection of Downstream Waters in WQS* webpage. For information on developing criteria that provide for the attainment and maintenance of downstream WQS, please see Chapter 3 of this Handbook.

The following section discusses when to reassess designated uses and presents different opportunities to do so: when uses are being attained; during a triennial review; and when developing a TMDL.

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91 The EPA uses the term "upstream" to include "instream" when referring to the waterbody or waterbodies for which states and authorized Tribes develop designated uses or water quality criteria that will ensure the attainment and maintenance of downstream WQS.

92 For more information, see the EPA's Environmental Justice webpage at https://www.epa.gov/environmentaljustice.

93 EPA. 2014. *Protection of Downstream Waters in Water Quality Standards: Frequently Asked Questions*, EPA-820-F-14-001. EPA, Office of Water, Washington, DC 20460. June 2017. https://www.epa.gov/sites/default/files/2018-10/documents/protection-downstream-wqs-faqs.pdf.

2.5 WHEN TO REASSESS DESIGNATED USES

States and authorized Tribes should reassess their designated uses periodically. There are several opportunities for states and authorized Tribes to conduct such reassessments.

2.5.1 When Uses are Presently Being Attained

40 CFR 131.10(i) requires states and authorized Tribes to revise their WQS to reflect the uses actually being attained if the currently applicable WQS specify designated uses less than what is presently being attained.[94] For example, if the currently designated use for a waterbody is limited warm water aquatic life use and data show that a full warm water aquatic life use is presently being attained, 40 CFR 131.10(i) requires the state to revise its WQS to designate that water as a warm water aquatic life use.

A state or authorized Tribe may find, for example, while conducting a UAA or during an antidegradation review (see Chapter 4 of this Handbook for more information) that the current limited warm water aquatic life use is not an accurate depiction of the warm water aquatic life use that is currently attained in the water. In such cases, 40 CFR 131.10(i) would require that the state or authorized Tribe revise its designated uses to include any use currently attained, thus ensuring that designated uses continue to make progress towards the CWA objective. Where such information is found during an antidegradation review conducted by the permitting authority, it is critical that the permitting authority notifies the state or Tribal WQS program that the currently applicable designated use needs to be revised.

It is important to note that the presently attained use identified for purposes of 40 CFR 131.10(i) may not be the existing use, as defined by 40 CFR 131.3(e). While a designated use is specified by the state or authorized Tribe in their WQS, the uses actually being attained may, at times, be better than what was designated. The EPA's regulation defines an existing use as a use actually attained *on or after November 28, 1975*, even if it may not be presently attained. However, a "presently attained" use, as used in 40 CFR 131.10(i), is a use that is being actually attained *at that point in time*. The EPA's regulation at 40 CFR 131.10(i) makes clear that, at minimum, states and authorized Tribes must upgrade the use of a waterbody when any use presently being attained is not protected

[94] Note that the language in 40 CFR 131.10(i) stating, "designated uses less than those which are presently being attained" includes situations where there is no designated use related to the use "actually being attained." For example, 40 CFR 131.10(i) would apply where an aquatic life use is presently being attained in a waterbody but its WQS do not currently specify any aquatic life use designation.

by its current designated uses. (Please see section 2.1.4 of this chapter for further discussion on how existing uses play a role when states and authorized Tribes wish to revise designated uses).

2.5.2 When Conducting a Triennial Review

CWA Section 303(c)(1) and 40 CFR 131.20(a) require that states and authorized Tribes shall from time to time, but at least once every three years, hold public hearings for the purpose of reviewing applicable WQS, and as appropriate, modify and adopt WQS. The regulation specifies that states and authorized Tribes must re-examine any waterbody with WQS that do not include the 101(a)(2) uses during the triennial review to determine if any new information has become available. Pursuant to 40 CFR 131.20(a), if such new information indicates that the 101(a)(2) uses are attainable, states and authorized Tribes must revise their WQS accordingly. For example, if data indicates that the cost of a treatment technology for a pollutant that was the sole reason a warm water aquatic life use was unattainable has decreased such that implementing the technology would no longer cause substantial and widespread social and economic impact, then the state or authorized Tribe would need to revise its WQS to adopt the now attainable warm water aquatic life use. Further, the EPA recommends that if new information becomes available indicating that a use closer to the 101(a)(2) use than what is currently designated is attainable but the 101(a)(2) uses remain unattainable, states and authorized Tribes should still revise their WQS to reflect the HAU.

This iterative process of designating and revising uses as new data and information become available or when the facts of the situation change reinforces the idea that designating uses is not a permanent one-time action. It also ensures that designated uses continue to reflect the HAU for a waterbody and facilitates water quality restoration.

