Presented below are water quality standards that are in effect for Clean Water Act purposes.

EPA is posting these standards as a convenience to users and has made a reasonable effort to assure their accuracy. Additionally, EPA has made a reasonable effort to identify parts of the standards that are not approved, disapproved, or are otherwise not in effect for Clean Water Act purposes.

June 22, 2021

Chapter 340, Division 41:
Water Quality Standards: Beneficial Uses, Policies, and Criteria for Oregon

(Effective March 12, 2021)

The attached standards are in effect for Clean Water Act purposes with the exception of the following provisions:

- April 13, 2020 Provision under review
    - OAR 340-041-0345(6): Multiple Discharger Variance for Mercury
- August 8, 2013 Disapprovals
    - OAR 340-041-0028(8): Natural Conditions Criteria. Where the department determines that the natural thermal potential of all or a portion of a water body exceeds the biologically-based criteria in section (4) of this rule, the natural thermal potential temperatures supersede the biologically-based criteria, and are deemed to be the applicable temperature criteria for that water body.
    - OAR 340-041-0007(2): Where a less stringent natural condition of a water of the State exceeds the numeric criteria set out in this Division, the natural condition supersedes the numeric criteria and becomes the standard for that water body. However, there are special restrictions, described in OAR 340 041-0004(9)(a)(D)(iii), that may apply to discharges that affect dissolved oxygen.
- February 20, 2009 Disapprovals
    - The stratified waters rule (OAR 340-041-0061(11))
    - The definition for managed lakes since EPA views the definition as intrinsically linked to the corresponding stratified waters rule. The term *managed lakes* is not used elsewhere in Oregon's WQS.

Department of Environmental Quality

Chapter 340

Division 41
WATER QUALITY STANDARDS: BENEFICIAL USES, POLICIES, AND CRITERIA FOR OREGON

340-041-0001
Preface

(1) The rules that follow, together with the applicable laws of the State of Oregon and the applicable regulations of the Environmental Quality Commission (the Commission), set forth Oregon's plans for management of the quality of public waters within the State of Oregon.

(2) Under this plan, the Department of Environmental Quality will continue to manage water quality by evaluating discharges and activities, whether existing or a new proposal, on a case-by-case basis, based on best information currently available and within the limiting framework of minimum standards, treatment criteria and policies which are set forth in the plan.

(3) The Commission recognizes that the deadlines for adoption of this plan prevented thorough involvement by local government in the development and review of the plan. Accordingly, the Department will review the contents of this plan with affected local governments and will use their comments and suggestions in preparing amendments for consideration by the Commission not later than December, 1977. At a minimum, the processes of coordination with local governments will consist of the following elements:

(a) Work with county coordinators to set up meetings to explain the plan to groups of local governments and solicit their comments;

(b) Provide copies of the plan and supporting documents to any affected local governments who have not already received them;

(c) Seek input from councils of governments;

(d) Upon request, visit local level governments to discuss the plan;

(e) Work with Statewide associations of local governments and others to inform local governments of the plan.

Statutory/Other Authority: ORS 468
Statutes/Other Implemented: ORS 468.015, 468.035 & 468B.015
History:
DEQ 17-2003, f. & cert ef. 12-9-03
DEQ 128, f. & ef. 1-21-77

340-041-0002
Definitions

Definitions in this rule apply to all basins unless context requires otherwise.

(1) "401 Water Quality Certification" means a determination made by DEQ that a dredge and fill activity, private hydropower facility, or other federally licensed or permitted activity that may result in a discharge to waters of the state has adequate terms and conditions to prevent an exceedance of water quality criteria. The federal permit in question may not be issued without this state determination in accordance with the Federal Clean Water Act, section 401 (33 USC 1341).

(2) "Ambient Stream Temperature" means the stream temperature measured at a specific time and place. The selected location for measuring stream temperature must be representative of the stream in the vicinity of the point being measured.

(3) "Anthropogenic," when used to describe "sources" or "warming," means that which results from human activity.

(4) "Applicable Criteria" means the biologically based temperature criteria in OAR 340-041-0028(4), the superseding cold water protection criteria in 340-041-0028(11) or the superseding natural condition criteria in 340-041-0028(8). The applicable criteria may also be site-specific criteria approved by U.S. EPA. A subbasin may have a combination of applicable temperature criteria derived from some or all of these numeric and narrative criteria.

(5) "Appropriate Reference Site or Region" means a site on the same water body or within the same basin or ecoregion that has similar habitat conditions and represents the water quality and biological community attainable within the areas of concern.

(6) "Aquatic Species" means plants or animals that live at least part of their life cycle in waters of the state.

(7) "Basin" means a third-field hydrologic unit as identified by the U.S. Geological Survey.

(8) "BOD" means 5-day, 20°C Biochemical Oxygen Demand.

(9) "Cold-Water Aquatic Life" means aquatic organisms that are physiologically restricted to cold water including, but not limited to, native salmon, steelhead, mountain whitefish, char including bull trout, and trout.

(10) "Cold Water Refugia" means those portions of a water body where or times during the diel temperature cycle when the water temperature is at least 2 degrees Celsius colder than the daily maximum temperature of the adjacent well-mixed flow of the water body.

(11) "Commission" or “EQC” means the Oregon Environmental Quality Commission.

(12) "Cool Water Aquatic Life" means aquatic organisms that are physiologically restricted to cool waters including, but not limited to, native sturgeon, Pacific lamprey, suckers, chub, sculpins and certain species of cyprinids (minnows.)

(13) "Core Cold Water Habitat Use" means waters expected to maintain temperatures within the range generally considered optimal for salmon and steelhead rearing, or that are suitable for bull trout migration, foraging and sub-adult rearing that occurs during the summer. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(14) "Critical Habitat" means those areas that support rare, threatened, or endangered species or serve as sensitive spawning and rearing areas for aquatic life as designated by the U.S. Fish and Wildlife

Service or National Oceanic and Atmospheric Administration-Fisheries according to the Endangered Species Act (16 U.S. Code § 1531).

(15) "Daily Mean" for dissolved oxygen means the numeric average of an adequate number of data to describe the variation in dissolved oxygen concentration throughout a day, including daily maximums and minimums. For calculating the mean, concentrations in excess of 100 percent of saturation are valued at the saturation concentration.

(16) "Department" or "DEQ" means the Oregon State Department of Environmental Quality.

(17) "Designated Beneficial Use" means the purpose or benefit to be derived from a water body as designated by the Water Resources Department or the Water Resources Commission.

(18) "DO" means dissolved oxygen.

(19) "Ecological Integrity" means the summation of chemical, physical, and biological integrity capable of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

(20) "Epilimnion" means the seasonally stratified layer of a lake or reservoir above the metalimnion; the surface layer.

(21) "Erosion Control Plan" means a plan containing a list of best management practices to be applied during construction to control and limit soil erosion.

(22) “Estuarine Waters” means all mixed fresh and oceanic waters in estuaries or bays from the point of oceanic water intrusion inland to a line connecting the outermost points of the headlands or protective jetties.

(23) "High Quality Waters" means those waters that meet or exceed levels necessary to support the propagation of fish, shellfish and wildlife; recreation in and on the water; and other designated beneficial uses.

(24) "Hypolimnion" means the seasonally stratified layer of a lake or reservoir below the metalimnion; the bottom layer.

(25) "Industrial Waste" means any liquid, gaseous, radioactive, or solid waste substance or a combination thereof resulting from any process of industry, manufacturing, trade, or business or from the development or recovery of any natural resources.

(26) "In Lieu Fee" means a fee collected by a jurisdiction in lieu of requiring construction of onsite stormwater quality control facilities.

(27) "Intergravel Dissolved Oxygen" (IGDO) means the concentration of oxygen measured in the water within the stream bed gravels. Measurements should be taken within a limited time period before emergence of fry.

(28) "Jurisdiction" means any city or county agency in the Tualatin River and Oswego Lake subbasin that regulates land development activities within its boundaries by approving plats or site plans or issuing permits for land development.

(29) "Land Development" means any human-induced change to improved or unimproved real estate including, but not limited to, construction, installation or expansion of a building or other structure; land division; drilling; or site alteration such as land surface mining, dredging, grading, construction of earthen berms, paving, improvements for use as parking or storage, excavation or clearing.

(30) "Load Allocation" or "LA" means the portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading that may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Whenever possible, natural and nonpoint source loads should be distinguished.

(31) "Loading Capacity" or "LC" means the greatest amount of loading that a water body can receive without violating water quality standards.

(32) "Low Flow Period" means the flows in a stream resulting primarily from groundwater discharge or base flows augmented from lakes and storage projects during the driest period of the year. The dry weather period varies across the state according to climate and topography. Wherever the low flow period is indicated in Water Quality Management Plans, this period has been approximated by the inclusive months. Where applicable in a waste discharge permit, the low flow period may be further defined.

On February 20, 2009, EPA disapproved the definition for managed lakes. This definition is not in effect for CWA purposes.

~~(33) "Managed Lakes" refers to lakes in which hydrology is managed by controlling the rate or timing of inflow or outflow.~~

(34) "Marine Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of the State of Oregon.

(35) "mg/l" or "mg/L" means milligrams per liter.

(36) "Metalimnion" means the seasonal, thermally stratified layer of a lake or reservoir that is characterized by a rapid change in temperature with depth and that effectively isolates the waters of the epilimnion from those of the hypolimnion during the period of stratification; the middle layer.

(37) "Migration Corridors" mean those waters that are predominantly used for salmon and steelhead migration during the summer and have little or no anadromous salmonid rearing in the months of July and August. Migration corridors are designated in Tables 101B and 121B and Figures 151A, 170A, 300A and 340A under OAR 340-041-0101 to 340-041-0340.

(38) "Minimum" for dissolved oxygen means the minimum recorded concentration including seasonal and diurnal minimums.

(39) "Monthly (30-day) Mean Minimum" for dissolved oxygen means the minimum of the 30 consecutive-day floating averages of the calculated daily mean dissolved oxygen concentration.

(40) "Natural Conditions" means conditions or circumstances affecting the physical, chemical, or biological integrity of a water of the state that are not influenced by past or present anthropogenic activities. Disturbances from wildfire, floods, earthquakes, volcanic or geothermal activity, wind, insect infestation and diseased vegetation are considered natural conditions.

(41) "Natural Thermal Potential" means the determination of the thermal profile of a water body using best available methods of analysis and the best available information on the site-potential riparian vegetation, stream geomorphology, stream flows and other measures to reflect natural conditions.

(42) "Nonpoint Sources" means any source of water pollution other than a point source. Generally, a nonpoint source is a diffuse or unconfined source of pollution where wastes can either enter into waters of the state or be conveyed by the movement of water into waters of the state.

(43) "Ocean Waters" means all oceanic, offshore waters outside of estuaries or bays and within the territorial limits of Oregon.

(44) "Outstanding Resource Waters" means waters designated by the EQC where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values or where special water quality protection is needed to maintain critical habitat areas.

(45) "Pollution" means such contamination or other alteration of the physical, chemical, or biological properties of any waters of the state, including change in temperature, taste, color, turbidity, silt, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into any water of the state that either by itself or in connection with any other substance present can reasonably be expected to create a public nuisance or render such waters harmful, detrimental, or injurious to public health, safety, or welfare; to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses; or to livestock, wildlife, fish, other aquatic life or the habitat thereof.

(46) "Point Source" means a discernible, confined, and discrete conveyance including, but not limited to, a pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or leachate collection system from which pollutants are or may be discharged. Point source does not include agricultural storm water discharges and return flows from irrigated agriculture.

(47) "Public Water" means the same as "waters of the state".

(48) "Public Works Project" means any land development conducted or financed by a local, state, or federal governmental body.

(49) "Reserve Capacity" means that portion of a receiving stream's loading capacity that has not been allocated to point sources or to nonpoint sources and natural background as waste load allocations or load allocations, respectively. The reserve capacity includes that loading capacity that has been set aside for a safety margin and is otherwise unallocated.

(50) "Resident Biological Community" means aquatic life expected to exist in a particular habitat when water quality standards for a specific ecoregion, basin or water body are met. This must be established by accepted biomonitoring techniques.

(51) "Salmon" means chinook, chum, coho, sockeye and pink salmon.

(52) "Salmon and Steelhead Spawning Use" means waters that are or could be used for salmon and steelhead spawning, egg incubation, and fry emergence. These uses are designated on the following subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B.

(53) "Salmon and Trout Rearing and Migration Use" means thermally suitable rearing habitat for salmon, steelhead, rainbow trout, and cutthroat trout as designated on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A.

(54) "Salmonid or Salmonids" means native salmon, trout, mountain whitefish and char including bull trout. For purposes of Oregon water quality standards, salmonid does not include brook or brown trout because they are introduced species.

(55) "Secondary Treatment" means the following depending on the context:

(a) For sewage wastes, secondary treatment means the minimum level of treatment mandated by U.S. Environmental Protection Agency regulations pursuant to Public Law 92-500.

(b) For industrial and other waste sources, secondary treatment means control equivalent to best practicable treatment.

(56) "Seven-Day Average Maximum Temperature" means a calculation of the average of the daily maximum temperatures from seven consecutive days made on a rolling basis.

(57) "Sewage" means the water-carried human or animal waste from residences, buildings, industrial establishments, or other places together with such groundwater infiltration and surface water as may be

present. The admixture with sewage of industrial wastes or wastes, as defined in this rule, may also be considered "sewage" within the meaning of this division.

(58) "Short-Term Disturbance" means a temporary disturbance of six months or less when water quality standards may be violated briefly but not of sufficient duration to cause acute or chronic effects on beneficial uses.

(59) "Spatial Median" means the value that falls in the middle of a data set of multiple intergravel dissolved oxygen (IGDO) measurements taken within a spawning area. Half the samples should be greater than and half the samples should be less than the spatial median.

(60) "SS" means suspended solids.

(61) "Stormwater Quality Control Facility" means any structure or drainage way designed, constructed and maintained to collect and filter, retain, or detain surface water runoff during and after a storm event for the purpose of water quality improvement. It may also include, but is not be limited to, existing features such as wetlands, water quality swales and ponds maintained as stormwater quality control facilities.

(62) "Subbasin" means a fourth-field hydrologic unit as identified by the U.S. Geological Survey.

(63) "Summer" means June 1 through September 30 of each calendar year.

(64) "Threatened or Endangered Species" means aquatic species listed as either threatened or endangered under the federal Endangered Species Act (16 U.S. Code § 1531 et seq. and Title 50 of the Code of Federal Regulations).

(65) "Total Maximum Daily Load (TMDL)" means the sum of the individual waste load allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and background. If receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure. If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs.

(66) "Toxic Substance" means those pollutants or combinations of pollutants, including disease-causing agents, that after introduction to waters of the state and upon exposure, ingestion, inhalation or assimilation either directly from the environment or indirectly by ingestion through food chains will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction), or physical deformations in any organism or its offspring.

(67) "Wasteload Allocation" or "WLA" means the portion of a receiving water's loading capacity allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation.

(68) "Warm-Water Aquatic Life" means the aquatic communities that are adapted to warm-water conditions and do not contain either cold- or cool-water species.

(69) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances that may cause or tend to cause pollution of any water of the state.

(70) "Water Quality Limited" means one of the following:

(a) A receiving stream that does not meet narrative or numeric water quality criteria during the entire year or defined season even after the implementation of standard technology;

(b) A receiving stream that achieves and is expected to continue to achieve narrative or numeric water quality criteria but uses higher than standard technology to protect beneficial uses;

(c) A receiving stream for which there is insufficient information to determine whether water quality criteria are being met with higher-than-standard treatment technology or a receiving stream that would not be expected to meet water quality criteria during the entire year or defined season without higher than standard technology.

(71) "Water Quality Swale" means a natural depression or wide, shallow ditch used to temporarily store, route or filter runoff for the purpose of improving water quality.

(72) "Waters of the state" means lakes, bays, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Pacific Ocean within the territorial limits of the State of Oregon, and all other bodies of surface or underground waters, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface or underground waters) that are located wholly or partially within or bordering the state or within its jurisdiction.

(73) "Weekly (seven-day) Mean Minimum" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the calculated daily mean dissolved oxygen concentration.

(74) "Weekly (seven-day) Minimum Mean" for dissolved oxygen means the minimum of the seven consecutive-day floating average of the daily minimum concentration. For application of the criteria, this value is the reference for diurnal minimums.

(75) "Without Detrimental Changes in the Resident Biological Community" means no loss of ecological integrity when compared to natural conditions at an appropriate reference site or region.

Statutory/Other Authority: ORS 468.020, 468B.010, 468B.015, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.035 & 468B.048
History:
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 3-2012, f. & cert. ef. 5-21-12
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 3-2004, f. & cert. ef. 5-28-04
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0004
Antidegradation

(1) Purpose. The purpose of the Antidegradation Policy is to guide decisions that affect water quality to prevent unnecessary further degradation from new or increased point and nonpoint sources of pollution, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses. The standards and policies set forth in OAR 340-041-0007 through 340-041-0350 supplement the Antidegradation Policy.

(2) Growth Policy. In order to maintain the quality of waters in the State of Oregon, it is the commission’s general policy to require that more efficient and effective waste treatment and control accommodate growth and development such that measurable future discharged waste loads from existing sources do not exceed presently allowed discharged loads except as provided in section (3) through (9) of this rule.

(3) Nondegradation Discharges. The following new or increased discharges are subject to this division. However, because they are not considered degradation of water quality, they are not required to undergo an antidegradation review under this rule:

(a) Discharges Into Existing Mixing Zones. Pollutants discharged into the portion of a water body that has been included in a previous mixing zone for a permitted source, including the zones of initial dilution, are not considered a reduction in water quality, so long as the mixing zone is established in accordance with OAR 340-041-0053, there are no other overlapping mixing zones from other point sources, and the discharger complies with all effluent limits set out in its National Pollutant Discharge Elimination System (NPDES) permit.

(b) Water Conservation Activities. An increase in a pollutant concentration is not considered a reduction in water quality so long as the increase occurs as the result of a water conservation activity, the total mass load of the pollutant is not increased, and the concentration increase has no adverse effect on either beneficial uses or threatened or endangered species in the water body.

(c) Temperature. Insignificant temperature increases authorized under OAR 340-041-0028(11) and (12) are not considered a reduction in water quality.

(d) Dissolved Oxygen. Up to a 0.1 mg/l decrease in dissolved oxygen from the upstream end of a stream reach to the downstream end of the reach is not considered a reduction in water quality so long as it has no adverse effects on threatened and endangered species.

