

§ 131.39 Oregon.*(a) Definitions.*

(1) *Natural condition* means water temperatures that would exist in the absence of human activities that alter water temperature.

(2) *Seven-day average of daily maximum, or 7DADM*, means the average of daily maximum temperatures over a seven-day period.

(3) *Cold water refugia* means waters, defined either spatially or temporally, that are more than 2°C/4°F colder than the daily maximum temperature at the nearest location in the main river channel.

(b) Designated Uses for Salmonids.

The maps at <http://www.epa.gov/r10earth/federaloregonwqs.htm> identify the salmonid designated uses for: bull trout juvenile rearing and spawning, salmon and steelhead core juvenile rearing, salmon and trout juvenile rearing and migration, salmon and steelhead migration, and salmon and steelhead spawning through fry emergence in each of the indicated water bodies or segments. The salmon and steelhead spawning through fry emergence use is designated only for the time period indicated in the map legends (fall through either May 15 or June 15); all other uses apply throughout the year. [You may also view a copy of the maps at EPA Region 10's Oregon Operations Office, 811 SW. 6th Avenue, Portland, Oregon, 97204.] Where EPA designates bull trout rearing and spawning, EPA also designates salmon and steelhead core juvenile rearing. Where EPA designates salmon and steelhead core juvenile rearing, EPA also designates salmon and trout juvenile rearing and migration. Where EPA designates salmon and trout juvenile rearing and migration, EPA also designates salmon and steelhead migration.

(c) Temperature Criteria for Salmonid Uses. The following water quality criteria for temperature, with temperatures expressed as a 7DADM, apply in water bodies or segments designated for the following uses, except as provided in paragraph (d) of this section:

(1) Bull Trout Juvenile Rearing and Spawning: 12°C/54°F.

(2) Salmon and Steelhead Core Juvenile Rearing: 16°C/61°F.

(3) Salmon and Trout Juvenile Rearing and Migration: 18°C/64°F.

(4) Salmon and Steelhead Migration: 20°C/68°F. In addition, the river must have well-distributed cold water refugia. Well-distributed cold water refugia means cold water refugia that are sufficiently distributed so as to allow salmon and steelhead to migrate

through a river segment or rear without significant adverse effects from high water temperatures.

(5) Salmon and Steelhead Spawning through Fry Emergence: 13°C/55°F.

(d) Alternative Temperature Criteria for Salmonid Uses. The following criteria, where applicable, apply instead of the criteria provided in paragraph (c) of this section:

(1) *Natural Conditions.* Where EPA identifies a water body or segment where the water temperature under natural conditions exceeds the applicable criterion set forth in paragraph (c) of this section, the natural condition so estimated shall be the applicable water quality criterion. This determination must be based on a scientifically-defensible method utilizing best available data. Where the natural temperature conditions so estimated exceed 20°C/68°F, the river must have well-distributed cold water refugia. Well-distributed cold water refugia means cold water refugia that are sufficiently distributed so as to allow salmon and steelhead to migrate through a river segment or rear without significant adverse effects from high water temperatures.

(2) *Existing Cold Waters.* In a water body or segment in which salmonid species that are listed as threatened or endangered under the Endangered Species Act are present, and where available data and information within the 10-year period preceeding the date of publication of the final rule in the **Federal Register** reflect the temperature in the water body and demonstrate that the warmest summer maximum 7DADM temperature is colder than the applicable numeric criterion. In these cases, the summer maximum 7DADM temperature shall be the applicable water quality criterion, unless a complete data record of 10 years is available, in which case the maximum 7DADM temperature for the year with the second highest maximum 7DADM shall be the applicable criterion.

(e) Temperature Standards Implementation. (1) Heat Load Limit. In water bodies that exceed the applicable temperature criteria, attainment determinations of these water quality standards for purposes of NPDES permitting and TMDL establishment shall allow for insignificant additions of heat by anthropogenic sources to water bodies or segments that exceed the applicable temperature criteria set forth in paragraphs (c) and (d) of this section, subject to the conditions in paragraph (e)(2) of this section. For the purposes of this paragraph, such additions of heat may be deemed insignificant only if all such additions cumulatively, at the

point of maximum impact, cause the water temperature to exceed the applicable criterion by 0.3°C/0.5°F or less, assuming complete mixing. In addition, in water bodies that exceed the applicable temperature criterion, no single NPDES point source may cause, by itself, a temperature increase of 0.3°C/0.5°F or more above the applicable criterion assuming complete mixing with 25 percent of the river flow.

(2) *Thermal Plume Impacts.* In addition to otherwise applicable numeric or narrative criteria, the following conditions may not be exceeded as a result of a discharge from a NPDES point source discharge, or a combination of NPDES point sources discharges:

(i) *Lethality.* The maximum temperature within the thermal plume caused by a point source, or a combination of point sources, may not exceed 32°C/90°F after two seconds of plume travel from the point of discharge.

(ii) *Thermal Shock.* No more than five percent of the cross-sectional area of a river or creek may exceed 25°C/77°F.

(iii) *Migration Blockage.*

(A) If the temperature immediately upstream of a point source discharge, or a combination of point source discharges, is less than 21°C/70°F, then no more than 25 percent of the cross-sectional area of the receiving water may exceed 21°C/70°F.

(B) If the temperature immediately upstream of a point source discharge, or a combination of point source discharges, is at or above 21°C/70°F, then no more than 25 percent of the cross-sectional area of the receiving water may be more than 0.3°C/0.5°F warmer than the upstream temperature.

(iv) *Spawning Impacts.* In active spawning or egg incubation areas:

(A) Water temperatures may not exceed 13°C/55°F if they would not have done so in the absence of point source discharges; and

(B) Where water temperatures would have exceeded 13°C/55°F in the absence of point source discharges, water temperatures may not exceed 0.3°C/0.5°F above the temperatures they would have achieved in the absence of point source discharges.

(v) *Cold Water Refugia Impacts.* A thermal plume shall not increase the temperature of spatial cold water refugia by more than 0.3°C/0.5°F.

(3) *Unusually Warm Weather Conditions.* A water body shall not be water quality-limited for CWA section 303(d) listing purposes if the maximum 7DADM temperature for the year with the second highest maximum 7DADM