Chapter 7 of this Handbook provides further discussion of triennial review requirements.

2.5.3 When Developing a TMDL

A TMDL identifies the maximum amount of a pollutant that a waterbody can receive and still meet WQS for that particular pollutant. TMDLs also allocate the point and nonpoint sources pollutant loads needed to meet WQS. A state or authorized Tribe could, in the course of developing a TMDL or even after the TMDL is developed, determine that it is not feasible to attain the designated use and proceed with a UAA. The information and analyses done during the TMDL development may inform the UAA and vice versa. The TMDL process can facilitate identification of targets and activities that would need to be implemented to attain the designated use. States and authorized Tribes should periodically review their designated uses consistent with the CWA and 40 CFR Part 131 and especially before making any long-term investments.

To support and anticipate a need for future WQS revisions, it would be beneficial for a state or authorized Tribe to design its baseline monitoring and assessment program to

generate data that could also support use refinements. In addition to documenting the attainment status of surface waters as required by CWA Section 303(d) and describing the quality of those waters as required by CWA Section 305(b), monitoring and assessment programs can generate data needed to support refined designated uses and alert the state or authorized Tribal WQS program to situations where the designated uses applied to a waterbody may be under or overprotective. Data collected within these programs can also help describe the expected conditions of waters and inform the state's or authorized Tribe's determination of the HAU.

In addition to ensuring appropriate targets, coordinating the designated use refinement and TMDL development processes may allow for a more collaborative approach where states or authorized Tribes and stakeholders can discuss issues that may influence both processes. This method provides a forum for all stakeholders to discuss the ways in which to best attain WQS and meet local needs. This approach may be particularly helpful where a UAA can assist in finding other unknown causes or sources of impairment. Finally, with a collaborative approach, states and authorized Tribes can evaluate designated uses and develop TMDLs in a coordinated fashion to spur cross-program information exchange (e.g., water quality data, formulation of multi-stakeholder teams and workgroups). This approach may also yield an assessment of the effectiveness of modeling tools, BMPs, resources, and partnerships. A coordinated process may also allow states and authorized Tribes to combine public participation requirements for establishing a TMDL and revising WQS, if needed.

The following section covers the regulatory approach when revising a designated use.

2.6 REGULATORY APPROACH FOR A DESIGNATED USE REVISION

States and authorized Tribes have flexibility in their regulatory approach for designated use revisions. They could: (1) choose to revise their designated uses and water quality criteria in one regulatory action, or (2) choose to revise their WQS in two or more separate regulatory actions. Any approach needs to be consistent with the CWA and 40 CFR Part 131, which require states and authorized Tribes to provide public notice and at least one public hearing in accordance with 40 CFR 25.5 when establishing, removing, or revising designated uses. For more information on this topic, see section 2.7 of this chapter and Chapter 7 of this Handbook.

1. Revise designated uses and criteria in one regulatory action:

Under this approach, states and authorized Tribes revise their designated uses and associated criteria for the specific waterbody in question in one regulatory action. Thus, when revising a 101(a)(2) use or adopting a subcategory of such a use that requires less stringent criteria than previously applicable, the state or authorized Tribe must conduct a UAA for the waterbody and adopt revised criteria based on sound science that will protect the revised designated use. The state or authorized Tribe must also conduct a public hearing and provide an opportunity for the public to comment on the revised use(s) and associated criteria.

2. Revise designated uses and criteria in two or more regulatory actions:

Under this approach, states and authorized Tribes revise their designated uses and associated criteria in two steps, where the first regulatory action adopts the use category and criteria to protect that use, and the second regulatory action assigns that designated use and associated criteria to the waterbody in question. When a state or authorized Tribe revises a 101(a)(2) use or adopts a subcategory of such a use that requires less stringent criteria than previously applicable, it would conduct the UAA during the second regulatory action. This approach allows the state or authorized Tribe to first establish its use framework and then engage all stakeholders on concerns regarding specific waterbodies through the UAA process. States and authorized Tribes could also consider adopting the use category (without associated criteria) in the first regulatory action and then adopt criteria that protects the designated use when assigning the waters to the use categories in a subsequent regulatory action along with the relevant demonstration needed for the use revision.

Whichever regulatory approach the state or authorized Tribes chooses to use, the EPA recommends states and authorized Tribes engage the EPA throughout the process. Below are the steps to conduct the rulemaking process taken from Step 4 of the UAA process diagram described in section 2.3.1.2 of this chapter.