(4) Recurring Activities. Since the baseline for applying the antidegradation policy to an individual source is the water quality resulting from the source's currently authorized discharge, and since regularly-scheduled, recurring activities remain subject to water quality standards and the terms and conditions in any applicable federal and state permits, certifications and licenses, the following activities will not be considered new or increasing discharges and will therefore not trigger an antidegradation review under this rule, so long as they do not increase in frequency, intensity, duration or geographical extent:

(a) Rotating grazing pastures,

(b) Agricultural crop rotations, and

(c) Maintenance dredging.

(5) Exemptions to the Antidegradation Requirement. Some activities may, on a short term basis, cause temporary water quality degradation. However, these same activities may also have substantial and desirable environmental benefits. The following activities and situations fall into this category. Such activities and situations remain subject to water quality standards and must demonstrate that they have minimized adverse effects to threatened and endangered species in order to be exempt from the antidegradation review under this rule:

(a) Riparian Restoration Activities. Activities that are intended to restore the geomorphology or riparian vegetation of a water body, or control invasive species need not undergo an antidegradation review so long as the department determines that there is a net ecological benefit to the restoration activity. Reasonable measures that are consistent with the restoration objectives for the water body must be used to minimize the degradation;

(b) Emergency Situations. The director or a designee may, for a period of time no greater than 6 months, allow lower water quality without an antidegradation review under this rule in order to respond to public health and welfare emergencies (for example, a significant threat of loss of life, personal injury or severe property damage); and

(c) Exceptions. Exceptions authorized by the commission or department under (9) of this rule.

(6) High Quality Waters Policy: Where the existing water quality meets or exceeds those levels necessary to support fish, shellfish, and wildlife propagation, recreation in and on the water, and other designated beneficial uses, that level of water quality must be maintained and protected. However, the commission, after full satisfaction of the intergovernmental coordination and public participation provisions of the

continuing planning process, and with full consideration of sections (2) and (9) of this rule, and 340-041-0007(4), may allow a lowering of water quality in these high quality waters if it finds:

(a) No other reasonable alternatives exist except to lower water quality; and

(b) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference;

(c) All water quality standards will be met and beneficial uses protected; and

(d) Federal threatened and endangered aquatic species will not be adversely affected.

(7) Water Quality Limited Waters Policy: Water quality limited waters may not be further degraded except in accordance with paragraphs (9)(a)(B), (C) and (D) of this rule.

(8) Outstanding Resource Waters Policy. Where existing high quality waters constitute an outstanding State or national resource such as those waters designated as extraordinary resource waters, or as critical habitat areas, the existing water quality and water quality values must be maintained and protected, and classified as "Outstanding Resource Waters of Oregon."

(a) The commission may specially designate high quality water bodies to be classified as Outstanding Resource Waters in order to protect the water quality parameters that affect ecological integrity of critical habitat or special water quality values that are vital to the unique character of those water bodies. The department will develop a screening process and establish a list of nominated water bodies for Outstanding Resource Waters designation in the Biennial Water Quality Status Assessment Report (305(b) Report). The priority water bodies for nomination include:

(A) Those in State and National Parks;

(B) National Wild and Scenic Rivers;

(C) State Scenic Waterways;

(D) Those in State and National Wildlife Refuges; and

(E) Those in federally designated wilderness areas.

(b) The department will bring to the commission a list of water bodies that are proposed for designation as Outstanding Resource Waters at the time of each triennial Water Quality Standards Review; and

(c) When designating Outstanding Resource Waters, the commission may establish the water quality values to be protected and provide a process for determining what activities are allowed that would not affect the outstanding resource values. After the designation, the commission may not allow activities that may lower water quality below the level established except on a short term basis to respond to public health and welfare emergencies, or to obtain long-term water quality improvements.

(d) The following are Outstanding Resource Waters of Oregon:

(A) The North Fork Smith River and its tributaries and associated wetlands, South Coast Basin. See OAR 340-041-0305(4).

(B) Waldo Lake and its associated wetlands, Willamette Basin. See OAR 340-041-0345(7)

(C) Crater Lake, Klamath Basin. See OAR 340-041-0185(6)

(9) Exceptions. The commission or department may grant exceptions to this rule so long as the following procedures are met:

(a) In allowing new or increased discharged loads, the commission or department must make the following findings:

(A) The new or increased discharged load will not cause water quality standards to be violated;

(B) The action is necessary and benefits of the lowered water quality outweigh the environmental costs of the reduced water quality. This evaluation will be conducted in accordance with DEQ's "Antidegradation Policy Implementation Internal Management Directive for NPDES Permits and section 401 water quality certifications," pages 27, and 33-39 (March 2001) incorporated herein by reference; and

(C) The new or increased discharged load will not unacceptably threaten or impair any recognized beneficial uses or adversely affect threatened or endangered species. In making this determination, the commission or department may rely on the presumption that, if the numeric criteria established to protect specific uses are met, the beneficial uses they were designed to protect are protected. In making this determination the commission or department may also evaluate other state and federal agency data that would provide information on potential impacts to beneficial uses for which the numeric criteria have not been set;

(D) The new or increased discharged load may not be granted if the receiving stream is classified as being water quality limited under sub-section (a) of the definition of “Water Quality Limited” in OAR 340-041-0002, unless:

(i) The pollutant parameters associated with the proposed discharge are unrelated either directly or indirectly to the parameter(s) causing the receiving stream to violate water quality standards and being designated water quality limited; or

(ii) Total maximum daily loads (TMDLs), waste load allocations (WLAs) load allocations (LAs), and the reserve capacity have been established for the water quality limited receiving stream, compliance plans under which enforcement action can be taken have been established, and there will be sufficient reserve capacity to assimilate the increased load under the established TMDL at the time of discharge; or

(iii) Effective July 1, 1996, in water bodies designated water-quality limited for dissolved oxygen, when establishing WLAs under a TMDL for water bodies meeting the conditions defined in this rule, the department may at its discretion provide an allowance for WLAs calculated to result in no measurable reduction of dissolved oxygen (DO). For this purpose, "no measurable reduction" is defined as no more than 0.10 mg/L for a single source and no more than 0.20 mg/L for all anthropogenic activities that influence the water quality limited segment. The allowance applies for surface water DO criteria and for Intergravel dissolved oxygen (IGDO) if a determination is made that the conditions are natural. The allowance for WLAs applies only to surface water 30-day and seven-day means; or

(iv) Under extraordinary circumstances to solve an existing, immediate and critical environmental problem, the commission or department may, after completing a TMDL but before the water body has achieved compliance with standards, consider a waste load increase for an existing source on a receiving stream designated water quality limited under sub-section (a) of the definition of “Water Quality Limited” in OAR 340-041-0002. This action must be based on the following conditions:

(I) That TMDLs, WLAs and LAs have been set; and

(II) That a compliance plan under which enforcement actions can be taken has been established and is being implemented on schedule; and

(III) That an evaluation of the requested increased load shows that this increment of load will not have an unacceptable temporary or permanent adverse effect on beneficial uses or adversely affect threatened or endangered species; and

(IV) That any waste load increase granted under subparagraph (iv) of this paragraph is temporary and does not extend beyond the TMDL compliance deadline established for the water body. If this action will result in a permanent load increase, the action must comply with sub-paragraphs (i) or (ii) of this paragraph.

(b) The activity, expansion, or growth necessitating a new or increased discharge load is consistent with the acknowledged local land use plans as a statement of land use compatibility from the appropriate local planning agency establishes.

(c) Oregon's water quality management policies and programs recognize that Oregon's water bodies have a finite capacity to assimilate waste. Unused assimilative capacity is an exceedingly valuable resource that enhances in-stream values and environmental quality in general. Allocation of any unused assimilative capacity should be based on explicit criteria. In addition to the conditions in subsection (a) of this section, the commission or department may consider the following:

(A) Environmental Effects Criteria:

(i) Adverse Out-of-Stream Effects. There may be instances where the non-discharge or limited discharge alternatives may cause greater adverse environmental effects than the increased discharge alternative. An example may be the potential degradation of groundwater from land application of wastes;

(ii) Instream Effects. Total stream loading may be reduced through elimination or reduction of other source discharges or through a reduction in seasonal discharge. A source that replaces other sources, accepts additional waste from less efficient treatment units or systems, or reduces discharge loadings during periods of low stream flow may be permitted an increased discharge load year-round or during seasons of high flow, so long as the loading has no adverse effect on threatened and endangered species;

(iii) Beneficial Effects. Land application, upland wetlands application, or other non-discharge alternatives for appropriately treated wastewater may replenish groundwater levels and increase streamflow and assimilative capacity during otherwise low streamflow periods.

(B) Economic Effects Criteria. When assimilative capacity exists in a stream, and when it is judged that increased loadings will not have significantly greater adverse environmental effects than other alternatives to increased discharge, the economic effect of increased loading will be considered. Economic effects will be of two general types:

(i) Value of Assimilative Capacity. The assimilative capacity of Oregon's streams is finite, but the potential uses of this capacity are virtually unlimited. Thus it is important that priority be given to those beneficial uses that promise the greatest return (beneficial use) relative to the unused assimilative capacity that might be utilized. In-stream uses that will benefit from reserve assimilative capacity, as well as potential future beneficial use, will be weighed against the economic benefit associated with increased loading;

(ii) Cost of Treatment Technology. The cost of improved treatment technology, non-discharge and limited discharge alternatives may be evaluated.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 5-2021, amend filed 02/09/2021, effective 02/09/2021
DEQ 4-2021, amend filed 01/25/2021, effective 01/25/2021
DEQ 8-2017, f. & cert. ef. 7-18-17
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0007
Statewide Narrative Criteria

(1) Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials, radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.

(2) Where a less stringent natural condition of a water of the State exceeds the numeric criteria set out in this Division, the natural condition supersedes the numeric criteria and becomes the standard for that water body. However, there are special restrictions, described in OAR 340-041-0004(9)(a)(D)(iii), that may apply to discharges that affect dissolved oxygen.

NOTE: On August 8, 2013, the Environmental Protection Agency disapproved rule section OAR 340-041-0007(2). Consequently, section (2) is no longer effective as a water quality criterion for purposes of CWA Section 303(c) and it cannot be used for issuing certifications under CWA Section 401, permits under CWA Section 402, or total maximum daily loads under CWA section 303(d).

(3) For any new waste sources, alternatives that utilize reuse or disposal with no discharge to public waters must be given highest priority for use wherever practicable. New source discharges may be approved subject to the criteria in OAR 340-041-0004(9).

(4) No discharges of wastes to lakes or reservoirs may be allowed except as provided in section OAR 340-041-0004(9).

(5) Log handling in public waters must conform to current Commission policies and guidelines.

(6) Sand and gravel removal operations must be conducted pursuant to a permit from the Division of State Lands and separated from the active flowing stream by a watertight berm wherever physically practicable. Recirculation and reuse of process water must be required wherever practicable. Discharges or seepage or leakage losses to public waters may not cause a violation of water quality standards or adversely affect legitimate beneficial uses.

(7) Road building and maintenance activities must be conducted in a manner so as to keep waste materials out of public waters and minimize erosion of cut banks, fills, and road surfaces.

(8) In order to improve controls over nonpoint sources of pollution, federal, State, and local resource management agencies will be encouraged and assisted to coordinate planning and implementation of programs to regulate or control runoff, erosion, turbidity, stream temperature, stream flow, and the withdrawal and use of irrigation water on a basin-wide approach so as to protect the quality and beneficial uses of water and related resources. Such programs may include, but not be limited to, the following:

(a) Development of projects for storage and release of suitable quality waters to augment low stream flow;

(b) Urban runoff control to reduce erosion;

(c) Possible modification of irrigation practices to reduce or minimize adverse impacts from irrigation return flows;

(d) Stream bank erosion reduction projects; and

(e) Federal water quality restoration plans.

(9) The development of fungi or other growths having a deleterious effect on stream bottoms, fish or other aquatic life, or that are injurious to health, recreation, or industry may not be allowed;

(10) The creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life or affect the potability of drinking water or the palatability of fish or shellfish may not be allowed;

(11) The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life or injurious to public health, recreation, or industry may not be allowed;

(12) Objectionable discoloration, scum, oily sheens, or floating solids, or coating of aquatic life with oil films may not be allowed;

(13) Aesthetic conditions offensive to the human senses of sight, taste, smell, or touch may not be allowed;

(14) Radioisotope concentrations may not exceed maximum permissible concentrations (MPC's) in drinking water, edible fishes or shellfishes, wildlife, irrigated crops, livestock and dairy products, or pose an external radiation hazard;

(15) Minimum Design Criteria for Treatment and Control of Wastes. Except as provided in OAR 340-041-0101 through 340-041-0350, and subject to the implementation requirements set forth in 340-041-0061, prior to discharge of any wastes from any new or modified facility to any waters of the State, such wastes must be treated and controlled in facilities designed in accordance with the following minimum criteria.

(a) In designing treatment facilities, average conditions and a normal range of variability are generally used in establishing design criteria. A facility once completed and placed in operation should operate at or near the design limit most of the time but may operate below the design criteria limit at times due to variables which are unpredictable or uncontrollable. This is particularly true for biological treatment facilities. The actual operating limits are intended to be established by permit pursuant to ORS 468.740 and recognize that the actual performance level may at times be less than the design criteria.

(A) Sewage wastes:

(i) Effluent BOD concentrations in mg/l, divided by the dilution factor (ratio of receiving stream flow to effluent flow) may not exceed one unless otherwise approved by the Commission;

(ii) Sewage wastes must be disinfected, after treatment, equivalent to thorough mixing with sufficient chlorine to provide a residual of at least 1 part per million after 60 minutes of contact time unless otherwise specifically authorized by permit;

(iii) Positive protection must be provided to prevent bypassing raw or inadequately treated sewage to public waters unless otherwise approved by the Department where elimination of inflow and infiltration would be necessary but not presently practicable; and

(iv) More stringent waste treatment and control requirements may be imposed where special conditions make such action appropriate.

(B) Industrial wastes:

(i) After maximum practicable in-plant control, a minimum of secondary treatment or equivalent control (reduction of suspended solids and organic material where present in significant quantities, effective disinfection where bacterial organisms of public health significance are present, and control of toxic or other deleterious substances);

(ii) Specific industrial waste treatment requirements may be determined on an individual basis in accordance with the provisions of this plan, applicable federal requirements, and the following:

(I) The uses that are or may likely be made of the receiving stream;

(II) The size and nature of flow of the receiving stream;

(III) The quantity and quality of wastes to be treated; and

(IV) The presence or absence of other sources of pollution on the same watershed.

(iii) Where industrial, commercial, or agricultural effluents contain significant quantities of potentially toxic elements, treatment requirements may be determined utilizing appropriate bioassays;

(iv) Industrial cooling waters containing significant heat loads must be subjected to off-stream cooling or heat recovery prior to discharge to public waters;

(v) Positive protection must be provided to prevent bypassing of raw or inadequately treated industrial wastes to any public waters;

(vi) Facilities must be provided to prevent and contain spills of potentially toxic or hazardous materials.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 5-2013, f. & cert. ef. 6-21-13
DEQ 10-2011, f. & cert. ef. 7-13-11
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0009
Bacteria

(1) Numeric Criteria: Organisms commonly associated with fecal sources may not exceed the criteria in subsections (a)-(c) of this section:

(a) Freshwater contact recreation:

(A) A 90-day geometric mean of 126 E. coli organisms per 100 mL;

(B) No single sample may exceed 406 E. coli organisms per 100 mL.

(b) Coastal water contact recreation, as designated in OAR 340-041-0101, 340-041-220, 340-041-230, 340-041-300 and 340-041-0320:

(A) A 90-day geometric mean of 35 enterococcus organisms per 100 mL;

(B) Not more than ten percent of the samples may exceed 130 organisms per 100 mL.

(c) Shellfish harvesting, as designated in 340-041-0101, 340-041-220, 340-041-230, 340-041-300 and 340-041-0320:

(A) A fecal coliform median concentration of 14 organisms per 100 mL;

(B) Not more than ten percent of the samples may exceed 43 organisms per 100 mL.

(2) A minimum of five samples in a 90-day period is required for calculating the criteria in sections (1)(a)(A) and (1)(b)(A) and (B) of this rule.

(3) Raw Sewage Prohibition: No sewage may be discharged into or in any other manner be allowed to enter the waters of the State, unless such sewage has been treated in a manner the Department approved or otherwise allowed by these rules.

(4) Animal Waste: Runoff contaminated with domesticated animal wastes must be minimized and treated to the maximum extent practicable before it is allowed to enter waters of the State.

(5) Bacterial pollution or other conditions deleterious to waters used for domestic purposes, livestock watering, irrigation, bathing, or shellfish propagation, or otherwise injurious to public health may not be allowed.

(6) Implementation in NDPES Permits: Upon NPDES permit renewal or issuance, or upon request for a permit modification by the permittee at an earlier date, bacteria in effluent discharges associated with fecal sources may not exceed the following amounts:

(a) In waters designated for coastal water contact recreation:

(A) A monthly geometric mean of 35 enterococcus organisms per 100 mL, and

(B) Not more than ten percent of samples in a month may exceed 130 enterococcus organisms per 100 mL.

(b) In waters designated for freshwater contact recreation:

(A) A monthly geometric mean of 126 E. coli organisms per 100 mL; and

(B) No single sample may exceed 406 E. coli organisms per 100 mL. However,

(C) No violation will be found for an exceedance if the permittee takes at least five consecutive re-samples at four-hour intervals beginning as soon as practicable (preferably within 28 hours) after the original sample was taken and the geometric mean of the five re-samples is less than or equal to 126 organisms per 100 mL of E. coli. However, if the Department finds that re-sampling within the timeframe outlined in this section would pose an undue hardship on a treatment facility, a more convenient schedule may be negotiated in the permit, provided that the permittee demonstrates that the sampling delay will result in no increase in the risk to water contact recreation in waters affected by the discharge;

(c) For sewage treatment plants that are authorized to use recycled water under OAR 340, division 55, and that also use a storage pond as a means to dechlorinate their effluent prior to discharge to public waters, effluent limitations for bacteria may, upon a permittee's request, be based upon appropriate total coliform limits as OAR 340-055-0012-requires:

(A) Class C limitations: No two consecutive samples may exceed 240 total coliform per 100 mL.

(B) Class A and Class B limitations: No single sample may exceed 23 total coliform per 100 mL.

