**WATER LAW DEFINITIONS**

CONSUMPTIVE WATER USE:

**Consumptive water use** is water removed from available supplies without return to a [water resource](https://en.wikipedia.org/wiki/Water_resources) system (e.g., water used in manufacturing, agriculture, and [food preparation](https://en.wikipedia.org/wiki/Cooking) that is not returned to a stream, river, or [water treatment](https://en.wikipedia.org/wiki/Water_treatment) plant). [Evaporation](https://en.wikipedia.org/wiki/Evaporation) from the surface of the earth into clouds of water in the air which then falls to the ground as "rain" is excluded from this model. Crop consumptive water use is the amount of water transpired during plant growth plus what evaporates from the soil surface and foliage in the crop area. The portion of water consumed in crop production depends on many factors, especially the [irrigation](https://en.wikipedia.org/wiki/Irrigation) technology.

HYDROLOLIC CONTINUITY:

This is not a simple concept, but for most of our purposes the following definition will suffice: "the interconnection between ground water (aquifers) and surface water sources.” An aquifer is in hydraulic continuity with wetlands, lakes, streams, rivers or other surface water bodies whenever it is discharging to these water bodies. Continuity also exists when an aquifer is being recharged by surface water. Hydraulically connected ground water and surface water cannot be considered as independent resources. A withdrawal from one will have some effect on the other" (Draft Hydraulic Continuity Policy Paper, The Water Resources Forum). Under RCW 90.44, hydraulic continuity is described as any underground water that is "part of or tributary to the source of any stream or lake." Any activities that impact recharge to ground water (e.g., changes to infiltration, evapotranspiration, or runoff), may have an impact on hydraulically connected surface water. See this slide presentation for more precise information: <https://www.uidaho.edu/-/media/UIdaho-Responsive/Files/law/law-review/symposium/one-source/paschal-osborn-rachael-ppt.ashx?la=en&hash=D1DEAFB685353CD83893667EFD256948DD59984F>

INTERRUPTIBLE:

An interruptible water right is one that — because it is junior in priority to other water rights, including instream flow levels — cannot be reliably used year-round. Senior water rights must be satisfied first, so more junior rights may be limited at certain times of the year. When a river falls below the instream flow levels, all junior water rights are subject to being turned off (interrupted) until the River meets the regulatory flow levels.

IRRP:

INSTREAM RESOURCES PROTECTION PROGRAM (Laws and Regulations passed to protect Rivers)

JUNIOR AND SENIOR WATER RIGHTS AND THE BASICS OF HOW WATER RIGHTS ARE DETERMINED

Washington State Department of Ecology is responsible for managing the water resources of the state, including issuing the right to use water as well as protecting the instream resources for the benefit of the public. We manage a portfolio of over 230,000 active water right certificates, permits, applications, and claims to help meet the state's many water supply needs. Many of these permits have been in existence since the late 1800s. Before we can issue a water right permit, the proposed use must meet a four-part test:

1. Water must be available (both physically **and** legally)
2. Water must be used beneficially
3. Water use must be in the public's interest
4. Water use must not impair another existing use

Washington state follows the doctrine of prior appropriation, which means that the first users have rights senior to those issued later. We call this "first in time, first in right." If a water shortage occurs, senior rights are satisfied first and the junior right holders can be curtailed.

When we issue a water right permit, it is a permit to develop a water right. It is not a water right until the water has been put to full use and we issue a certificate of water right. A water right will remain in good standing as long as you continue to exercise the right.

MITIGATION:

Generally, **mitigation** means offsetting or countering the adverse environmental effects that developing the land can have on wetlands, rivers, streams, lakes, and other aquatic habitats. Wetland mitigation usually occurs in a sequence of steps or actions.

MONTE CARLO SIMULATION:

Monte Carlo simulation is a computerized mathematical technique that allows people to account for risk in quantitative analysis and decision making. The technique is used by professionals in such widely disparate fields as finance, project management, energy, manufacturing, engineering, research and development, insurance, oil & gas, transportation, and the environment.

Monte Carlo simulation furnishes the decision-maker with a range of possible outcomes and the probabilities they will occur for any choice of action.. It shows the extreme possibilities—the outcomes of going for broke and for the most conservative decision—along with all possible consequences for middle-of-the-road decisions.

The technique was first used by scientists working on the atom bomb; it was named for Monte Carlo, the Monaco resort town renowned for its casinos. Since its introduction in World War II, Monte Carlo simulation has been used to model a variety of physical and conceptual systems.

