



## Beneficial Uses

A water quality standard defines the water quality goals for a water, in part by designating the use or uses to be made of the water. The beneficial use of a water body must consider its actual use, the ability of the water to support in the future a use that is not currently supported, and the basic goal of the Clean Water Act that all waters support aquatic life and recreation where attainable. Idaho must designate its uses accordingly.

A **designated use** is a beneficial use assigned to a specific water body in Idaho water quality rules. The Clean Water Act requires Idaho to recognize **existing uses**, which are uses that are or were actually attained in a water body on or after November 28, 1975, whether or not they are designated uses. In some cases, a water body does not have uses designated. For these water bodies, Idaho applies a **presumed use protection**, meaning the water body will be protected for cold water aquatic life and contact recreation.

In designating uses, Idaho considers the use and value of the water body for supporting aquatic life; for public water supply; for protection of fish, shellfish, and wildlife; and for recreational, agricultural, industrial, and navigational purposes. While a water body may have competing beneficial uses, federal law requires DEQ to protect the most sensitive of the beneficial uses.

Idaho evaluates the suitability of a water body for the uses based on the following:

- Physical, chemical, and biological characteristics
- Geographical setting and scenic qualities
- Economic and public values

### **Beneficial Uses Identified in Idaho's Water Quality Standards**

In general, different water bodies, and different portions of any given water body, are assigned various combinations of designated uses. A segment will almost always be classified for more than one designated use. The following are the beneficial uses identified in Section 100 of Idaho's [water quality standards](#) (IDAPA 58.01.02.100).

#### ***Aquatic Life***

The standards associated with this use are designed to protect animal and plant species that live in the water. Some pollutants or conditions that affect aquatic life are water temperature,

dissolved oxygen levels, and concentrations of toxic substances such as ammonia, metals, and pesticides. Therefore, Idaho's water quality standards set criteria for these pollutants or conditions to protect against adverse effects due to human activities.

The following are subcategories for the aquatic life designation:

- **Cold water:** water quality appropriate for protecting and maintaining a viable aquatic life community for coldwater species
- **Salmonid spawning:** waters that provide or could provide a habitat for active self-propagating populations of salmonid fishes
- **Seasonal cold water:** water quality appropriate for protecting and maintaining a viable aquatic life community of cool and coldwater species, where coldwater aquatic life may be absent during, or tolerant of, seasonally warm temperatures
- **Warm water:** water quality appropriate for protecting and maintaining a viable aquatic life community for warm-water species.
- **Modified:** water quality appropriate for an aquatic life community that is limited due to one or more conditions that preclude attaining reference streams or conditions

Except for the modified use, the main distinction between the subclassifications of aquatic life is different temperature criteria. In addition to the subclassifications of aquatic life, the cold water aquatic life use has subcategories of Bull Trout and Kootenai River Sturgeon with temperature criteria that are different than the cold water aquatic life temperature criterion. These subcategories apply only in specific areas of the state (e.g., the Kootenai River for the sturgeon criterion).

### ***Recreation***

Recreational uses are divided into primary contact and secondary contact recreation. Both of these classifications have the same bacteria criterion ([IDAPA 58.01.02.251](#)), which, in part, protects people from gastrointestinal illness due to incidental ingestion of the water they are recreating in or on.

- **Primary contact recreation** applies to waters where people engage in activities that involve immersion in, and likely ingestion of, water, such as swimming, waterskiing, and skin diving.
- **Secondary contact recreation** applies to waters where people engage in activities where ingestion of water may occasionally occur, such as fishing, boating, wading, and infrequent swimming.

### ***Water Supply***

Standards associated with this use indicate whether water from a lake or river is suitable for use as a source for a water supply system. The domestic water supply use protects waters used as sources for public drinking water from toxic substances and turbidity. However, designation as a domestic water supply does not necessarily mean the water should be consumed without treatment. Public drinking water is treated before it is delivered to the tap; a separate set of standards governs treated drinking water. Indicators used to measure the safety or usability of surface water bodies as sources for drinking water include turbidity, which may interfere with

treatment, and the presence or absence of toxic substances such as metals or pesticides.

The following are subclassifications for the water supply designation:

- **Domestic:** water quality appropriate for drinking water supplies.
- **Agricultural:** water quality appropriate for irrigating crops or providing drinking water for livestock. This use applies to all surface waters of the state.
- **Industrial:** water quality appropriate for industrial processes. This use applies to all surface waters of the state.

### ***Wildlife Habitats***

The standards associated with this use are designed to protect water quality appropriate for wildlife habitat. This use applies to all surface waters of the state.

### ***Aesthetics***

This use applies to all surface waters of the state.

## **Beneficial Use Support**

DEQ determines whether a water body fully supports its beneficial uses by evaluating whether the applicable water quality standards and criteria are being achieved and whether a healthy, balanced biological community is present. DEQ's *Water Body Assessment Guidance* describes a process that uses biological and aquatic habitat parameters, as well as traditional water quality data, to assist in assessing beneficial use status. Bioassessment is particularly useful in judging compliance with Idaho's narrative criteria. The following are bioassessment parameters that DEQ uses to assess beneficial use status. These are merely parameters and should not be treated as water quality criteria or applied as water quality standards.

### ***Aquatic Habitat Parameters***

- Stream width
- Stream depth
- Stream shade
- Sediment impacts
- Bank stability
- Other physical characteristics of the stream that affect habitat for fish, insects, or other aquatic life

### ***Biological Parameters***

- Distribution and relative abundance of aquatic insects including Ephemeroptera, Plecoptera, and Trichoptera (EPT)
- Level of organic enrichment
- Relative abundance of functional feeding groups of aquatic insects
- Variety and abundance of fish and other aquatic life, such as aquatic plants

## Changing a Designated Use

The designated use of a water body that is shown to not be an existing use may be changed if it is not attainable. A **use attainability analysis (UAA)** is a structured scientific assessment of the beneficial uses a water body could support, given application of required effluent limits and implementation of cost-effective and reasonable best management practices.