(C) No violation will be found for an exceedance under this paragraph if the permittee takes at least five consecutive re-samples at four hour intervals beginning as soon as practicable (preferably within 28 hours) after the original sample(s) were taken; and in the case of Class C recycled water, the log mean of the five re-samples is less than or equal to 23 total coliform per 100 mL, or, in the case of Class A and Class B recycled water, if the log mean of the five re-samples is less than or equal to 2.2 total coliform per 100 mL.

(7) Sewer Overflows in winter: Domestic waste collection and treatment facilities are prohibited from discharging raw sewage to waters of the State during the period of November 1 through May 21, except during a storm event greater than the one-in-five-year, 24-hour duration storm. However, the following exceptions apply:

(a) The Commission may on a case-by-case basis approve a bacteria control management plan to be prepared by the permittee, for a basin or specified geographic area which describes hydrologic conditions under which the numeric bacteria criteria would be waived. These plans will identify the specific hydrologic conditions and the public notification and education processes that will be followed to inform

the public about an event and the plan, describe the water quality assessment conducted to determine bacteria sources and loads associated with the specified hydrologic conditions, and describe the bacteria control program that is being implemented in the basin or specified geographic area for the identified sources.

(b) Facilities with separate sanitary and storm sewers existing on January 10, 1996, and that currently experience sanitary sewer overflows due to inflow and infiltration problems, must submit an acceptable plan to the Department at the first permit renewal, which describes actions the facility will take to assure compliance with the discharge prohibition by January 1, 2010. Where discharges occur to a receiving stream with sensitive beneficial uses, the Department may negotiate a more aggressive schedule for discharge elimination.

(c) On a case-by-case basis, the Department may define the beginning of winter as October 15, if the permittee so requests and demonstrates to the Department's satisfaction that the risk to beneficial uses, including water contact recreation, will not be increased due to the date change.

(8) Sewer Overflows in summer: Domestic waste collection and treatment facilities are prohibited from discharging raw sewage to waters of the State during the period of May 22 through October 31, except during a storm event greater than the one-in-ten-year, 24-hour duration storm. The following exceptions apply:

(a) For facilities with combined sanitary and storm sewers, the Commission may on a case-by-case basis approve a bacteria control management plan such as that described in subsection (6)(a) of this rule.

(b) On a case-by-case basis, the Department may define the beginning of summer as June 1 if the permittee so requests and demonstrates to the Department's satisfaction that the risk to beneficial uses, including water contact recreation, will not be increased due to the date change.

(c) For discharge sources whose permit identifies the beginning of summer as any date from May 22 through May 31: If the permittee demonstrates to the Department's satisfaction that an exceedance occurred between May 21 and June 1 because of a sewer overflow, and that no increase in risk to beneficial uses, including water contact recreation, occurred because of the exceedance, no violation may be triggered, if the storm associated with the overflow was greater than the one-in-five-year, 24-hour duration storm.

(9) Storm Sewers Systems Subject to Municipal NPDES Stormwater Permits: Best management practices must be implemented for permitted storm sewers to control bacteria to the maximum extent practicable. In addition, a collection-system evaluation must be performed prior to permit issuance or renewal so that illicit and cross connections are identified. Such connections must be removed upon identification. A collection system evaluation is not required where the Department determines that illicit and cross connections are unlikely to exist.

(10) Storm Sewers Systems Not Subject to Municipal NPDES Stormwater Permits: A collection system evaluation must be performed of non-permitted storm sewers by January 1, 2005, unless the Department determines that an evaluation is not necessary because illicit and cross connections are unlikely to exist. Illicit and cross-connections must be removed upon identification.

(11) In water bodies the Department identifies as water-quality limited for bacteria, and in accordance with priorities the Department establishes, the Department may require those sources that the Department determines to be contributing to the problem to develop and implement a bacteria management plan. The Department may determine that a plan is not necessary for a particular stream segment or segments within a water-quality limited basin based on the contribution of the segment(s) to the problem. The bacteria management plans will identify the technologies, best management practices and measures and approaches to be implemented by point and nonpoint sources to limit bacterial contamination. For point sources, their National Pollutant Discharge Elimination System permit is their bacteria management plan.

For nonpoint sources, designated management agencies will develop the bacteria management plan that will identify the appropriate best management practices or measures and approaches.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 9-2016, f. & cert. ef. 8-18-16
DEQ 16-2013, f. & cert. ef. 12-23-13
DEQ 10-2011, f. & cert. ef. 7-13-11
DEQ 6-2008, f. & cert. ef. 5-5-08
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0011
Biocriteria

Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
Renumbered from 340-041-0027 by DEQ 17-2003, f. & cert. ef. 12-9-03
DEQ 14-1991, f. & cert. ef. 8-13-91
Sunset on 09-28-2017
[DEQ 14-1991, f. & cert. ef. 8-13-91; Renumbered to 340-041-0011 by DEQ 17-2003, f. & cert. ef. 12-9-03]

340-041-0016
Dissolved Oxygen

Dissolved oxygen (DO): No wastes may be discharged and no activities may be conducted that either alone or in combination with other wastes or activities will cause violation of the following standards: The changes adopted by the Commission on January 11, 1996, become effective July 1, 1996. Until that time, the requirements of this rule that were in effect on January 10, 1996, apply:

(1) For water bodies identified as active spawning areas in the places and times indicated on the following Tables and Figures set out in OAR 340-041-0101 to 340-041-0340: Tables 101B, 121B, and 190B, and Figures 130B, 151B, 160B, 170B, 180A, 201A, 220B, 230B, 260A, 271B, 286B, 300B, 310B, 320B, and 340B, (as well as any active spawning area used by resident trout species), the following criteria apply during the applicable spawning through fry emergence periods set forth in the tables and figures and, where resident trout spawning occurs, during the time trout spawning through fry emergence occurs:

(a) The dissolved oxygen may not be less than 11.0 mg/l. However, if the minimum intergravel dissolved oxygen, measured as a spatial median, is 8.0 mg/l or greater, then the DO criterion is 9.0 mg/l;

(b) Where conditions of barometric pressure, altitude, and temperature preclude attainment of the 11.0 mg/l or 9.0 mg/l criteria, dissolved oxygen levels must not be less than 95 percent of saturation;

(c) The spatial median intergravel dissolved oxygen concentration must not fall below 8.0 mg/l.

(2) For water bodies identified by the Department as providing cold-water aquatic life, the dissolved oxygen may not be less than 8.0 mg/l as an absolute minimum. Where conditions of barometric pressure, altitude, and temperature preclude attainment of the 8.0 mg/l, dissolved oxygen may not be less than 90 percent of saturation. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 8.0 mg/l as a 30-day mean

minimum, 6.5 mg/l as a seven-day minimum mean, and may not fall below 6.0 mg/l as an absolute minimum (Table 21);

(3) For water bodies identified by the Department as providing cool-water aquatic life, the dissolved oxygen may not be less than 6.5 mg/l as an absolute minimum. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 6.5 mg/l as a 30-day mean minimum, 5.0 mg/l as a seven-day minimum mean, and may not fall below 4.0 mg/l as an absolute minimum (Table 21);

(4) For water bodies identified by the Department as providing warm-water aquatic life, the dissolved oxygen may not be less than 5.5 mg/l as an absolute minimum. At the discretion of the Department, when the Department determines that adequate information exists, the dissolved oxygen may not fall below 5.5 mg/l as a 30-day mean minimum, and may not fall below 4.0 mg/l as an absolute minimum (Table 21);

(5) For estuarine water, the dissolved oxygen concentrations may not be less than 6.5 mg/l (for coastal water bodies);

(6) For ocean waters, no measurable reduction in dissolved oxygen concentration may be allowed.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Attachments referenced in 340-041-0016 rule text (Table 21) are provided in Attachment 1 of this document.

340-041-0019
Nuisance Phytoplankton Growth

(1)(a) The following values and implementation program must be applied to lakes, reservoirs, estuaries and streams, except for ponds and reservoirs less than ten acres in surface area, marshes and saline lakes:

(b) The following average Chlorophyll a values must be used to identify water bodies where phytoplankton may impair the recognized beneficial uses:

(A) Natural lakes that thermally stratify: 0.01 mg/1;

(B) Natural lakes that do not thermally stratify, reservoirs, rivers and estuaries: 0.015 mg/1;

(C) Average Chlorophyll a values may be based on the following methodology (or other methods approved by the Department): A minimum of three samples collected over any three consecutive months at a minimum of one representative location (e.g., above the deepest point of a lake or reservoir or at a point mid-flow of a river) from samples integrated from the surface to a depth equal to twice the secchi depth or the bottom (the lesser of the two depths); analytical and quality assurance methods must be in accordance with the most recent edition of Standard Methods for the Examination of Water and Wastewater.

(2) Upon determination by the Department that the values in section (1) of this rule are exceeded, the Department may:

(a) In accordance with a schedule approved by the Commission, conduct such studies as are necessary to describe present water quality; determine the impacts on beneficial uses; determine the probable causes of the exceedance and beneficial use impact; and develop a proposed control strategy for

attaining compliance where technically and economically practicable. Proposed strategies could include standards for additional pollutant parameters, pollutant discharge load limitations, and other such provisions as may be appropriate. Where natural conditions are responsible for exceedance of the values in section (1) of this rule or beneficial uses are not impaired, the values in section (1) of this rule may be modified to an appropriate value for that water body;

(b) Conduct necessary public hearings preliminary to adoption of a control strategy, standards or modified values after obtaining Commission authorization;

(c) Implement the strategy upon adoption by the Commission.

(3) In cases where waters exceed the values in section (1) of this rule and the necessary studies are not completed, the Department may approve new activities (which require Department approval), new or additional (above currently approved permit limits) discharge loadings from point sources provided that it is determined that beneficial uses would not be significantly impaired by the new activity or discharge.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
Renumbered from 340-041-0150 by DEQ 17-2003, f. & cert. ef. 12-9-03
DEQ 7-1986, f. & ef. 3-26-86
Sunset on 09-28-2017
[DEQ 7-1986, f. & ef. 3-26-86; Renumbered to 340-041-0019 by DEQ 17-2003, f. & cert. ef. 12-9-03]

340-041-0021
pH

(1) Unless otherwise specified in OAR 340-041-0101 through 340-041-0350, pH values (Hydrogen ion concentrations) may not fall outside the following ranges:

(a) Marine waters: 7.0-8.5;

(b) Estuarine and fresh waters: See basin specific criteria (OAR 340-041-0101 through 340-041-0350).

(2) Waters impounded by dams existing on January 1, 1996, which have pHs that exceed the criteria are not in violation of the standard, if the Department determines that the exceedance would not occur without the impoundment and that all practicable measures have been taken to bring the pH in the impounded waters into compliance with the criteria.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0028
Temperature

(1) Background. Water temperatures affect the biological cycles of aquatic species and are a critical factor in maintaining and restoring healthy salmonid populations throughout the State. Water temperatures are influenced by solar radiation, stream shade, ambient air temperatures, channel morphology, groundwater inflows, and stream velocity, volume, and flow. Surface water temperatures may also be warmed by anthropogenic activities such as discharging heated water, changing stream width or depth, reducing stream shading, and water withdrawals.

(2) Policy. It is the policy of the Commission to protect aquatic ecosystems from adverse warming and cooling caused by anthropogenic activities. The Commission intends to minimize the risk to cold-water aquatic ecosystems from anthropogenic warming, to encourage the restoration and protection of critical aquatic habitat, and to control extremes in temperature fluctuations due to anthropogenic activities. The Commission recognizes that some of the State's waters will, in their natural condition, not provide optimal thermal conditions at all places and at all times that salmonid use occurs. Therefore, it is especially important to minimize additional warming due to anthropogenic sources. In addition, the Commission acknowledges that control technologies, best management practices and other measures to reduce anthropogenic warming are evolving and that the implementation to meet these criteria will be an iterative process. Finally, the Commission notes that it will reconsider beneficial use designations in the event that man-made obstructions or barriers to anadromous fish passage are removed and may justify a change to the beneficial use for that water body.

(3) Purpose. The purpose of the temperature criteria in this rule is to protect designated temperature-sensitive, beneficial uses, including specific salmonid life cycle stages in waters of the State.

(4) Biologically Based Numeric Criteria. Unless superseded by the natural conditions criteria described in section (8) of this rule, or by subsequently adopted site-specific criteria approved by EPA, the temperature criteria for State waters supporting salmonid fishes are as follows:

(a) The seven-day-average maximum temperature of a stream identified as having salmon and steelhead spawning use on subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 130B, 151B, 160B, 170B, 220B, 230B, 271B, 286B, 300B, 310B, 320B, and 340B, may not exceed 13.0 degrees Celsius (55.4 degrees Fahrenheit) at the times indicated on these maps and tables;

(b) The seven-day-average maximum temperature of a stream identified as having core cold water habitat use on subbasin maps set out in OAR 340-041-101 to 340-041-340: Figures 130A, 151A, 160A, 170A, 180A, 201A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A, may not exceed 16.0 degrees Celsius (60.8 degrees Fahrenheit);

(c) The seven-day-average maximum temperature of a stream identified as having salmon and trout rearing and migration use on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130A, 151A, 160A, 170A, 220A, 230A, 271A, 286A, 300A, 310A, 320A, and 340A, may not exceed 18.0 degrees Celsius (64.4 degrees Fahrenheit);

(d) The seven-day-average maximum temperature of a stream identified as having a migration corridor use on subbasin maps and tables OAR 340-041-0101 to 340-041-0340: Tables 101B, and 121B, and Figures 151A, 170A, 300A, and 340A, may not exceed 20.0 degrees Celsius (68.0 degrees Fahrenheit). In addition, these water bodies must have cold water refugia that are sufficiently distributed so as to allow salmon and steelhead migration without significant adverse effects from higher water temperatures elsewhere in the water body. Finally, the seasonal thermal pattern in Columbia and Snake Rivers must reflect the natural seasonal thermal pattern;

(e) The seven-day-average maximum temperature of a stream identified as having Lahontan cutthroat trout or redband trout use on subbasin maps and tables set out in OAR 340-041-0101 to 340-041-0340: Tables 121B, 140B, 190B, and 250B, and Figures 180A, 201A, 260A and 310A may not exceed 20.0 degrees Celsius (68.0 degrees Fahrenheit);

(f) The seven-day-average maximum temperature of a stream identified as having bull trout spawning and juvenile rearing use on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130B, 151B, 160B, 170B, 180A, 201A, 260A, 310B, and 340B, may not exceed 12.0 degrees Celsius (53.6 degrees Fahrenheit). From August 15 through May 15, in bull trout spawning waters below Clear Creek and Mehlhorn reservoirs on Upper Clear Creek (Pine Subbasin), below Laurance Lake on the Middle Fork Hood River, and below Carmen reservoir on the Upper McKenzie River, there may be no more than

a 0.3 degrees Celsius (0.5 Fahrenheit) increase between the water temperature immediately upstream of the reservoir and the water temperature immediately downstream of the spillway when the ambient seven-day-average maximum stream temperature is 9.0 degrees Celsius (48 degrees Fahrenheit) or greater, and no more than a 1.0 degree Celsius (1.8 degrees Fahrenheit) increase when the seven-day-average stream temperature is less than 9 degrees Celsius.

(5) Unidentified Tributaries. For waters that are not identified on the “Fish Use Designations” maps referenced in section (4) of this rule, the applicable criteria for these waters are the same criteria as is applicable to the nearest downstream water body depicted on the applicable map. This section (5) does not apply to the “Salmon and Steelhead Spawning Use Designations” maps.

(6) Natural Lakes. Natural lakes may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the natural condition unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life. Absent a discharge or human modification that would reasonably be expected to increase temperature, DEQ will presume that the ambient temperature of a natural lake is the same as its natural thermal condition.

(7) Oceans and Bays. Except for the Columbia River above river mile 7, ocean and bay waters may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the natural condition unless a greater increase would not reasonably be expected to adversely affect fish or other aquatic life. Absent a discharge or human modification that would reasonably be expected to increase temperature, DEQ will presume that the ambient temperature of the ocean or bay is the same as its natural thermal condition.

(8) Natural Conditions Criteria. Where the department determines that the natural thermal potential of all or a portion of a water body exceeds the biologically-based criteria in section (4) of this rule, the natural thermal potential temperatures supersede the biologically-based criteria, and are deemed to be the applicable temperature criteria for that water body.

NOTE: On August 8, 2013, the Environmental Protection Agency disapproved rule section OAR 340-041-0028(8). Consequently, section (8) is no longer effective as a water quality criterion for purposes of CWA Section 303(c) and it cannot be used for issuing certifications under CWA Section 401, permits under CWA Section 402, or total maximum daily loads under CWA section 303(d).

(9) Cool Water Species.

(a) No increase in temperature is allowed that would reasonably be expected to impair cool water species. Waters of the State that support cool water species are identified on subbasin tables and figures set out in OAR 340-041-0101 to 340-041-0340; Tables 140B, 190B and 250B, and Figures 180A, 201A and 340A.

(b) See OAR 340-041-0185 for a basin specific criterion for the Klamath River.

(10) Borax Lake Chub. State waters in the Malheur Lake Basin supporting the Borax Lake chub may not be cooled more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) below the natural condition.

(11) Protecting Cold Water.

(a) Except as described in subsection (c) of this rule, waters of the State that have summer seven-day-average maximum ambient temperatures that are colder than the biologically based criteria in section (4) of this rule, may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the colder water ambient temperature. This provision applies to all sources taken together at the point of maximum impact where salmon, steelhead or bull trout are present.

(b) A point source that discharges into or above salmon & steelhead spawning waters that are colder than the spawning criterion, may not cause the water temperature in the spawning reach where the physical

habitat for spawning exists during the time spawning through emergence use occurs, to increase more than the following amounts after complete mixing of the effluent with the river:

(A) If the rolling 60 day average maximum ambient water temperature, between the dates of spawning use as designated under subsection (4)(a) of this rule, is 10 to 12.8 degrees Celsius, the allowable increase is 0.5 Celsius above the 60 day average; or

(B) If the rolling 60 day average maximum ambient water temperature, between the dates of spawning use as designated under subsection (4)(a) of this rule, is less than 10 degrees Celsius, the allowable increase is 1.0 Celsius above the 60 day average, unless the source provides analysis showing that a greater increase will not significantly impact the survival of salmon or steelhead eggs or the timing of salmon or steelhead fry emergence from the gravels in downstream spawning reach.

(c) The cold water protection narrative criteria in subsection (a) do not apply if:

(A) There are no threatened or endangered salmonids currently inhabiting the water body;

(B) The water body has not been designated as critical habitat; and

(C) The colder water is not necessary to ensure that downstream temperatures achieve and maintain compliance with the applicable temperature criteria.