1. Engage with the EPA to ensure all needed components are included in the UAA package prior to public outreach,
2. Engage the EPA for pre-proposal review and discussion (in addition to being engaged throughout the process, this crucial step allows for yet another opportunity for issues to be raised to be resolved in a timely fashion),
3. Propose use revisions with the supporting UAA and ensure that all public participation requirements have been met (e.g., public notice, public hearing),
4. Address public comments and make any corresponding revisions, and
5. Adopt final use revisions into the WQS regulation and submit them along with the UAA to the EPA.
6. After receiving the complete WQS revisions package including the UAA, the EPA will review the revisions for approval or disapproval. The statutory timeframe for review and EPA action is 60 to 90 days. The use revision becomes effective for CWA purposes upon EPA approval.

The following section discusses how to involve the EPA and stakeholders in the use revision process.

2.7 COORDINATION AND COLLABORATION WITH THE EPA AND STAKEHOLDERS

Consistent with the EPA's policy to promote communication between the EPA and states and authorized Tribes, the EPA encourages states and authorized Tribes to engage with the EPA when revising their designated uses early and often in the process. Engaging with the EPA early could, for example, help interested parties determine whether a UAA is necessary or useful. Although the EPA does not require any specific approach or method for conducting a UAA as long as the methods are scientifically valid, it does encourage states and authorized Tribes to work with the EPA to determine appropriate methods and procedures prior to initiating and carrying out any of the analyses.

Below are ways to involve the EPA and stakeholders in the use revision process.

How to Involve the EPA in the Use Revision Process

Early collaboration between states and authorized Tribes and the EPA's regional representatives will significantly facilitate the UAA and WQS review processes. As discussed in section 2.1.1.3, the EPA could provide assistance when a state or authorized Tribe is developing its UAA protocol. The EPA encourages states and authorized Tribes to engage the EPA at the beginning of the UAA process and to send the draft UAA to the EPA before any WQS revisions are proposed. The EPA can provide early assistance and can address any policy and technical questions that may arise when conducting a UAA or a use and value demonstration.

The EPA may also be able to provide examples of other designated use revisions in waters with a similar fact pattern that could be informative for states and authorized Tribes. Finally, the EPA can help states and authorized Tribes design their monitoring and assessment protocols to evaluate designated use refinements on a statewide or authorized Tribe-wide basis.

How to Involve Stakeholders in the Use Revision Process

Early involvement of key stakeholders who may be affected by any changes to a waterbody's designated use is an important element in the designated use revision process. Stakeholders may include residents, users of the waterbody (e.g., anglers, boaters, kayakers, canoers), governmental agencies at all levels, nonpoint source dischargers, environmental organizations, and the regulated community (e.g., point source dischargers). The public process should be open, thorough, and transparent.

In addition, states and authorized Tribes should make special efforts to ensure meaningful engagement in the designated use revision process with overburdened and underserved communities. This is particularly important where states and authorized Tribes are re-examining waterbodies with WQS that do not include all the uses specified in Section 101(a)(2) of the CWA or are considering removing such uses.

Engaging stakeholders is a two-way communication process. It is critical for the public to have an opportunity to review proposed designated use revisions and supporting analyses to understand the state's or authorized Tribe's goal and rationale for a designated use revision. This can facilitate communicating with the public about the UAA process or the use and value demonstration and when designated use revisions may be beneficial.

It is also critical for the public to have an opportunity to provide input and data for the use revision process. Stakeholders can provide valuable information and it is important for the affected stakeholders to be able to express their own goals and visions for the future use of the water resource. They play a key role in providing information to determine the existing and HAUs of the waterbody in question and can also be instrumental in highlighting any potential unintended consequences associated with a designated use revision (e.g., economic impacts, safety concerns). In many cases, stakeholders can provide a historical perspective on past uses of the water, observed causes and sources of impairment, and/or observed improvements in water quality and aquatic communities. In addition, water quality or biological data may be available through community monitoring efforts and academic institutions. States and authorized Tribes should consider all input received and document both the input and their decisions. This will also help in developing the rule revisions if the UAA or use and value demonstration shows a designated use revision is warranted and will assist the EPA's review of the revised WQS.

The EPA's *Improving the Effectiveness of the Use Attainability Analysis (UAA) Process, Memorandum from Ephraim S. King* (2006) has helped reinforce the importance of coordination efforts between the EPA, states and authorized Tribes, and key stakeholders, thereby leading to more successful outcomes.