# NON-CONSUMPTIVE WATER USE

|  |  |
| --- | --- |
|  |  |

Nonconsumptive water use includes water withdrawn for use that is not consumed, for example, water withdrawn for purposes such as hydropower generation. This also includes uses such as boating or fishing where the water is still available for other uses at the same site. The terms Consumptive Use and Nonconsumptive Use are traditionally associated with water rights and water use studies, but they are not completely definitive. No typical consumptive use is 100 percent efficient; there is always some return flow associated with such use either in the form of a return to surface flows or as a ground water recharge. Nor are typically nonconsumptive uses of water entirely nonconsumptive. There are evaporation losses, for instance, associated with maintaining a reservoir at a specified elevation to support fish, recreation, or hydro-power, and there are conveyance losses associated with maintaining a minimum streamflow in a river, canal, or ditch.

|  |  |
| --- | --- |
| **OCPI**  Per RCW 90.54.020(3) below, see details of this Definition for Overriding Considerations of the Public Interest. The Definition it includes protecting the natural environment – but this is rarely mentioned |  |

### RCW [90.54.020](http://app.leg.wa.gov/RCW/default.aspx?cite=90.54.020)

### General declaration of fundamentals for utilization and management of waters of the state.

Utilization and management of the waters of the state shall be guided by the following general declaration of fundamentals:

(1) Uses of water for domestic, stock watering, industrial, commercial, agricultural, irrigation, hydroelectric power production, mining, fish and wildlife maintenance and enhancement, recreational, and thermal power production purposes, and preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state, are declared to be beneficial.

(2) Allocation of waters among potential uses and users shall be based generally on the securing of the maximum net benefits for the people of the state. Maximum net benefits shall constitute total benefits less costs including opportunities lost.

(3) The quality of the natural environment shall be protected and, where possible, enhanced as follows:

(a) Perennial rivers and streams of the state shall be retained with base flows necessary to provide for preservation of wildlife, fish, scenic, aesthetic and other environmental values, and navigational values. Lakes and ponds shall be retained substantially in their natural condition. Withdrawals of water which would conflict therewith shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served.

(b) Waters of the state shall be of high quality. Regardless of the quality of the waters of the state, all wastes and other materials and substances proposed for entry into said waters shall be provided with all known, available, and reasonable methods of treatment prior to entry. Notwithstanding that standards of quality established for the waters of the state would not be violated, wastes and other materials and substances shall not be allowed to enter such waters which will reduce the existing quality thereof, except in those situations where it is clear that overriding considerations of the public interest will be served. Technology-based effluent limitations or standards for discharges for municipal water treatment plants located on the Chehalis, Columbia, Cowlitz, Lewis, or Skagit river shall be adjusted to reflect credit for substances removed from the plant intake water if:

(i) The municipality demonstrates that the intake water is drawn from the same body of water into which the discharge is made; and

(ii) The municipality demonstrates that no violation of receiving water quality standards or appreciable environmental degradation will result.

(4) The development of multipurpose water storage facilities shall be a high priority for programs of water allocation, planning, management, and efficiency. The department, other state agencies, local governments, and planning units formed under \*section 107 or 108 of this act shall evaluate the potential for the development of new storage projects and the benefits and effects of storage in reducing damage to stream banks and property, increasing the use of land, providing water for municipal, industrial, agricultural, power generation, and other beneficial uses, and improving streamflow regimes for fisheries and other instream uses.

(5) Adequate and safe supplies of water shall be preserved and protected in potable condition to satisfy human domestic needs.

(6) Multiple-purpose impoundment structures are to be preferred over single-purpose structures. Due regard shall be given to means and methods for protection of fishery resources in the planning for and construction of water impoundment structures and other artificial obstructions.

(7) Federal, state, and local governments, individuals, corporations, groups and other entities shall be encouraged to carry out practices of conservation as they relate to the use of the waters of the state. In addition to traditional development approaches, improved water use efficiency, conservation, and use of reclaimed water shall be emphasized in the management of the state's water resources and in some cases will be a potential new source of water with which to meet future needs throughout the state. Use of reclaimed water shall be encouraged through state and local planning and programs with incentives for state financial assistance recognizing programs and plans that encourage the use of conservation and reclaimed water use, and state agencies shall continue to review and reduce regulatory barriers and streamline permitting for the use of reclaimed water where appropriate.

(8) Development of water supply systems, whether publicly or privately owned, which provide water to the public generally in regional areas within the state shall be encouraged. Development of water supply systems for multiple domestic use which will not serve the public generally shall be discouraged where water supplies are available from water systems serving the public.

(9) Full recognition shall be given in the administration of water allocation and use programs to the natural interrelationships of surface and groundwaters.

(10) Expressions of the public interest will be sought at all stages of water planning and allocation discussions.

(11) Water management programs, including but not limited to, water quality, flood control, drainage, erosion control and storm runoff are deemed to be in the public interest.

**ROE:**

Record of Examination or the details supporting a water right permit

**WWTP:**

Wastewater Treatment Plant