(12) Implementation of the Temperature Criteria.

(a) Minimum Duties. There is no duty for anthropogenic sources to reduce heating of the waters of the State below their natural condition. Similarly, each anthropogenic point and nonpoint source is responsible only for controlling the thermal effects of its own discharge or activity in accordance with its overall heat contribution. In no case may a source cause more warming than that allowed by the human use allowance provided in subsection (b) of this rule.

(b) Human Use Allowance. Insignificant additions of heat are authorized in waters that exceed the applicable temperature criteria as follows:

(A) Prior to the completion of a temperature TMDL or other cumulative effects analysis, no single NPDES point source that discharges into a temperature water quality limited water may cause the temperature of the water body to increase more than 0.3 degrees Celsius (0.5 Fahrenheit) above the applicable criteria after mixing with either twenty five (25) percent of the stream flow, or the temperature mixing zone, whichever is more restrictive; or

(B) Following a temperature TMDL or other cumulative effects analysis, waste load and load allocations will restrict all NPDES point sources and nonpoint sources to a cumulative increase of no greater than 0.3 degrees Celsius (0.5 Fahrenheit) above the applicable criteria after complete mixing in the water body, and at the point of maximum impact.

(C) Point sources must be in compliance with the additional mixing zone requirements set out in OAR 340-041-0053(2)(d).

(D) A point source in compliance with the temperature conditions of its NPDES permit is deemed in compliance with the applicable criteria.

(c) Air Temperature Exclusion. A water body that only exceeds the criteria set out in this rule when the exceedance is attributed to daily maximum air temperatures that exceed the 90th percentile value of annual maximum seven-day average maximum air temperatures calculated using at least 10 years of air temperature data, will not be listed on the section 303(d) list of impaired waters and sources will not be considered in violation of this rule.

(d) Low Flow Conditions. An exceedance of the biologically-based numeric criteria in section (4) of this rule, or an exceedance of the natural condition criteria in section (8) of this rule will not be considered a permit violation during stream flows that are less than the 7Q10 low flow condition for that water body.

(e) Other Nonpoint Sources. The department may, on a case-by-case basis, require nonpoint sources (other than forestry and agriculture), including private hydropower facilities regulated by a 401 water quality certification, that may contribute to warming of State waters beyond 0.3 degrees Celsius (0.5 degrees Fahrenheit), and are therefore designated as water-quality limited, to develop and implement a temperature management plan to achieve compliance with applicable temperature criteria or an applicable load allocation in a TMDL pursuant to OAR 340-042-0080.

(A) Each plan must ensure that the nonpoint source controls its heat load contribution to water temperatures such that the water body experiences no more than a 0.3 degrees Celsius (0.5 degree Fahrenheit) increase above the applicable criteria from all sources taken together at the maximum point of impact.

(B) Each plan must include a description of best management practices, measures, effluent trading, and control technologies (including eliminating the heat impact on the stream) that the nonpoint source intends to use to reduce its temperature effect, a monitoring plan, and a compliance schedule for undertaking each measure.

(C) The Department may periodically require a nonpoint source to revise its temperature management plan to ensure that all practical steps have been taken to mitigate or eliminate the temperature effect of the source on the water body.

(f) Compliance Methods. Anthropogenic sources may engage in thermal water quality trading in whole or in part to offset its temperature discharge, so long as the trade results in at least a net thermal loading decrease in anthropogenic warming of the water body, and does not adversely affect a threatened or endangered species. Sources may also achieve compliance, in whole or in part, by flow augmentation, hyporheic exchange flows, outfall relocation, or other measures that reduce the temperature increase caused by the discharge.

(g) Release of Stored Water. Stored cold water may be released from reservoirs to cool downstream waters in order to achieve compliance with the applicable numeric criteria. However, there can be no significant adverse impact to downstream designated beneficial uses as a result of the releases of this cold water, and the release may not contribute to violations of other water quality criteria. Where the Department determines that the release of cold water is resulting in a significant adverse impact, the Department may require the elimination or mitigation of the adverse impact.

(13) Site-Specific Criteria. The Department may establish, by separate rulemaking, alternative site-specific criteria for all or a portion of a water body that fully protects the designated use.

(a) These site-specific criteria may be set on a seasonal basis as appropriate.

(b) The Department may use, but is not limited by the following considerations when calculating site-specific criteria:

(A) Stream flow;

(B) Riparian vegetation potential;

(C) Channel morphology modifications;

(D) Cold water tributaries and groundwater;

(E) Natural physical features and geology influencing stream temperatures; and

(F) Other relevant technical data.

(c) DEQ may consider the thermal benefit of increased flow when calculating the site-specific criteria.

(d) Once established and approved by EPA, the site-specific criteria will be the applicable criteria for the water bodies affected.

[ED. NOTE: Tables referenced are available from the agency.]

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 35-2018, minor correction filed 04/02/2018, effective 04/02/2018
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 5-2013, f. & cert. ef. 6-21-13
DEQ 10-2011, f. & cert. ef. 7-13-11
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 1-2007, f. & cert. ef. 3-14-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0031
Total Dissolved Gas

(1) Waters will be free from dissolved gases, such as carbon dioxide hydrogen sulfide, or other gases, in sufficient quantities to cause objectionable odors or to be deleterious to fish or other aquatic life, navigation, recreation, or other reasonable uses made of such water.

(2) Except when stream flow exceeds the ten-year, seven-day average flood, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection may not exceed 110 percent of saturation. However, in hatchery-receiving waters and other waters of less than two feet in depth, the concentration of total dissolved gas relative to atmospheric pressure at the point of sample collection may not exceed 105 percent of saturation.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0032
Total Dissolved Solids (TDS)

Total Dissolved Solids: Total Dissolved Solids: The concentrations listed in the basin specific criteria found in OAR 340-041-0101 through 340-041-0350, may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0033
Toxic Substances

(1) Toxic Substances Narrative. Toxic substances may not be introduced above natural background levels in waters of the state in amounts, concentrations, or combinations that may be harmful, may

chemically change to harmful forms in the environment, or may accumulate in sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety, or welfare or aquatic life, wildlife or other designated beneficial uses.

(2) Aquatic Life Numeric Criteria. Levels of toxic substances in waters of the state may not exceed the applicable aquatic life criteria as defined in Table 30 under OAR 340-041-8033.

(3) Human Health Numeric Criteria. The criteria for waters of the state listed in Table 40 under OAR 340-041-8033 are established to protect Oregonians from potential adverse health effects associated with long-term exposure to toxic substances associated with consumption of fish, shellfish and water.

(4) To establish permit or other regulatory limits for toxic substances without criteria in Table 30 under OAR 340-041-8033 or Table 40 under 340-041-8033, DEQ may use the guidance values in Table 31 under 340-041-8033, public health advisories, and published scientific literature. DEQ may also require or conduct bio-assessment studies to monitor the toxicity to aquatic life of complex effluents, other suspected discharges or chemical substances without numeric criteria.

(5) Establishing Site-Specific Background Pollutant Criteria: This provision is a performance- based water quality standard that results in site-specific human health water quality criteria under the conditions and procedures specified in this rule section. It addresses existing permitted discharges of a pollutant removed from the same body of water. For waterbodies where a discharge does not increase the pollutant's mass and does not increase the pollutant concentration by more than 3 percent, and where the water body meets a pollutant concentration associated with a risk level of 1 x 10-4, DEQ concludes that the pollutant concentration continues to protect human health.

(a) Definitions: As used in this section:

(A) "Background pollutant concentration" means the ambient water body concentration immediately upstream of the discharge, regardless of whether those pollutants are natural or result from upstream human activity.

(B) An "intake pollutant" is the amount of a pollutant present in waters of the state (including groundwater) as provided in subsection (C), below, at the time it is withdrawn from such waters by the discharger or other facility supplying the discharger with intake water.

(C) "Same body of water": An intake pollutant is considered to be from the "same body of water" as the discharge if DEQ finds that the intake pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had the permittee not removed it. To make this finding, DEQ requires information showing that:

(i) The background concentration of the pollutant in the receiving water (excluding any amount of the pollutant in the facility's discharge) is similar to that in the intake water; and,

(ii) There is a direct hydrological connection between the intake and discharge points.

(I) DEQ may also consider other site-specific factors relevant to the transport and fate of the pollutant to make the finding in a particular case that a pollutant would or would not have reached the vicinity of the outfall point in the receiving water within a reasonable period had the permittee not removed it.

(II) An intake pollutant from groundwater may be considered to be from the "same body of water" if DEQ determines that the pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had the permittee not removed it. A pollutant is not from the same body of water if the groundwater contains the pollutant partially or entirely due to past or present human activity, such as industrial, commercial, or municipal operations, disposal actions, or treatment processes.

(iii) Water quality characteristics (e.g., temperature, pH, hardness) are similar in the intake and receiving waters.

(b) Applicability

(A) DEQ may establish site-specific criteria under this rule section only for carcinogenic pollutants.

(B) Site-specific criteria established under this rule section apply in the vicinity of the discharge for purposes of establishing permit limits for the specified permittee.

(C) The underlying waterbody criteria continue to apply for all other Clean Water Act programs.

(D) The site-specific background pollutant criterion will be effective when DEQ issues the permit for the specified permittee.

(E) DEQ will reevaluate any site-specific criteria developed under this procedure upon permit renewal.

(c) DEQ may establish a site-specific background pollutant criterion when all of the following conditions are met:

(A) The discharger has a currently effective NPDES permit;

(B) The mass of the pollutant discharged to the receiving waterbody does not exceed the mass of the intake pollutant from the same body of water, as defined in section (5)(a)(C) above, and therefore does not increase the total mass load of the pollutant in the receiving water body;

(C) DEQ has not assigned the discharger a TMDL wasteload allocation for the pollutant in question;

(D) The permittee uses any feasible pollutant reduction measures available and known to minimize the pollutant concentration in their discharge;

(E) The pollutant discharge has not been chemically or physically altered in a manner that causes adverse water quality impacts that would not occur if the intake pollutants were left in-stream; and,

(F) The timing and location of the pollutant discharge would not cause adverse water quality impacts that would not occur if the intake pollutant were left in-stream.

(d) The site-specific background pollutant criterion must be the most conservative of the following four values. Section (5)(e) of this rule describes the procedures for deriving these values.

(A) The projected in-stream pollutant concentration resulting from the current discharge concentration and any feasible pollutant reduction measures under (c)(D) above, after mixing with the receiving stream.

(B) The projected in-stream pollutant concentration resulting from the portion of the current discharge concentration associated with the intake pollutant mass after mixing with the receiving stream. This analysis ensures that there will be no increase in the mass of the intake pollutant in the receiving water body as required by condition (c)(B) above.

(C) The projected in-stream pollutant concentration associated with a 3 percent increase above the background pollutant concentration as calculated:

(i) For the main stem Willamette and Columbia Rivers, using 25 percent of the harmonic mean flow of the waterbody.

(ii) For all other waters, using 100 percent of the harmonic mean flow or similar critical flow value of the waterbody.

(D) A criterion concentration value representing a human health risk level of 1 x 10-4. DEQ calculates this value using EPA's human health criteria derivation equation for carcinogens (EPA 2000), a risk level of 1

x 10-4, and the same values for the remaining calculation variables that were used to derive the underlying human health criterion.

(e) Procedure to derive a site-specific human health water quality criterion to address a background pollutant:

(A) DEQ will develop a flow-weighted characterization of the relevant flows and pollutant concentrations of the receiving waterbody, effluent and all facility intake pollutant sources to determine the fate and transport of the pollutant mass.

(i) The pollutant mass in the effluent discharged to a receiving waterbody may not exceed the mass of the intake pollutant from the same body of water.

(ii) Where a facility discharges intake pollutants from multiple sources that originate from the receiving waterbody and from other waterbodies, DEQ will calculate the flow-weighted amount of each source of the pollutant in the characterization.

(iii) Where a municipal water supply system provides intake water for a facility and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration and mass of the intake water pollutant must be determined at the point where the water enters the water supplier's distribution system.

(B) Using the flow weighted characterization developed in section (5)(e)(A), DEQ will calculate the in-stream pollutant concentration following mixing of the discharge into the receiving water. DEQ will use the resultant concentration to determine the conditions in section (5)(d)(A) and (B).

(C) Using the flow-weighted characterization, DEQ will calculate the in-stream pollutant concentration based on an increase of 3 percent above background pollutant concentration. DEQ will use the resultant concentration to determine the condition in Section (5)(d)(C).

(i) For the main stem Willamette and Columbia Rivers, DEQ will use 25 percent of the harmonic mean flow of the waterbody.

(ii) For all other waters, DEQ will use 100 percent of the harmonic mean flow or similar critical flow value of the waterbody.

(D) DEQ will select the most conservative of the following values as the site-specific water quality criterion.

(i) The projected in-stream pollutant concentration described in section (5)(e)(B);

(ii) The in-stream pollutant concentration based on an increase of 3 percent above background described in section (5)(e)(C); or

(iii) A water quality criterion based on a risk level of 1 x 10-4.

(f) Calculation of water quality based effluent limits based on a site-specific background pollutant criterion:

(A) For discharges to receiving waters with a site-specific background pollutant criterion, DEQ will use the site-specific criterion in the calculation of a numeric water quality based effluent limit.

(B) DEQ will compare the calculated water quality based effluent limits to any applicable aquatic toxicity or technology based effluent limits and select the most conservative for inclusion in the permit conditions.

(g) In addition to the water quality based effluent limits described in section (5)(f), DEQ will calculate a mass-based limit where necessary to ensure that the condition described in section (5)(c)(B) is met. Where mass-based limits are included, the permit will specify how DEQ will assess compliance with mass-based effluent limitations.

(h) The permit shall include a provision requiring DEQ to consider the re-opening of the permit and re-evaluation of the site-specific background pollutant criterion if new information shows the discharger no longer meets the conditions described in subsections (5)(c) and (e).

(i) Public Notification Requirements.

(A) If DEQ proposes to grant a site-specific background pollutant criterion, it must provide public notice of the proposal and hold a public hearing. The public notice may be included in the public notification of a draft NPDES permit or other draft regulatory decision that would rely on the criterion and will also be published on DEQ's water quality standards website;

(B) DEQ will publish a list of all site-specific background pollutant criteria approved according to this rule. DEQ will add the criterion to this list within 30 days of its effective date. The list will identify the:

(i) Permittee;

(ii) Site-specific background pollutant criterion and the associated risk level;

(iii) Waterbody to which the criterion applies;

(iv) Allowable pollutant effluent limit; and,

(v) How to obtain additional information about the criterion.

(6) Arsenic Reduction Policy: The inorganic arsenic criterion for the protection of human health from the combined consumption of organisms and drinking water is 2.1 micrograms per liter. While this criterion is protective of human health and more stringent than the federal maximum contaminant level (MCL) for arsenic in drinking water, which is 10 micrograms per liter, it is based on a higher risk level than EQC used to establish other human health criteria. This higher risk level recognizes that much of the risk is due to naturally high levels of inorganic arsenic in Oregon's waterbodies. In order to maintain the lowest human health risk from inorganic arsenic in drinking water, EQC determined that it is appropriate to adopt the following policy to limit the human contribution to that risk.

(a) It is EQC policy to reduce the addition of inorganic arsenic from new or existing anthropogenic sources to waters of the state within a surface water drinking water protection area to the maximum amount feasible. The requirements of this rule section (OAR 340-041-0033(6)) apply to sources that discharge to surface waters of the state with an ambient inorganic arsenic concentration equal to or lower than the applicable numeric inorganic arsenic criteria for the protection of human health.

(b) Definitions. As used in this section:

(A) "Add inorganic arsenic" means to discharge a net mass of inorganic arsenic from a point source (the mass of inorganic arsenic discharged minus the mass of inorganic arsenic taken into the facility from a surface water source).

(B) A "surface water drinking water protection area," means an area delineated as such by DEQ under the source water assessment program of the federal Safe Drinking Water Act, 42 U.S.C. § 300j 13. DEQ delineates these areas to protect public or community drinking water supplies that use surface water sources. These delineations are on DEQ's drinking water program Web page.

(C) "Potential to significantly increase inorganic arsenic concentrations in the public drinking water supply source water" means:

(i) A discharge will increase the concentration of inorganic arsenic in the receiving water by 10 percent or more after mixing with the harmonic mean flow of the receiving water; or

(ii) As an alternative, if sufficient data are available, the discharge will increase the concentration of inorganic arsenic in the surface water intake water of a public water system by 0.021 micrograms per liter or more based on a mass balance calculation.

(c) Following the effective date of this rule, applications for an individual NPDES permit or permit renewal received from industrial dischargers located in a surface water drinking water protection area and identified by DEQ as likely to add inorganic arsenic to the receiving water must include sufficient data to enable DEQ to determine whether:

(A) The discharge adds inorganic arsenic; and,

(B) The discharge has the potential to significantly increase inorganic arsenic concentrations in the public drinking water supply source water.

(d) Where DEQ determines that both conditions in subsection (c) of this section (6) are true, the industrial discharger must develop an inorganic arsenic reduction plan and propose all feasible measures to reduce its inorganic arsenic loading to the receiving water. The proposed plan, including proposed measures, monitoring and reporting requirements, and a schedule for those actions, will be described in the fact sheet and incorporated into the source's NPDES permit after public comment and DEQ review and approval. In developing the plan, the source must:

(A) Identify how much it can minimize its inorganic arsenic discharge through pollution prevention measures, process changes, wastewater treatment, alternative water supply for groundwater users, or other possible pollution prevention and control measures;

(B) Evaluate the costs, feasibility and environmental impacts of the potential inorganic arsenic reduction and control measures;

(C) Estimate the predicted reduction in inorganic arsenic and the reduced human health risk expected to result from the control measures;

(D) Propose specific inorganic arsenic reduction or control measures, if feasible, and an implementation schedule; and,

(E) Propose monitoring and reporting requirements to document progress in plan implementation and the inorganic arsenic load reductions.

(e) In order to implement this section, DEQ will develop the following information and guidance within 120 days of the effective date of this rule and periodically update it as warranted by new information:

(A) A list of industrial sources or source categories, including industrial stormwater and sources covered by general permits likely to add inorganic arsenic to surface waters of the state. For industrial sources or source categories permitted under a general permit that have been identified by DEQ as likely sources of inorganic arsenic, DEQ will evaluate options for reducing inorganic arsenic during permit renewal or evaluation of Stormwater Pollution Control Plans.

(B) Quantitation limits for monitoring inorganic arsenic concentrations.