2.8 TRIBAL RESERVED RIGHTS

The EPA promulgated "Water Quality Standards Regulatory Revisions To Protect Tribal Reserved Rights" on May 2, 2024.[95] The contents of this WQS Handbook chapter as it applies to 40 CFR 131.9 are appropriate for consideration during any state or authorized Tribal WQS adoption, revision, and implementation as well as the implementation of federally promulgated WQS. For more information on protecting Tribal reserved rights, see the *Revising the Federal Water Quality Standards Regulations to Protect Tribal Reserved Rights* webpage.[96]

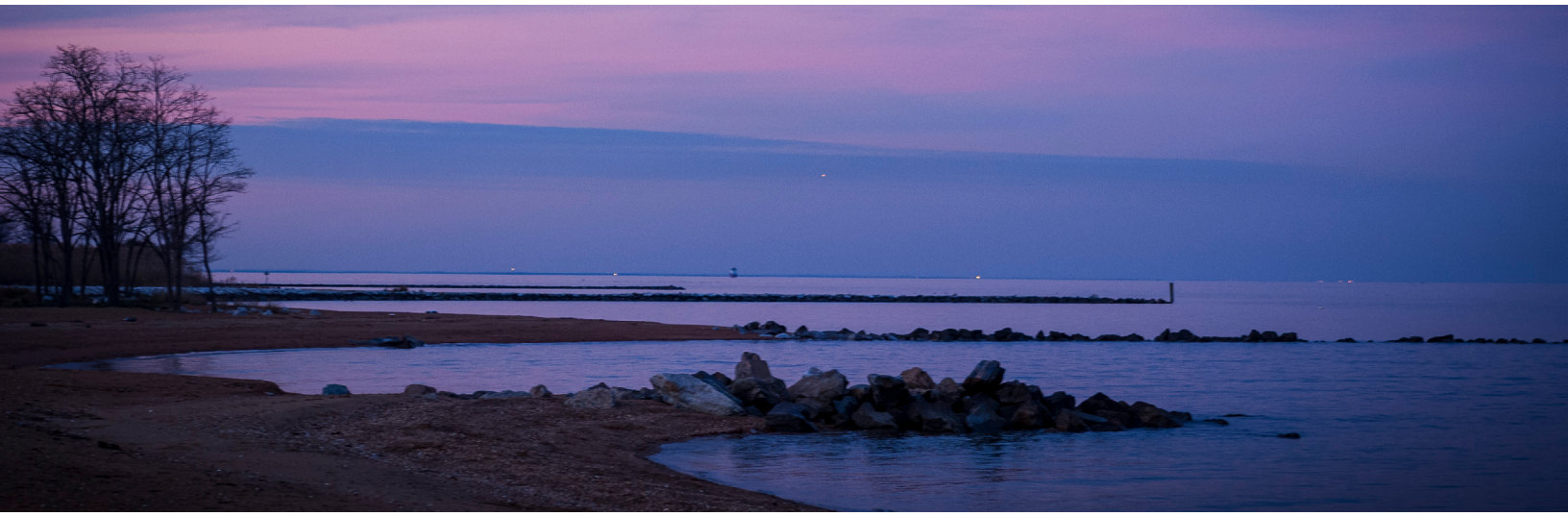
[95] *Water Quality Standards Regulatory Revisions to Protect Tribal Reserved Rights*, 89 Fed. Reg. 35717 (May 2, 2024).
[96] https://www.epa.gov/wqs-tech/revising-federal-water-quality-standards-regulations-protect-tribal-reserved-rights.

2.9 FEDERAL PROMULGATIONS FOR STATES AND TRIBES

As a matter of policy, the EPA prefers that states and authorized Tribes adopt their own WQS. However, under Section 303(c)(4) of the CWA and 40 CFR 131.22, the EPA must promptly propose federal WQS if either of the following conditions occur:

- The EPA determines that a new or revised WQS submitted by a state or authorized Tribe is not consistent with CWA requirements and 40 CFR Part 131, and the state or authorized Tribe does not adopt the changes the EPA specifies within 90 days from that disapproval.
- In any case where the EPA Administrator determines that a new or revised WQS is necessary to meet CWA requirements and 40 CFR Part 131.

In either situation, should the EPA propose federal WQS, it must promulgate federal WQS within 90 days of such a proposal unless the state or authorized Tribe adopts, and the EPA approves the WQS prior to the deadline. The EPA's promulgation of federal WQS for states and Tribes can be found at 40 CFR Part 131, Subpart D (see Chapter 6 of this Handbook for more information on federal promulgations). Please see the EPA's Federally Promulgated Water Quality Standards for Specific States, Territories, and Tribes webpage, for a full listing of the EPA's federal promulgations.[97] The contents of this WQS Handbook chapter are generally appropriate for any adoption, revision, and implementation of state, Tribal, or federally promulgated WQS.



[97] https://www.epa.gov/wqs-tech/federally-promulgated-water-quality-standards-specific-states-territories-and-tribes.