(C) Information and guidance to assist sources in estimating, according to subsection (d)(C) of this section, the reduced human health risk expected to result from inorganic arsenic control measures based on the most current EPA risk assessment.

(f) It is the policy of EQC that landowners engaged in agricultural or development practices on land where pesticides, fertilizers, or soil amendments containing arsenic are currently being or have previously been applied, implement conservation practices to minimize the erosion and runoff of inorganic arsenic to waters of the state or to a location where such material could readily migrate into waters of the state.

NOTE: Tables 30, 31 and 40 are found under OAR 340-041-8033 and provided in Attachment 2 of this document.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 11-2016, f. & cert. ef. 11-2-16
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 17-2013, f. 12-23-13, cert. ef. 4-18-14
DEQ 10-2011, f. & cert. ef. 7-13-11
DEQ 8-2011, f. & cert. ef. 6-30-11
DEQ 17-2010, f. & cert. ef. 12-21-10
DEQ 3-2004, f. & cert. ef. 5-28-04
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0036
Turbidity

Turbidity (Nephelometric Turbidity Units, NTU): No more than a ten percent cumulative increase in natural stream turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity. However, limited duration activities necessary to address an emergency or to accommodate essential dredging, construction or other legitimate activities and which cause the standard to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and one of the following has been granted:

(1) Emergency activities: Approval coordinated by the Department with the Oregon Department of Fish and Wildlife under conditions they may prescribe to accommodate response to emergencies or to protect public health and welfare;

(2) Dredging, Construction or other Legitimate Activities: Permit or certification authorized under terms of section 401 or 404 (Permits and Licenses, Federal Water Pollution Control Act) or OAR 14l-085-0100 et seq. (Removal and Fill Permits, Division of State Lands), with limitations and conditions governing the activity set forth in the permit or certificate.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0046
Water Quality Limited Waters

(1) A receiving stream may be designated as water quality limited through the biennial water quality status assessment report prepared to meet the requirements of section 305(b) of the Federal Clean Water Act. Appendix A of the Status Assessment report will identify: what water bodies are water quality limited, the time of year the water quality standards violations occur, the segment of stream or area of water body limited, the parameter(s) of concern, and whether it is water quality limited under the definition of “Water Quality Limited” in OAR 340-041-0002. Appendix B and C of the Status Assessment report will identify the specific evaluation process for designating water bodies limited;

(2) The water quality limited list contained in Appendix A of the Status Assessment report will be placed on public notice and reviewed through the public hearing process. At the conclusion of the hearing process and the evaluation of the testimony, Appendix A will become the official water quality limited list. The Department may add a water body to the water quality limited list between status assessment reports after placing that action out on public notice and conducting a public hearing;

(3) For interstate water bodies, the State is responsible for completing the requirements of OAR 340-041-0004(9) of this rule for that portion of the interstate water body within the boundary of the State;

(4) For water bodies designated as water quality limited under sub-section (c) of the definition of “Water Quality Limited” in OAR 340-041-0002, the Department will establish a priority list and schedule for future water quality monitoring activities to determine: if the water body should be designated as water quality limited under sub-sections (a) or (b) of the definition of “Water Quality Limited” in OAR 340-041-0002, if estimated TMDLs need to be prepared, and if an implementation plan needs to be developed and implemented;

(5) For water bodies designated as water quality limited under sub-section (b) of the definition of “Water Quality Limited” in OAR 340-041-0002, requests for load increases may be considered using the process set out in OAR 340-041-0004(9)(b) of this rule.

[NOTE: Documents referenced are available from the agency.]

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0053
Mixing Zones

(1) The Department may allow a designated portion of a receiving water to serve as a zone of dilution for wastewaters and receiving waters to mix thoroughly and this zone will be defined as a mixing zone;

(2) The Department may suspend all or part of the water quality standards, or set less restrictive standards in the defined mixing zone, provided that the following conditions are met:

(a) A point source for which the mixing zone is established may not cause or significantly contribute to any of the following:

(A) Materials in concentrations that will cause acute toxicity to aquatic life as measured by a Department approved bioassay method. Acute toxicity is lethal to aquatic life as measured by a significant difference in lethal concentration between the control and 100 percent effluent in an acute bioassay test. Lethality in 100 percent effluent may be allowed due to ammonia and chlorine only when it is demonstrated on a case-by-case basis that immediate dilution of the effluent within the mixing zone reduces toxicity below lethal concentrations. The Department may on a case-by-case basis establish a zone of immediate dilution if appropriate for other parameters;

(B) Materials that will settle to form objectionable deposits;

(C) Floating debris, oil, scum, or other materials that cause nuisance conditions; and

(D) Substances in concentrations that produce deleterious amounts of fungal or bacterial growths.

(b) A point source for which the mixing zone is established may not cause or significantly contribute to any of the following conditions outside the boundary of the mixing zone:

(A) Materials in concentrations that will cause chronic (sublethal) toxicity. Chronic toxicity is measured as the concentration that causes long-term sublethal effects, such as significantly impaired growth or reproduction in aquatic organisms, during a testing period based on test species life cycle. Procedures and end points will be specified by the Department in wastewater discharge permits;

(B) Exceedances of any other water quality standards under normal annual low flow conditions.

(c) The limits of the mixing zone must be described in the wastewater discharge permit. In determining the location, surface area, and volume of a mixing zone area, the Department may use appropriate mixing zone guidelines to assess the biological, physical, and chemical character of receiving waters, effluent, and the most appropriate placement of the outfall, to protect instream water quality, public health, and other beneficial uses. Based on receiving water and effluent characteristics, the Department will define a mixing zone in the immediate area of a wastewater discharge to:

(A) Be as small as feasible;

(B) Avoid overlap with any other mixing zones to the extent possible and be less than the total stream width as necessary to allow passage of fish and other aquatic organisms;

(C) Minimize adverse effects on the indigenous biological community, especially when species are present that warrant special protection for their economic importance, tribal significance, ecological uniqueness, or other similar reasons determined by the Department and does not block the free passage of aquatic life;

(D) Not threaten public health;

(E) Minimize adverse effects on other designated beneficial uses outside the mixing zone.

(d) Temperature Thermal Plume Limitations. Temperature mixing zones and effluent limits authorized under 340-041-0028(12)(b) will be established to prevent or minimize the following adverse effects to salmonids inside the mixing zone:

(A) Impairment of an active salmonid spawning area where spawning redds are located or likely to be located. This adverse effect is prevented or minimized by limiting potential fish exposure to temperatures of 13 degrees Celsius (55.4 Fahrenheit) or more for salmon and steelhead, and 9 degrees Celsius (48 degrees Fahrenheit) or more for bull trout;

(B) Acute impairment or instantaneous lethality is prevented or minimized by limiting potential fish exposure to temperatures of 32.0 degrees Celsius (89.6 degrees Fahrenheit) or more to less than 2 seconds);

(C) Thermal shock caused by a sudden increase in water temperature is prevented or minimized by limiting potential fish exposure to temperatures of 25.0 degrees Celsius (77.0 degrees Fahrenheit) or more to less than 5 percent of the cross section of 100 percent of the 7Q10 low flow of the water body; the Department may develop additional exposure timing restrictions to prevent thermal shock; and

(D) Unless the ambient temperature is 21.0 degrees of greater, migration blockage is prevented or minimized by limiting potential fish exposure to temperatures of 21.0 degrees Celsius (69.8 degrees Fahrenheit) or more to less than 25 percent of the cross section of 100 percent of the 7Q10 low flow of the water body.

(e) The Department may request the applicant of a permitted discharge for which a mixing zone is required, to submit all information necessary to define a mixing zone, such as:

(A) Type of operation to be conducted;

(B) Characteristics of effluent flow rates and composition;

(C) Characteristics of low flows of receiving waters;

(D) Description of potential environmental effects;

(E) Proposed design for outfall structures.

(f) The Department may, as necessary, require mixing zone monitoring studies and/or bioassays to be conducted to evaluate water quality or biological status within and outside the mixing zone boundary;

(g) The Department may change mixing zone limits or require the relocation of an outfall, if it determines that the water quality within the mixing zone adversely affects any existing beneficial uses in the receiving waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 1-2007, f. & cert. ef. 3-14-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0057
Implementation at Domestic Wastewater Treatment Works

(1) Oregon's publicly owned sewerage utilities have since 1956 developed an increasing reliance on federal sewerage works construction grant funds to meet a major portion of the cost of their sewerage works construction needs. This reliance did not appear unreasonable based on federal legislation passed up through 1978. Indeed, the Environmental Quality Commission (Commission) has routinely approved compliance schedules with deadlines contingent on federal funding. This reliance no longer appears reasonable based on recent and proposed legislative actions and appropriations and the general state of the nation's economy.

(2) The federal funds expected for future years will address a small percentage of Oregon's sewerage works construction needs. Thus, continued reliance by DEQ and public agencies on federal funding for sewerage works construction will not assure that sewage from a growing Oregon population will be adequately treated and disposed of so that health hazards and nuisance conditions are prevented, and beneficial uses of public waters are not threatened or impaired by quality degradation.

(3) Therefore, the following statements of policy are established to guide future sewerage works planning and construction:

(a) The Commission remains strongly committed to its historic program of preventing water quality problems by requiring control facilities to be provided prior to the connection of new or increased waste loads;

(b) The Commission urges each sewerage utility in Oregon to develop, as soon as practicable, a financing plan that will ensure that future sewerage works construction, operation, maintenance and replacement needs can be met in a timely manner. Such financing plans will be a prerequisite to Department issuance of permits for new or significantly modified sewerage facilities, for approval of plans for new or significantly modified sewerage facilities, or for access to funding assistance from the State pollution control bond fund. The Department may accept assurance of development of such financing plan if necessary to prevent delay in projects already planned and in the process of implementation. The Department will work with the League of Oregon Cities and others as necessary to aid in the development of financing plans;

(c) No sewerage utility should assume that it will receive grant assistance to aid in addressing its planning and construction needs;

(d) Existing sewerage facility plans that are awaiting design and construction should be updated where necessary to include:

(A) Evaluation of additional alternatives where appropriate, and re-evaluation of costs of existing alternatives;

(B) Identification and delineation of phased construction alternatives; and

(C) A financing plan which will assure ability to construct facilities over an appropriate time span with locally derived funds.

(e) New sewerage works facility planning initiated after October 1, 1981 should not be approved without adequate consideration of alternatives and phased construction options, and without a financing plan which assures adequate funding for construction, operation, maintenance and replacement of sewerage facilities:

(A) The Commission recognizes that many cities in need of immediate sewerage works construction have completed planning and are awaiting design or construction funding. These cities have developed their program relying on 75 percent federal grants. They will have difficulty developing and implementing alternatives to fund immediate construction needs. Many are, or will be, under moratoriums on new connections because existing facilities are at, or near, capacity. The Commission will consider the following interim measures as a means of assisting these cities to get on a self-supporting basis provided that an approvable long-range program is presented:

(i) Temporary increases in waste discharge loading may be approved provided a minimum of secondary treatment, or equivalent control is maintained and beneficial uses of the receiving waterway are not impaired;

(ii) Installation and operation of temporary treatment works may be approved providing:

(I) The area served is inside an approved urban growth boundary and the proposal is consistent with State Land Use Planning laws;

(II) A master sewerage plan is adopted which shows how and when the temporary facilities will be phased out;

(III) The public agency responsible for implementing the master plan is the owner and operator of the temporary facilities;

(IV) Sewerage service to the area served by the temporary facility is necessary as part of the financing program for master plan implementation and no other option for service is practicably available;

(V) An acceptable receiving stream or method of effluent disposal is available for the temporary facility.

(B) Compliance schedules and other permit requirements may be modified to incorporate an approved interim program. Compliance with a permit so modified will be required at all times.

(f) Sewerage Construction programs should be designed to eliminate raw sewage bypassing during the summer recreation season (except for a storm event greater than the ten-year, 24-hour storm) as soon as practicable. A program and timetable should be developed through negotiation with each affected source. Bypasses which occur during the remainder of the year should be eliminated in accordance with an approved longer term maintenance based correction program. More stringent schedules may be imposed as necessary to protect drinking water supplies and shellfish growing areas;

(g) Any sewerage utility that is presently in compliance and foresees a need to plan for future expansion to accommodate growth, but elects to wait for federal funds for planning and construction, will make such election with full knowledge that if existing facilities reach capacity before new facilities are completed, a new-connection moratorium will be imposed. Such moratorium will not qualify them for any special consideration, since its presence is deemed a matter of their choice;

(h) The Department will continue to assist cities to develop interim and long-range programs, use construction schedules and to secure financing for essential construction.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0059
Variances

(1) Applicability. Subject to the requirements and limitations set out in sections (2) through (7) below, DEQ or the EQC may grant a water quality standards variance where the discharger or DEQ demonstrates that it is not feasible to attain the designated use and criterion during the term of the variance because of one of the factors listed in subsection (2)(a) of this rule. The director may grant an individual discharger variance and the commission may grant a multiple discharger variance or a water body variance. All water quality standards variances are subject to EPA approval. The variance may be used only for the purpose of establishing NPDES permit limits and requirements under CWA Section 301(b)(1)(C) or for issuing certifications under CWA Section 401. The underlying designated use and criterion otherwise remains in effect.

(2) Conditions to Grant a Variance. Before the EQC or DEQ may grant a variance, it must determine that:

(a) Attaining the designated use and criterion during the term of the variance is not feasible for one or more of the following reasons:

(A) Naturally occurring pollutant concentrations prevent attaining the use;

(B) Natural, ephemeral, intermittent, or low flow conditions, or water levels prevent attaining the use, unless these conditions may be compensated for by discharging sufficient volume of effluent discharges to enable uses to be met without violating state water conservation requirements;

(C) Human-caused conditions or sources of pollution prevent attaining the use and cannot be remedied or would cause more environmental damage to correct than to leave in place;

(D) Dams, diversions, or other types of hydrologic modifications preclude attaining the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way which would result in the attainment of the use;

(E) 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 attaining aquatic life protection uses;

(F) Controls more stringent than those required by sections 301(b) and 306 of the federal Clean Water Act would result in substantial and widespread economic and social impact; or

(G) Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented;

(b) The effluent limit sufficient to meet the underlying designated use and criterion cannot be attained by implementing technology-based effluent limits required under sections 301(b) and 306 of the federal Clean Water Act.

(c) The requirements that apply throughout the term of the water quality standards variance will not result in lowering the currently attained ambient water quality, unless the variance is needed for restoration activities as specified in paragraph(2)(a)(G) of this rule.

(3) Variance Duration and Re-evaluation.

(a) The duration of a variance must only be as long as necessary to achieve the highest attainable condition as described in section (5) of this rule.

(b) The DEQ order or EQC rule will specify the duration of the variance.

(c) If the duration of the variance is less than the term of the NPDES permit, the permittee must comply with the specified effluent limitation sufficient to meet the underlying water quality standard when the variance expires. The permit will include the date the variance and corresponding interim effluent limit will expire.

(d) If the term of the variance exceeds five years, DEQ will re-evaluate the highest attainable condition using all existing and readily available information at least every five years. DEQ will specify the re-evaluation frequency in the variance. Following public input, DEQ will submit its re-evaluation to EPA within 30 days of completion. If DEQ does not submit the re-evaluation to EPA within the specified timeline, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA.

(4) Variance Submittal Requirements.

(a) To request an individual variance, a permittee must submit the following information to DEQ:

(A) The specific pollutant, discharger, and receiving waterbody to which the variance will apply;

(B) A demonstration that attaining the designated use and criterion for the specific pollutant is not feasible for the requested duration of the variance based on one of the factors found in subsection (2)(a) of this rule;

(C) A description of treatment or alternative options the permittee considered to meet permit limits based on the applicable underlying water quality criterion, and a description of why these options are not technologically, economically, or otherwise feasible;

(D) Sufficient water quality data and analyses to characterize ambient and discharge water pollutant concentrations and determine the Highest Attainable Condition, as required in section (5) of this rule;

(E) If the highest attainable condition for the variance is consistent with paragraph (5)(a)(C) of this rule, a proposed pollutant minimization plan covering the term of the variance that includes actions the permittee(s) will take that will result in progress toward meeting the underlying water quality standard; and

(F) If the discharger is a publicly owned treatment works, a demonstration of the jurisdiction's legal authority, such as a sewer use ordinance, to regulate the pollutant for which the variance is sought. The jurisdiction's legal authority must be sufficient to control potential sources of that pollutant that discharge into the jurisdiction's sewer collection system.

(b) To be eligible for any multiple discharger variance or waterbody variance, a permittee must submit all the information required in the specific multiple discharger or waterbody variance rule.

(5) Highest Attainable Condition. The highest attainable condition is a quantifiable expression of one of the following:

(a) For individual or multiple discharger WQS variances:

(A) The highest attainable interim criterion; or

(B) The interim effluent condition that reflects the greatest pollutant reduction achievable; or

(C) If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control

technologies installed at the time the State grants the WQS variance, and adoption and implementation of a pollutant minimization plan.

(b) For WQS variances applicable to a waterbody or waterbody segment:

(A) The highest attainable interim use and interim criterion; or

(B) If no additional feasible pollutant control technology can be identified, the interim use and interim criterion that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a pollutant minimization plan.

(c) For any WQS variance that applies to a waterbody or waterbody segment, supporting documentation will identify and document any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) or water quality parameter(s) and waterbody or waterbody segment(s) specified in the WQS variance that could be implemented to make progress towards attaining the underlying designated use and criterion. DEQ will provide public notice and comment for any such documentation.

(d) In any subsequent WQS variance for a waterbody or waterbody segment, DEQ will document whether and to what extent best management practices for nonpoint source controls were implemented to address the pollutant(s) or water quality parameter(s) subject to the WQS variance and the water quality progress achieved.

(6) Variance Permit Conditions. DEQ must establish and incorporate into the discharger's NPDES permit all conditions necessary to implement an approved variance in lieu of the underlying water quality standard, so long as the variance remains effective. The permit must include, at a minimum, the following requirements:

(a) A permit limit or requirement deriving from the highest attainable effluent condition or highest attainable use and criterion specified in the variance, including any updated highest attainable effluent condition based on a five year re-evaluation;

(b) For variances expressing the highest attainable condition per section 5(a)(C) or 5(b)(B) of this rule, a requirement to implement the Pollutant Minimization Program included in the applicable variance ;

(c) Any studies, effluent monitoring, or other monitoring necessary to ensure compliance with the conditions of the variance; and

(d) An annual progress report to DEQ describing the results of any required studies or monitoring during the reporting year, and identifying the pollutant reduction activities completed and any impediments to reaching any specific milestones stated in the variance.

(7) Public Input and Notification Requirements.

(a) If DEQ proposes to grant a variance, it must provide public notice of the proposed variance and accept public comment. The public notice may be coordinated with the public notification of a draft NPDES permit or draft 401 certification that would rely on the variance;

(b) If DEQ is required to re-evaluate the highest attainable condition consistent with (3)(d) of this rule, DEQ will obtain public input on the re-evaluation prior to submitting the re-evaluation to EPA. The specific method of obtaining public input will be documented in the variance.

(c) DEQ will publish a list of all variances approved under this rule on its website. DEQ will add newly approved variances to this list within 30 days of their effective date. The list will identify:

(A) The effective date and duration of the variance;

(B) The facility or facilities;

(C) The pollutant(s) or water quality parameter(s);

(D) The waters to which the variance applies;

(E) The underlying designated use and criterion for the waterbody;

(F) The highest attainable condition specified in the variance;

(G) How to obtain additional information about the variance.

Statutory/Other Authority: ORS 468.020, 468B.010, 468B.020, 468B.035 & 468B.110
Statutes/Other Implemented: ORS 468B.048
History:
DEQ 3-2020, amend filed 01/24/2020, effective 01/24/2020
DEQ 10-2011, f. & cert. ef. 7-13-11

340-041-0061
Other Implementation of Water Quality Criteria

(1) A waste treatment and disposal facility may not be constructed or operated and wastes may not be discharged to public waters without a permit from the department in accordance with ORS 468B.050.

(2) Plans for all sewage and industrial waste treatment, control, and disposal facilities must be submitted to the department for review and approval prior to construction as required by ORS 468B.055.

(3) Minimum design criteria for waste treatment and control facilities prescribed under this plan and other waste treatment and controls deemed necessary to ensure compliance with the water quality standards contained in this plan must be provided in accordance with specific permit conditions for those sources or activities for which permits are required and the following implementation program.

(a) For new or expanded waste loads or activities, fully approved treatment or control facilities, or both, must be provided prior to discharge of any wastes from the new or expanded facilities or conduct of the new or expanded activity.

(b) For existing waste loads or activities, additional treatment or control facilities necessary to correct specific unacceptable water quality conditions must be provided in accordance with a specific program and timetable incorporated into the waste discharge permit for the individual discharger or activity. In developing treatment requirements and implementation schedules for existing installations or activities, consideration will be given to the impact upon the overall environmental quality, including air, water, land use, and aesthetics.

(c) Wherever minimum design criteria for waste treatment and control facilities set forth in this plan are more stringent than applicable federal standards and treatment levels currently being provided, upgrading to the more stringent requirements will be deferred until it is necessary to expand or otherwise modify or replace the existing treatment facilities. Such deferral will be acknowledged in the permit for the source.

(d) Where planning, design, or construction of new or modified waste treatment and controls to meet prior applicable state or federal requirements is underway at the time this plan is adopted, such plans, design, or construction may be completed under the requirements in effect when the project was initiated. Upgrading to meet more stringent future requirements will be timed in accordance with section (3) of this rule.

(4) Confined animal feeding operations (CAFOs) are regulated under OAR 340-051-0005 through 340-051-0080 to minimize potential adverse effect on water quality (see also OAR 603-074-0005 through 603-074-0070).

(5) Programs for control of pollution from nonpoint sources when developed by the department or by other agencies pursuant to section 208 of the federal Clean Water Act and approved by the department will be incorporated into this plan by amendment via the same process used to adopt the plan unless other procedures are established by law.

(6) Where minimum requirements of federal law or enforceable regulations are more stringent than specific provisions of this plan, the federal requirements will prevail.

(7) Within the framework of statewide priorities and available resources, the department will monitor water quality within the basin for the purposes of evaluating conformance with the plan and developing information for additions or updates.

(8) The commission recognizes that the potential exists for conflicts between water quality management plans and the land use plans and resource management plans that local governments and other agencies are required to develop. If conflicts develop, the department will meet with the local governments or responsible agencies to resolve the conflicts. Revisions will be presented for adoption via the same process used to adopt the plan unless other specific procedures are established by law.

(9) The department will calculate and include effluent limits specified in pounds per day, which will be the mass load limits for biochemical oxygen demand or carbonaceous biochemical oxygen demand and total suspended solids in National Pollutant Discharge Elimination System permits issued to all sewage treatment facilities. These limits must be calculated as follows.

(a) Except as noted in paragraph (H) of this subsection, the following requirements apply to existing facilities and to facilities receiving departmental approval for engineering plans and specifications for new treatment facilities or treatment facilities expanding the average dry weather treatment capacity before June 30, 1992:

(A) During periods of low stream flows (approximately May 1 through October 31), the monthly average mass load expressed as pounds per day may not exceed the applicable monthly concentration effluent limit times the design average dry weather flow expressed in million gallons per day times 8.34. The weekly average mass load expressed as pounds per day may not exceed the monthly average mass load times 1.5. The daily mass load expressed in pounds per day may not exceed the monthly average mass load times 2.0.

(B) During the period of high stream flows (approximately November 1 through April 30), the monthly average mass load expressed as pounds per day may not exceed the monthly concentration effluent limit times the design average wet weather flow expressed in million gallons per day times 8.34. The weekly average mass load expressed as pounds per day may not exceed the monthly average mass load times 1.5. The daily mass load expressed in pounds per day may not exceed the monthly average mass load times 2.0.

(C) On any day that the daily flow to a sewage treatment facility exceeds the lesser hydraulic capacity of the secondary treatment portion of the facility or twice the design average dry weather flow, the daily mass load limit does not apply. The permittee must operate the treatment facility at highest and best practicable treatment and control.

(D) The design average wet weather flow used in calculating mass loads must be approved by the department in accordance with prudent engineering practice and must be based on a facility plan approved by the department, engineering plans and specifications approved by the department, or an engineering evaluation. The permittee must submit documentation describing and supporting the design average wet weather flow with the permit application, application for permit renewal, or modification request or upon request by the department. The design average wet weather flow is defined as the average flow between November 1 and April 30 when the sewage treatment facility is projected to be at design capacity for that portion of the year.

(E) Mass loads assigned as described in paragraphs (B) and (C) of this subsection will not be subject to OAR 340-041-0004(9);

(F) Mass loads as described in this rule will be included in permits upon renewal or upon a request for permit modification.

(G) Within 180 days after permit renewal or modification, a permittee receiving higher mass loads under this rule and having a separate sanitary sewer system must submit to the department for review and approval a proposed program and time schedule for identifying and reducing inflow. The program must include the following:

(i) Identification of all overflow points and verification that sewer system overflows are not occurring up to a 24-hour, five-year storm event or equivalent;

(ii) Monitoring of all pump station overflow points;

(iii) A program for identifying and removing all inflow sources into the permit holder's sewer system over which the permit holder has legal control; and

(iv) For those permit holders not having the necessary legal authority for all portions of the sewer system discharging into the permit holder's sewer system or treatment facility, a program and schedule for gaining legal authority to require inflow reduction and a program and schedule for removing inflow sources.

(H) Within one year after the department's approval of the program, the permit holder must begin implementation of the program.

(I) Paragraphs (A) through (G) of this subsection do not apply to the cities of Athena, Elgin, Adair Village, Halsey, Harrisburg, Independence, Carlton, and Sweet Home. Mass load limits have been individually assigned to these facilities.

(b) For new sewage treatment facilities or treatment facilities expanding the average dry weather treatment capacity and receiving engineering plans and specifications approval from the department after June 30, 1992, the mass load limits must be calculated by the department based on the proposed treatment facility capabilities and the highest and best practicable treatment to minimize the discharge of pollutants.

(c) Mass load limits as defined in this rule may be replaced by more stringent limits if required by waste load allocations established in accordance with a TMDL for treatment facilities discharging to water quality limited streams or if required to prevent or eliminate violations of water quality standards.

(d) If the design average wet weather flow or the hydraulic secondary treatment capacity is not known or has not been approved by the department at the time of permit issuance, the permit must include as interim mass load limits the mass load limits in the previous permit issued to the permit holder for the treatment facility. The permit must also include a requirement that the permit holder submit to the department the design average wet weather flow and hydraulic secondary treatment capacity within 12 months after permit issuance. Upon review and approval of the design flow information, the department will modify the permit and include mass load limits as described in subsection (a) of this section.

(e) Each permit holder with existing sewage treatment facilities otherwise subject to subsection (a) of this section may choose mass load limits calculated as follows:

(A) The monthly average mass load expressed as pounds per day may not exceed the applicable monthly concentration effluent limit times the design average dry weather flow expressed in million gallons per day times 8.34 pounds per gallon.

(B) The weekly average mass load expressed as pounds per day may not exceed the monthly average mass load times 1.5.

(C) The daily mass load expressed in pounds per day may not exceed the monthly average mass load times 2.0. If existing mass load limits are retained by the permit holder, the terms and requirements of subsection (a) of this section do not apply.

(f) The commission may grant exceptions to subsection (a) of this section. In allowing increased discharged loads, the commission must make the findings specified in OAR 340-041-0004(9)(a) for waste loads and the following findings:

(A) Mass loads calculated in subsection (a) of this section cannot be achieved with the existing treatment facilities operated at maximum efficiency at projected design flows; and

(B) There are no practicable alternatives to achieving the mass loads as calculated in subsection (a) of this section.

(10) Testing methods. The analytical testing methods for determining compliance with the water quality standards in this rule must comply with 40 CFR Part 136 or, if Part 136 does not prescribe a method, with the most recent edition of Standard Methods for the Examination of Water and Waste Water published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation; if the department has published an applicable superseding method, testing must comply with the superseding method. Testing in accordance with an alternative method must comply with this rule if the department has published the method or has approved the method in writing.

On February 20, 2009 EPA disapproved the Stratified Waters Rule. Therefore 340-041-0061(11) is not in effect for CWA purposes.

~~(11) Reservoirs or managed lakes are deemed in compliance with water quality criteria for temperature, pH, or dissolved oxygen (DO) if all of the following circumstances exist.~~

~~(a) The water body has thermally stratified naturally or due to the presence of an impoundment.~~

~~(b) The water body has three observable layers, defined as the epilimnion, metalimnion, and hypolimnion.~~

~~(c) A layer exists in the reservoir or managed lake in which temperature, pH, and DO criteria are all met, and the layer is sufficient to support beneficial uses.~~

~~(d) All practicable measures have been taken by the entities responsible for management of the reservoir or managed lake to maximize the layers meeting the temperature, pH, and DO criteria.~~

~~(e) One of the following conditions is met:~~

~~(A) The streams or river segments immediately downstream of the water body meet applicable criteria for temperature, pH, and DO.~~

~~(B) All practicable measures have been taken to maximize downstream water quality potential and fish passage.~~

~~(C) If the applicable criteria are not met in the stream or river segment immediately upstream of the water body, then no further measurable downstream degradation of water quality has taken place due to stratification of the reservoir or managed lake.~~

(12) Compliance schedules. In a permit issued under OAR 340, division 045 or in a water quality certification under OAR 340, division 48, the department may include compliance schedules for the implementation of effluent limits derived from water quality criteria in this division. A compliance schedule in an NPDES permit is allowed only for water quality based effluent limits that are newly applicable to the permit and must comply with provisions in 40 CFR §122.47 (including the requirement that water quality criteria must be achieved as soon as possible).

[NOTE: Referenced publications are available from the agency.]

Statutory/Other Authority: ORS 468.020, 468B.048, 468B.030 & 468B.035
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 5-2013, f. & cert. ef. 6-21-13
DEQ 10-2011, f. & cert. ef. 7-13-11
DEQ 3-2004, f. & cert. ef. 5-28-04
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0101
Basin-Specific Criteria (Main Stem Columbia River): Beneficial Uses to Be Protected in the Main Stem Columbia River

(1) Water quality in the main stem Columbia River (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 101A (November 2003).

(2) Designated fish uses to be protected in the main stem Columbia River are shown in Table 101B (November 2003).

(3) Coastal water contact recreation and shellfish harvesting use is to be protected in the portion of the main stem Columbia River designated for these uses in Figure 101A (August 2016).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 9-2016, f. & cert. ef. 8-18-16
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0103
Basin-Specific Criteria (Main Stem Columbia River): Approved TMDLs in the Basin

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Columbia River — Dioxin — February 25, 1991

Columbia River — Dissolved Gas — November 11, 2002

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0104
Basin-Specific Criteria (Main Stem Columbia River): Water Quality Standards and Policies Specific to the Main Stem Columbia River

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: main stem Columbia River (mouth to river mile 309): 7.0 – 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below must not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0101:

(a) Main stem Columbia River (river miles 120 to 147 and 218-309) — 200.0 mg/l;

(b) All other river miles of main stem Columbia River — 500.0 mg/l.

(3) Total Dissolved Gas. The Commission may modify the total dissolved gas criteria in the Columbia River for the purpose of allowing increased spill for salmonid migration. The Commission must find that:

(a) Failure to act would result in greater harm to salmonid stock survival through in-river migration than would occur by increased spill;

(b) The modified total dissolved gas criteria associated with the increased spill provides a reasonable balance of the risk of impairment due to elevated total dissolved gas to both resident biological communities and other migrating fish and to migrating adult and juvenile salmonids when compared to other options for in-river migration of salmon;

(c) Adequate data will exist to determine compliance with the standards; and

(d) Biological monitoring is occurring to document that the migratory salmonid and resident biological communities are being protected.

(e) The Commission will give public notice and notify all known interested parties and will make provision for opportunity to be heard and comment on the evidence presented by others, except that the Director may modify the total dissolved gas criteria for emergencies for a period not exceeding 48 hours;

(f) The Commission may, at its discretion, consider alternative modes of migration.

(4) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (see paragraphs 4(a)(A) and 4(a)(B) of this rule): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control. Periods of low stream flow vary throughout the main stem Columbia River. Low stream flow periods, by river mile, are:

(A) River miles 120 to 147: Approximately July 1 to January 31;

(B) River miles 147 to 218: Approximately May 1 to October 31.

(b) During periods of high stream flows (see paragraphs 4(b)(A) and 4(b)(B) below): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

(A) River miles 120 to 147: Approximately February 1 to June 30;

(B) River miles 147 to 218: Approximately November 1 to April 30.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0121
Basin-Specific Criteria (Main Stem Snake River): Beneficial Uses to Be Protected in the Main Stem Snake River

(1) Water quality in the main stem Snake River (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 121A (August 2005).

(2) Designated fish uses to be protected in the main stem Snake River are shown in Table 121B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0122
Basin-Specific Criteria (Main Stem Snake River): Approved TMDLs in the Basin

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0124
Basin-Specific Criteria (Main Stem Snake River): Water Quality Standards and Policies Specific to the Main Stem Snake River

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: main stem Snake River: 7.0-9.0.

(2) Total Dissolved Solids. Guide concentration listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0120: main stem Snake River — 750.0 mg/l.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0130
Basin-Specific Criteria (Deschutes): Beneficial Uses to Be Protected in the Deschutes Basin

(1) Water quality in the Deschutes Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 130A (November 2003).

(2) Designated fish uses to be protected in the Deschutes Basin are shown in Figures 130A and 130B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0133
Basin-Specific Criteria (Deschutes): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0135
Basin-Specific Criteria (Deschutes): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) All other Basin streams (except Cascade lakes): 6.5–8.5;

(b) Cascade lakes above 3,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0562: 500.0 mg/l.

(3) La Pine Aquifer.

(a) In order to protect the shallow aquifer located in the vicinity of the community of La Pine in Deschutes County for present and future use as a drinking water source, it is the policy of the Environmental Quality Commission to support the implementation of the La Pine Aquifer Management Plan adopted by the Deschutes County Board of Commissioners on September 28, 1982, by requiring the following:

(b) The waste water generated outside the core area of the community of La Pine but within the study area described in the La Pine Aquifer Management Plan, will be subjected to regulation under the Department's on-site waste disposal rules (OAR 340-071);

(A) The core area of the community of La Pine is that area defined as follows: Located in a portion of Sections 10, 11, 14, and 15, Township 22 South, Range 10 East, Willamette Meridian, Deschutes County, Oregon, more particularly described as follows: Beginning at the northwest corner of the intersection of U.S. Highway 97 and First Street (aka Reed Road); thence in a northeasterly direction along the westerly right-of-way line of said U.S. Highway 97 a distance of 1,480 feet, more or less, to the intersection of said U.S. Highway 97 and the northerly line of the south one-half of the southwest one-quarter of said Section 11; thence in a westerly direction along the northerly line of the south one-half of the southwest one-quarter of said Section 11 a distance of 1,950 feet, more or less, to the south one-sixteenth corner between said Sections 10 and 11; thence in a northerly direction along the section line between Sections 10 and 11, 990 feet, more or less, to the northeast corner of the south one-half of the north one-half of the northeast one-quarter of the southeast one-quarter of said Section 10 being the northeast corner of the Bend-La Pine School District property; thence in a westerly direction along the north line of the said south one-half of the north one-half of the northeast one-quarter of the southeast one-quarter, being the north line of the said Bend-La Pine School District property, 1,320 feet, more or less, to the northwest corner of the south one-half of the north one-half of the southeast one-quarter of the southeast one-quarter of said Section 10, said point further being the northwest corner of the Bend-La Pine School District property; thence in a southerly direction along the westerly line of the east one-half of the southeast one-quarter of said Section 10, 2, 310 feet, more or less, to a point at the intersection of the westerly line of the southeast one-quarter of the southeast one-quarter of said Section 10 and the northerly right-of-way line of said First Street, said point further being the southwest corner of the Bend-La Pine School District property; thence in an easterly direction along the northerly right-of-way line of said First Street, 350 feet, more or less, to a point on the northerly right-of-way line of said First Street due

north of the northwest corner of the alley in Block 16 of the Plat of La Pine Subdivision; thence in a southerly direction along the westerly side of said alley 550 feet, more or less, to a point along the southerly right-of-way of 2nd Street due south of the southwest corner of the alley in Block 16 of the Plat of La Pine Subdivision; thence in an easterly direction along the southerly right-of-way of 2nd Street, 390 feet, more or less, to the southwest corner of the intersection of Stillwell Street and 2nd Street; thence in a southerly direction along the westerly right-of-way line of said Stillwell Street, 950 feet, more or less, to the northwest corner of the intersection of said Stillwell Street and 4th Street; thence in a southerly direction along the west right-of-way line of Stillwell Street approximately 1,186 feet to the northwest corner of the intersection of Stillwell Street and Hill Street; thence in a southwesterly direction along the west right-of-way line of Hill Street approximately 340 feet to the intersection of the west line of Hill Street with the north line of 8th Street; thence westerly along the north line of 8th Street, 41 feet, more or less to the northeast corner of the intersection of 8th Street and Stearns Street; thence in a southerly direction along the east right-of-way line of Stearns Street approximately 387 feet to the northeast corner of the intersection of Stearns Street and 9th Street; thence in an easterly direction along the north right-of-way line of 9th Street and the easterly extension of the north line of said 9th Street, 1,093 feet to its intersection with the east right-of-way line of Pengra Huntington Road; thence in a northerly direction along the east right-of-way line of Pengra Huntington Road approximately 1,166 feet to the southwest corner of Lot 31, Government Homesite Tracts; thence in an easterly direction along the south boundary of said Lot 31 approximately 263 feet to the southeast corner of said Lot 31; thence in a northerly direction along the east boundary of said Lot 31 approximately 200 feet to the south right-of-way line of Finley Butte Road; thence in an easterly direction along the south right-of-way line of Finley Butte Road approximately 675 feet to the southeast corner of the intersection of Finley Butte Road and Bonnie Road; thence in a northerly direction along the east right-of-way line of Bonnie Road approximately 1,075 feet to the southeast corner of the intersection of Bonnie Road and William Foss Road; thence in an easterly direction along the southerly right-of-way line of said William Foss Road, 1,640 feet, more or less, to the north-south center section line of said Section 14 thence in a northerly direction along the north-south center line of said Section 14, 1,635 feet, more or less, to the north right-of-way line of said First Street (aka Reed Road); thence in a westerly direction along the north right-of-way line of said First Street, 1,432 feet, more or less, to the point of beginning;

(B) All dwellings and buildings that contain plumbing fixtures inside this core area boundary must eliminate the discharge of inadequately treated sewage, abandon existing on-site sewage disposal systems and connect to the regional sewerage facility. This must be done within 90 days following notification by the approved regional sewerage agency that sewer service is available.

(c) Waste disposal systems for new developments within the La Pine Aquifer Management Plan Boundary where development density exceeds two single family equivalent dwelling units per acre or which have an aggregate waste flow in excess of 5,000 gallons per day may only be approved if a study is conducted by the applicant which convinces the department that the aquifer will not be unreasonably degraded.

(4) In addition to the requirements set forth in section (3) of this rule, the following actions are encouraged:

(a) Since the aquifer is presently degraded to the point where it does not meet Federal Drinking Water Standards, and the installation of sewer facilities will not immediately restore the quality to safe levels, Deschutes County should notify the citizens of the La Pine core area of the need to develop a safe drinking water supply for the community as soon as possible;

(b) Residents of the La Pine area are encouraged to test their drinking water frequently;

(c) Owners of underground liquid storage tanks are encouraged to periodically test the storage tanks to assure prompt detection and repair of leaks;

(d) Data on the quality of the shallow aquifer in and around La Pine should be obtained on a periodic basis to assess the effect of the above waste water management decisions on the quality of the groundwater.

(5) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) Metolius River Subbasin and Deschutes River Basin above Bend Diversion Dam (river mile 165): Treatment resulting in monthly average effluent concentrations not to exceed 5 mg/l of BOD and 5 mg/l of SS or equivalent control;

(b) Deschutes River from the Bend Diversion Dam (river mile 165) downstream to the Pelton Reregulating Dam (river mile 100) and for the Crooked River Subbasin:

(A) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to March 31): A minimum of secondary treatment or equivalent and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

(c) Deschutes from the Pelton Reregulating Dam (river mile 100) downstream to the mouth:

(A) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to March 31): A minimum of secondary treatment or equivalent and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0140
Basin-Specific Criteria (Goose and Summer Lakes): Beneficial Uses to be Protected in Goose and Summer Lake Basins

(1) Water quality in the Goose and Summer Lake Basins (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 140A (November 2003).

(2) Designated fish uses to be protected in the Goose and Summer Lake Basins are shown in Table 140B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0143
Basin-Specific Criteria (Goose and Summer Lakes): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0145
Basin-Specific Criteria (Goose and Summer Lakes): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration):

(a) Goose Lake: pH values may not fall outside the range of 7.5 to 9.5;

(b) All other basin waters. pH values may not fall outside the range of 7.0 to 9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0140: None.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes: a minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0151
Basin-Specific Criteria (Grande Ronde): Beneficial Uses to Be Protected in the Grande Ronde Basin

(1) Water quality in the Grande Ronde Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 151A (November 2003).

(2) Designated fish uses to be protected in the Grande Ronde Basin are shown in Figures 151A and 151B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0154
Basin-Specific Criteria (Grande Ronde): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Upper Grande Ronde — Temperature, Sediment, Nitrogen and Phosphorous — May 3, 2000

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0156
Basin-Specific Criteria (Grande Ronde): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: all basin streams (other than main stem Snake River): 6.5–9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0150: main stem Grande Ronde River — 200.0 mg/l;

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (approximately June 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of suspended solids or equivalent control;

(b) During the period of high stream flows (approximately November 1 to May 31): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0160
Basin-Specific Criteria (Hood): Beneficial Uses to Be Protected in the Hood Basin

(1) Water quality in the Hood Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 160A (November 2003).

(2) Designated fish uses to be protected in the Hood Basin are shown in Figures 160A and 160B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0164
Basin-Specific Criteria (Hood): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Western Hood — Temperature — January 30, 2002

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0165
Basin-Specific Criteria (Hood): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Hood River Basin streams (except main stem Columbia River and Cascade lakes): pH values may not fall outside the range of 6.5 to 8.5;

(b) Cascade lakes above 3,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0160: 500.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately May 1 to October 31): Hood River Basin streams (except main stem Columbia River): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of suspended solids or equivalent control.

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0170
Basin-Specific Criteria (John Day): Beneficial Uses to Be Protected in the John Day Basin

(1) Water quality in the John Day Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 170A (November 2003).

(2) Designated fish uses to be protected in the John Day Basin are shown in Figures 170A and 170B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0174
Basin-Specific Criteria (John Day): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0175
Basin-Specific Criteria (John Day): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: all Basin streams (other than the main stem Colombia River): 6.5–9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0170: John Day River and Tributaries — 500.0 mg/l.

(3) Minimum Design Criteria for Treatment and control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0180
Basin-Specific Criteria (Klamath): Beneficial Uses to Be Protected in the Klamath Basin

(1) Water quality in the Klamath Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 180A (August 2005).

(2) Designated fish uses to be protected in the Klamath Basin are shown in Figure 180A (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019

DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0184
Basin-Specific Criteria (Klamath): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Upper Klamath Lake Drainage — Temperature, Dissolved Oxygen, pH, Chlorophyll a — August 7, 2002.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0185
Basin-Specific Criteria (Klamath): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Fresh waters except Cascade lakes: pH values may not fall outside the range of 6.5-9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin;

(b) Cascade lakes above 5,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Temperature. From June 1 to September 30, no NPDES point source that discharges to the portion of the Klamath River designated for cool water species may cause the temperature of the water body to increase more than 0.3°C above the natural background after mixing with 25% of the stream flow. Natural background for the Klamath River means the temperature of the Klamath River at the outflow from Upper Klamath Lake plus any natural warming or cooling that occurs downstream. This criterion supersedes OAR 340-041-0028(9)(a) during the specified time period for NPDES permitted point sources.

(3) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0180: main stem Klamath River from Klamath Lake to the Oregon-California Border (river miles 255 to 208.5): The specific conductance may not exceed 400 micro-ohms at 77°F when measured at the Oregon-California Border (river mile 208.5).

(4) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low streams flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 of suspended solids or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities to maximum practicable efficient and effectiveness so as to minimize waste discharge to public waters.

(5) Time Schedule for Dam Removal.

(a) DEQ may issue a 401 Water Quality Certification for the federal license or permit authorizing the removal of J.C. Boyle Dam on the Klamath River that includes a time schedule for compliance with water quality standards, if DEQ makes the following findings:

(A) The dam removal and its associated water quality impacts will be of limited duration;

(B) The dam removal and related restoration activities will provide a net ecological benefit;

(C) The dam removal will be performed in a manner minimizing, to the maximum extent practicable, adverse impacts to water quality, threatened and endangered species, and beneficial uses of the Klamath River; and

(D) The dam removal, by the end of a specified time schedule, is not expected to cause an exceedance of a water quality standard set forth in this Division.

(b) Any 401 Water Quality Certification issued by DEQ for removal of J.C. Boyle Dam must:

(A) Be based on an application, evaluation, and public participation complying with OAR chapter 340 division 48; and

(B) Contain conditions ensuring that the dam removal:

(i) Will be performed in accordance with interim milestones and a time schedule specified in the certification;

(ii) Will be performed in a manner that, to the maximum practicable extent, minimizes adverse impacts to water quality, threatened and endangered species, and beneficial uses of the Klamath River (including the use of best practices and interim and post-removal protection, mitigation, and monitoring measures); and

(iii) Will not cause an exceedance of a water quality standard set forth in this Division by the end of the maximum period for meeting standards specified in the certification.

(6) Outstanding Resource Waters of Oregon (ORWs): Crater Lake. The current high water quality and exceptional ecological and recreation values of Crater Lake shall be maintained and protected, except as altered by natural processes or as authorized under (6)(a)-(b), below.

(a) No new NPDES discharge or increase of an existing NPDES discharge to Crater Lake shall be allowed, except a construction stormwater permit may be authorized for projects that will not have more than a short-term water quality impact.

(b) Any other new discharge to Crater Lake is prohibited if such discharge would degrade the water quality or ecological or recreation values of Crater Lake, except in the following circumstances:

(A) As needed to respond to a public health or safety emergency, including but not limited to wildfire response. The water quality impacts of such responses shall be short term and will be mitigated or rehabilitated to the extent practicable.

(B) As needed in connection with ecological restoration or water quality improvement activities where short term water quality impacts are necessary to obtain long-term restoration or water quality improvements.

(c) The Environmental Quality Commission acknowledges the mandate of Crater Lake National Park to also manage the park for the purpose of providing public access and enjoyment, as directed by the National Park Service Organic Act (16U.S.C. 1 et seq.).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048

History:
DEQ 5-2021, amend filed 02/09/2021, effective 02/09/2021
DEQ 4-2021, amend filed 01/25/2021, effective 01/25/2021
DEQ 2-2012, f. & cert .ef. 5-21-12
DEQ 1-2007, f. & cert. ef. 3-14-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0190
Basin-Specific Criteria (Malheur Lake): Beneficial Uses to Be Protected in the Malheur Lake Basin

(1) Water quality in the Malheur Lake Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 190A (November 2003).

(2) Designated fish uses to be protected in the Malheur Lake Basin are shown in Table 190B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0194
Basin-Specific Criteria (Malheur Lake): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0195
Basin-Specific Criteria (Malheur Lake): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the range of 7.0 to 9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Temperature. State waters in the Malheur Lake Basin supporting the Borax Lake chub may not be cooled more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) below the natural condition.

(3) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0190: None.

(4) Minimum Design Criteria for Treatment and Control of Sewage wastes: a minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:

DEQ 1-2007, f. & cert. ef. 3-14-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0201
Basin-Specific Criteria (Malheur River):Beneficial Uses to Be Protected in the Malheur River Basin

(1) Water quality in the Malheur River Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 201A (August 2005).

(2) Designated fish uses to be protected in the Malheur River Basin are shown in Figure 201A (August 2005).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0204
Basin-Specific Criteria (Malheur River): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 36-2018, minor correction filed 04/02/2018, effective 04/02/2018
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0207
Basin-Specific Criteria (Malheur River): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the range of 7.0 to 9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0201: Snake River — 750.0 mg/l.

(3) Minimum Design Criteria for Treatment Control of Sewage Wastes:

(a) During periods of low stream flow (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During periods of high stream flow (approximately November 1 to April 30): A minimum of Secondary Treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 37-2018, minor correction filed 04/02/2018, effective 04/02/2018
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0220
Basin-Specific Criteria (Mid Coast Basin): Beneficial Uses to Be Protected in the Mid Coast Basin

(1) Water quality in the Mid Coast Basin (see Figure 1) may be managed to protect the designated beneficial uses shown in Table 220A (November 2003).

(2) Designated fish uses to be protected in the Mid Coast Basin are shown in Figures 220A and 220B (November 2003).

(3) Coastal water contact recreation use is to be protected in all Mid Coast Basin marine waters and in coastal waters designated in Figures 220C through 220H (August 2016).

(4) Shellfish harvesting use is to be protected in all Mid Coast Basin marine waters and in coastal waters designated in Figures 220C through 220H (August 2016).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 9-2016, f. & cert. ef. 8-18-16
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0224
Basin-Specific Criteria (Mid Coast Basin): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Clear Lake — Phosphorus — December 8, 1992

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0225
Basin-Specific Criteria (Mid Coast Basin): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Marine waters: 7.0–8.5;

(b) Estuarine and fresh waters: 6.5–8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0220: 100.0 mg/l.

(3) Nutrients in Clear Lake Watershed. In order to preserve the existing high quality water in Clear Lake north of Florence for use as a public water supply source requiring only minimal filtration, it is the policy of

the Environmental Quality Commission to protect the Clear Lake watershed including both surface and groundwater, from existing and potential contamination sources with the following requirements:

(a) The total phosphorus maximum annual loading discharged into Clear Lake may not exceed 241 pounds per year from all sources.

(b) The total phosphorus maximum annual loading for the Clear Lake watershed may be deemed exceeded if the median concentration of total phosphorus from samples collected in the epilimnion between May 1 and September 30 exceed nine micrograms per liter during two consecutive years.

(c) Of the total phosphorus loading of 241 pounds per year specified in section (1) of this rule, 192 pounds per year will be considered current background and Department reserve and is not available to other sources.

(d) The total phosphorus maximum annual loading discharged into Collard Lake may not exceed 123 pounds per year.

(e) If water quality monitoring within the Clear Lake watershed indicates degradation, the Commission may require additional studies, corrective actions, or both, by rule. Such corrective actions may include but are not limited to the construction of sewage collection and off-site treatment and disposal facilities.

(4) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS, or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30) and for direct ocean discharges: a minimum of secondary treatment or equivalent control, and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0230
Basin-Specific Criteria (North Coast): Beneficial Uses to Be Protected in the North Coast Basin

(1) Water quality in the North Coast Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 230A (November 2003).

(2) Designated fish uses to be protected in the North Coast Basin are shown in Figures 230A and 230B (November 2003).

(3) Coastal water contact recreation use is to be protected in all North Coast Basin marine waters and in coastal waters designated in Figures 230C through 230H (August 2016).

(4) Shellfish harvesting use is to be protected in all North Coast Basin marine waters and in coastal waters as designated in Figures 230Cthrough 230H (August 2016).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019

DEQ 9-2016, f. & cert. ef. 8-18-16
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0234
Basin-Specific Criteria (North Coast): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Nestucca Bay Drainage — Temperature, Bacteria and Sediment — May 13, 2002

Tillamook Bay Drainage — Temperature and Bacteria — July 31, 2001

North Coast — Temperature and Bacteria — August 20, 2003

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0235
Basin-Specific Criteria (North Coast): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Marine waters: 7.0–8.5;

(b) Estuarine and fresh waters: 6.5–8.5.

(2) Total Dissolved Solids. Guide concentrations may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0230: All Fresh Water Streams and Tributaries (other than the main stem Columbia River) — 100.0 mg/l.

(3) Minimum Design Criteria for Treatment and control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0250
Basin-Specific Criteria (Owyhee): Beneficial Uses to Be Protected in the Owyhee Basin

(1) Water quality in the Owyhee Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 250A (November 2003).

(2) Designated fish uses to be protected in the Owyhee Basin are shown in Table 250B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0254
Basin-Specific Criteria (Owyhee): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0256
Basin-Specific Criteria (Owyhee): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the range of 7.0 to 9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0250: Snake River — 750.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes: a minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0260
Basin-Specific Criteria (Powder/Burnt): Beneficial Uses to Be Protected in the Powder/Burnt Basins

(1) Water quality in the Powder/Burnt Basins (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 260A (August 2005).

(2) Designated fish uses to be protected in the Powder/Burnt Basins are shown in Figure 260A (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:

DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0264
Basin-Specific Criteria (Powder/Burnt): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0265
Basin-Specific Criteria (Powder/Burnt): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: all Basin streams (other than main stem Snake River): 6.5–9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Minimum Design Criteria for Treatment and Control of Sewage Wastes: a minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, the operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0271
Basin-Specific Criteria (Rogue): Beneficial Uses to Be Protected in the Rogue Basin

(1) Water quality in the Rogue Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 271A (November 2003).

(2) Designated fish uses to be protected in the Rogue Basin are shown in Figures 271A (November 2003) and 271B (August 2005).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0274
Basin-Specific Criteria (Rogue): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Bear Creek — Ammonia, BOD and Phosphorus — December 8, 1992

Lobster Creek — Temperature — June 13, 2002

Lower Sucker Creek — Temperature — May 30, 2002

Upper Sucker Creek — Temperature — May 4, 1999

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0275
Basin-Specific Criteria (Rogue): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Marine waters: 7.0–8.5;

(b) Estuarine and fresh waters (except Cascade lakes): 6.5–8.5;

(c) Cascade lakes above 3,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0271: 500.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0286
Basin-Specific Criteria (Sandy Basin): Beneficial Uses to Be Protected in the Sandy Basin

(1) Water quality in the Sandy Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 286A (November 2003).

(2) Designated fish uses to be protected in the Sandy Basin are shown in Figures 286A and 286B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0289
Basin-Specific Criteria (Sandy Basin): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0290
Basin-Specific Criteria (Sandy Basin): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) All Basin waters (except main stem Columbia River and Cascade lakes): pH values may not fall outside the range of 6.5 to 8.5;

(b) Cascade lakes above 3,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0286: All Basin Waters (other than the main stem Columbia river) — 100.0 mg/l.

(3)(a) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(b) All Basin waters (except main stem Columbia River):

(A) During periods of low stream flows (approximately June 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to May 31): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0300
Basin-Specific Criteria (South Coast): Beneficial Uses to Be Protected in the South Coast Basin

(1) Water quality in the South Coast Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 300A (November 2003).

(2) Designated fish uses to be protected in the South Coast Basin are shown in Figures 300A (August 2005) and 300B (November 2003).

(3) Coastal water contact recreation use is to be protected in all South Coast Basin marine waters and in coastal waters designated in Figures 300C and 300D (August 2016).

(4) Shellfish harvesting use is to be protected in all South Coast Basin marine waters and in coastal waters as designated in Figures 300C and 300D (August 2016)

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 9-2016, f. & cert. ef. 8-18-16
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0304
Basin-Specific Criteria (South Coast): Approved TMDLs in the Basin

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Coquille — BOD — July 3, 1996

Upper South Fork of the Coquille — Temperature — March 23, 2001

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0305
Water Quality Standards and Policies for South Coast Basin

(1) pH (Hydrogen ion concentration) pH values may not fall outside the following ranges:

(a) Estuarine and fresh waters: 6.5-8.5.

(b) Marine waters: 7.0-8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0300: 100.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations may not exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30) and for direct ocean discharges: A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

(4) Outstanding Resource Waters of Oregon (ORWs)

(a) The North Fork Smith River and its tributaries and associated wetlands. These streams include but are not limited to the North Fork Smith River, Chrome Creek, Spokane Creek, Fall Creek, Cedar Creek, Horse Creek, Packsaddle Creek, Baldface Creek, Taylor Creek, Biscuit Creek, Wimer Creek, McGee Creek, Cabin Creek, Diamond Creek, and the North Fork Diamond Creek.

(b) The current high water quality, exceptional ecological values, and existing and designated uses of the ORWs identified in this rule ("these waters") must be maintained and protected except as altered by natural causes.

(c) No new NPDES discharge or expansion of an existing discharge to these waters may be allowed.

(d) No new NPDES discharge or expansion of an existing discharge to waters upstream of or tributary to these waters may be allowed if such discharge would degrade the water quality within these waters.

(e) No activities may be allowed that would degrade the existing water quality and ecological characteristics and values of these waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 8-2017, f. & cert. ef. 7-18-17
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0310
Basin-Specific Criteria (Umatilla): Beneficial Uses to Be Protected in the Umatilla Basin

(1) Water quality in the Umatilla Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 310A (January 2015).

(2) Designated fish uses to be protected in the Umatilla Basin are shown in Figures 310A and 310B (November 2003, except as noted in Table 310A).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 3-2012, f. & cert. ef. 5-21-12
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0314
Basin-Specific Criteria (Umatilla): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Umatilla River Basin — Temperature, pH, Sediment, Turbidity, Aquatic Weeds, and Algae — May 9, 2001

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0315
Basin-Specific Criteria (Umatilla): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following range: all Basin streams except the main stem Columbia River and the "constructed channel" segment of the West Division Main

Canal: 6.5-9.0. When more than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by DEQ, DEQ will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) The following criteria apply to the “constructed channel” segment of the West Division Main Canal and supersede the water quality standards in OAR 340-041-0011 through 340-041-0036 for the “constructed channel” segment of the canal. The criteria in (b) and (c) also apply to the “overflow channels” segment of the West Division Main Canal.

(a) Canal waters may not exceed the numeric criteria shown in Table 315 from the uppermost irrigation withdrawal to the end of the “constructed channel” segment of the canal.

(b) Toxic substances must not be present in canal waters in amounts likely to singularly or in combination harm the designated beneficial uses of the canal or downstream waters.

(c) Sediment load and particulate size shall not exceed levels that interfere with irrigation or the other designated beneficial uses of the canal;

(d) pH values may not fall outside the range of 4.5 to 9.0.

(3) Minimum Design Criteria for Treatment and control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control;

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by DEQ, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 1-2015, f. & cert. ef. 1-7-15
DEQ 3-2012, f. & cert. ef. 5-21-12
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0320
Basin-Specific Criteria (Umpqua Basin): Beneficial Uses to Be Protected in the Umpqua Basin

(1) Water quality in the Umpqua Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 320A (November 2003).

(2) Designated fish uses to be protected in the Umpqua Basin are shown in Figures 320A (November 2003) and 320B (August 2005).

(3) Coastal water contact recreation use is to be protected in all marine waters adjacent to the Umpqua River and in coastal waters designated in Figure 320C (August 2016).

(4) Shellfish harvesting use is to be protected in all marine waters adjacent to the Umpqua River and in coastal waters as designated in Figure 320C (August 2016).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 7-2018, minor correction filed 02/14/2018, effective 02/14/2018
DEQ 32-2017, minor correction filed 11/30/2017, effective 11/30/2017
DEQ 9-2016, f. & cert. ef. 8-18-16
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0324
Basin-Specific Criteria (Umpqua Basin): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Little River — Temperature, pH and Sediment — January 29, 2002

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0326
Basin-Specific Criteria (Umpqua Basin): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) Marine waters: 7.0–8.5;

(b) Estuarine and fresh waters (except Cascade lakes): 6.5–8.5;

(c) Cascade lakes above 3,000 feet altitude: pH values may not fall outside the range of 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-04l-0320: 500.0 mg/l.

(3) Turbidity (Nephelometric Turbidity Units, NTU). When appropriate studies are completed by the Corps of Engineers, or others, the Environmental Quality Commission will, consistent with the provisions of ORS Chapter 468, modify the turbidity standard, on a case-by-case basis if necessary, to accommodate such specific water storage and development projects in the South Umpqua Basin as are found to be in the best overall interest of the public.

(4) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) During periods of low stream flows (approximately May 1 to October 31):

(A) Main stem Umpqua River, South Umpqua River, and all tributaries to the main stem and South Umpqua Rivers: Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) North Umpqua River from mouth to Idleyld Park (river mile 0 to 35): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(C) North Umpqua River above Idleyld Park (river mile 35) and all tributaries to North Umpqua River: Treatment resulting in monthly average effluent concentrations not to exceed 5 mg/l of BOD and 5 mg/l of SS or equivalent control.

(b) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0330
Basin-Specific Criteria (Walla Walla): Beneficial Uses to Be Protected in the Walla Walla Basin

(1) Water quality in the Walla Walla Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 330A (November 2003).

(2) Designated fish uses to be protected in the Walla Walla Basin are shown in Figures 310A and 310B (November 2003).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0334
Basin-Specific Criteria (Walla Walla): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site: None.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0336
Basin-Specific Criteria (Walla Walla): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the range of 6.5 to 9.0. When greater than 25 percent of ambient measurements taken between June and September are greater than pH 8.7, and as resources are available according to priorities set by the Department, the Department will determine whether the values higher than 8.7 are anthropogenic or natural in origin.

(2) Total Dissolved Solids. Guide concentrations listed below may not be exceeded unless otherwise specifically authorized by DEQ upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0330: 200.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes in this Basin:

(a) During periods of low stream flows (approximately April 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of suspended solids or equivalent control;

(b) During the period of high stream flows (approximately November 1 to March 31): A minimum of secondary treatment or equivalent control and unless otherwise specifically authorized by the Department, operation of all waste treatment and control facilities at maximum practicable efficiency and effectiveness so as to minimize waste discharges to public waters.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0340
Basin-Specific Criteria (Willamette): Beneficial Uses to Be Protected in the Willamette Basin

(1) Water quality in the Willamette Basin (see Figure 1) must be managed to protect the designated beneficial uses shown in Table 340A (August 2005).

(2) Designated fish uses to be protected in the Willamette Basin are shown in Figures 340A (November 2003) and 340B (August 2005).

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 5-2020, minor correction filed 02/03/2020, effective 02/03/2020
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

NOTE: Referenced basin-specific tables and figures are provided in Attachment 3 of this document.

340-041-0344
Basin-Specific Criteria (Willamette): Approved TMDLs in the Basin:

The following TMDLs have been approved by EPA, and appear on the Department's web site:

Columbia Slough — Bacteria, Dissolved Oxygen, Chlorophyll a, pH, lead, PCBs, Dieldrin, Dioxin, DDE/DDT, and Phosphorus — November 25, 1998

Pudding — Ammonia and BOD — October 18, 1993

Rickreall Creek — BOD — April 18, 1994

Tualatin — Temperature, Bacteria, Dissolved Oxygen, Settleable Volatile Solids, Ammonia, Chlorophyll a, pH and Phosphorus — August 7, 2001

Yamhill — Phosphorus — December 8, 1992

Willamette — Dioxin — February 25, 1991

Willamette Coast Fork — Ammonia and Phosphorus — May 17, 1996

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0345
Basin-Specific Criteria (Willamette): Water Quality Standards and Policies for this Basin

(1) pH (hydrogen ion concentration). pH values may not fall outside the following ranges:

(a) All basin waters, except main stem Columbia River and Cascade lakes: 6.5 to 8.5;

(b) Cascade lakes above 3,000 feet altitude: 6.0 to 8.5.

(2) Total Dissolved Solids. Guide concentrations listed may not be exceeded unless DEQ specifically authorizes otherwise upon such conditions as it may deem necessary to carry out the general intent of this plan and to protect the beneficial uses set forth in OAR 340-041-0340: Willamette River and Tributaries — 100.0 mg/l.

(3) Minimum Design Criteria for Treatment and Control of Sewage Wastes:

(a) Willamette River and tributaries except Tualatin River Subbasin:

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): A minimum of secondary treatment or equivalent control and, unless DEQ otherwise specifically authorizes, operating all waste treatment and control facilities at maximum practical efficiency and effectiveness so as to minimize waste discharges to public waters.

(b) Main stem Tualatin River from mouth to Gaston (river mile 0 to 65):

(A) During periods of low stream flows (approximately May 1 to October 31): Treatment resulting in monthly average effluent concentrations not to exceed 10 mg/l of BOD and 10 mg/l of SS or equivalent control;

(B) During the period of high stream flows (approximately November 1 to April 30): Treatment resulting in monthly average effluent concentrations not to exceed 20 mg/l of BOD and 20 mg/l of SS or equivalent control.

(c) Main stem Tualatin River above Gaston (river mile 65) and all tributaries to the Tualatin River: Treatment resulting in monthly average effluent concentrations not to exceed 5 mg/l of BOD and 5 mg/l of SS or equivalent control;

(d) Tualatin River Subbasin: The dissolved oxygen level in the discharged effluents may not be less than 6 mg/l;

(4) Nonpoint source pollution control in the Tualatin River subbasin and lands draining to Oswego Lake:

(a) Subsection (5)(b) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins except those developments with application dates before January 1, 1990. The application date is the date on which the local jurisdiction receives a complete application for development approval as the local jurisdiction’s regulations require;

(b) For land development, no jurisdiction in these subbasins may approve any preliminary plat, site plan, permit, or public works project unless the conditions of the plat permit or plan approval include an erosion control plan containing methods or interim facilities, or both, to be constructed or used concurrently with land development and to be operated during construction to control the discharge of sediment in the stormwater runoff. The erosion control plan must include the following elements:

(A) Protection techniques to control soil erosion and sediment transport to less than one ton per acre per year, as calculated using the Natural Resources Conservation Service's Universal Soil Loss Equation or other equivalent methods (see Figures 1 to 6 in Appendix 1 for examples). The erosion control plan must include temporary sedimentation basins or other sediment control devices when, because of steep slopes or other site specific considerations, other on-site sediment control methods will not likely keep the sediment transport to less than one ton per acre per year. The local jurisdictions may establish additional requirements for meeting an equivalent degree of control. Any sediment basin constructed must be sized using 1.5 feet minimum sediment storage depth plus 2.0 feet storage depth above for a settlement zone. The storage capacity of the basin must be sized to store all of the sediment that is likely to be transported and collected during construction while the erosion potential exists. When the erosion potential has been removed, the sediment basin, or other sediment control facilities, can be removed and the site restored as per the final site plan. All sediment basins must be constructed with an emergency overflow to prevent erosion or failure of the containment dike; or

(B) A soil erosion control matrix derived from and consistent with the universal soil equation the jurisdiction or DEQ approves.

(c) The Director may modify Appendix 1 as necessary without approval from the Environmental Quality Commission. The Director may modify Appendix 1 to simplify it and to make it easier for people to apply;

(d) Subsection (5)(e) of this rule applies to any new land development within the Tualatin River and Oswego Lake subbasins, except:

(A) Those developments with application dates before June 1, 1990. The application date is the date on which the local jurisdiction receives a complete application for development approval as that jurisdiction’s regulations require;

(B) One and two family dwellings on existing lots of record;

(C) Sewer lines, water lines, utilities, or other land development that will not directly increase nonpoint source pollution once construction has been completed and the site is either restored to, or not altered from, its approximate original condition;

(D) If the Environmental Quality Commission determines that a jurisdiction does not need to require stormwater quality control facilities for new development;

(E) When a jurisdiction adopts ordinances that provide for a stormwater quality program equivalent to subsection (e) of this section. Ordinances adopted to implement equivalent programs must:

(i) Encourage on-site retention of stormwater, require phosphorus removal equivalent to the removal efficiency required by subsection (e) of this section, provide for adequate operation and maintenance of stormwater quality control facilities, and require financial assurance, or equivalent security, that assures construction of the stormwater quality control facilities the ordinance requires;

(ii) If the ordinances provide for exemptions other than those allowed for by paragraphs (B) and (C) of this subsection, the ordinances must provide for collecting in-lieu fees, or other equivalent mechanisms, that assure financing for, and construction of, associated, off-site stormwater quality control facilities. No exemption may be allowed if the jurisdiction is not meeting an approved schedule for identifying location of the off-site stormwater quality control facility to serve the development requesting an exemption.

(e) For new development, no jurisdiction may approve any plat, site plan, building permit or public works project in these subbasins unless the conditions of the plat, permit, or plan approval require permanent stormwater quality control facilities to control phosphorus loadings associated with stormwater runoff from the development site. Jurisdictions must encourage and provide preference to techniques and methods that prevent and minimize pollutants from entering the storm and surface water systems. Permanent stormwater quality control facilities for phosphorus must meet the following requirements:

(A) The stormwater quality control facilities must be designed to achieve a phosphorus removal efficiency as calculated from the following equation:

Rp = 100 - 24.5/Rv

Where:

Rp = Required phosphorus removal efficiency

Rv = Average site runoff coefficient

The average site runoff coefficient can be calculated from the following equation:

Rv = (0.7 x A1) + (0.3 x A2) + (0.7 x A3) + (0.05 x A4) + (A5 x 0.0)

Where:

A1 = fraction of total area that is paved streets with curbs and that drain to storm sewers or open ditches.

A2 = fraction of total area that is paved streets that drain to water quality swales located on site.

A3 = fraction of total area that is building roof and paved parking that drains to storm sewers.

A4 = fraction of total area that is grass, trees and marsh areas.

A5 = fraction of total area for which runoff will be collected and retained on site with no direct discharge to surface waters.

(B) A jurisdiction may modify the equation for Rv to allow applying additional runoff coefficients associated with land surfaces not identified in this subsection. DEQ must be notified in writing whenever an additional runoff coefficient is used. The use of additional runoff coefficients must be based on scientific data. The jurisdiction must discontinue using an additional runoff coefficient if DEQ objects to its use in writing within ten days of receiving notification;

(C) The stormwater quality control facilities must be designed to meet the removal efficiency specified in paragraph (A) of this subsection for a mean summertime storm event totaling 0.36 inches of precipitation with an average return period of 96 hours;

(D) The removal efficiency specified in paragraph (A) of this subsection specify only design requirements and are not intended to be used as a basis for performance evaluation or compliance determination of the stormwater quality control facility installed or constructed pursuant to this subsection;

(E) A jurisdiction may approve stormwater quality control facilities this subsection requires only if the following are met:

(i) For developments larger than one acre, the plat or site plan must include plans and a certification prepared by an Oregon registered, professional engineer, that the proposed stormwater control facilities have been designed in accordance with criteria expected to achieve removal efficiencies for total phosphorus required by paragraph (A) of this subsection;

(ii) The plat or site plan must be consistent with the area and associated runoff coefficients used to determine the removal efficiency required in paragraph (A) of this subsection;

(iii) The developer must provide a financial assurance, or equivalent security acceptable to the jurisdiction, with the jurisdiction that assures that the stormwater control facilities are constructed according to the plans established in the plat or site plan approval. Where practicable, the jurisdiction must combine the financial assurance this rule requires with other financial assurance requirements imposed by the jurisdiction;

(iv) Each jurisdiction that constructs or authorizes construction of permanent stormwater quality control facilities must file with DEQ an operation and maintenance plan for the stormwater quality control facilities within its jurisdiction. The operation and maintenance plan must allow for public or private ownership, operation, and maintenance of individual permanent stormwater quality control facilities. The jurisdiction or private operator must operate and maintain the permanent stormwater control facilities as the operation and maintenance plan specifies.

(f) Except as paragraph (D) of this subsection requires, the jurisdiction may grant an exception to subsection (e) of this section if the jurisdiction chooses to adopt and, on a case-by-case basis, impose a one time in-lieu fee. The fee will be an option where, because of the size of the development, topography, or other factors, the jurisdiction determines that the construction of on-site permanent stormwater treatment systems is impracticable or undesirable:

(A) The in-lieu fee will be based upon a reasonable estimate of the current, prorated cost for the jurisdiction to provide stormwater quality control facilities for the land development being assessed the fee. Estimated costs include costs associated with off-site land and rights-of-way acquisition, design, construction, and construction inspection;

(B) The jurisdiction must deposit any in-lieu fees collected under this paragraph in an account dedicated only to reimbursing the jurisdiction for expenses related to off-site land and rights-of-way acquisition, design, construction, and construction inspection of stormwater quality control facilities;

(C) The ordinance establishing the in-lieu fee must include provisions that reduce the fee in proportion to the ratio of the site's average runoff coefficient (Rv), as established according to the equation in paragraph (6)(e)(A) of this rule;

(D) No new development may be granted an exemption if the jurisdiction is not meeting an approved time schedule for identifying the location for the off-site stormwater quality control facilities that would serve that development.

(g) DEQ may approve other mechanisms that allow jurisdictions to grant exemptions to new development. DEQ may only approve those mechanisms that assure financing for off-site stormwater quality control facilities and that encourage or require on-site retention where feasible;

(h) Subsection (b) of this section applies until a jurisdiction adopts ordinances that provide for a program equivalent to subsection (b) of this section, or the Environmental Quality Commission determines such a program is not necessary when it approves the jurisdiction's program plan required by OAR 340-041-0470(2)(g).

(5) In order to improve water quality within the Yamhill River subbasin to meet the existing water quality standard for pH, the following special rules for total maximum daily loads, waste load allocations, load allocations and program plans are established:

(a) After wastewater control facilities and program plans the EQC approved under this rule are completed, and no later than June 30, 1994, no activities may be allowed, and no wastewater may be discharged to the Yamhill River or its tributaries, without the EQC’s authorization, that cause the monthly median concentration of total phosphorus to exceed 70 ug/1 as measured during the low flow period between approximately May 1 and October 31 of each year;

[NOTE: *DEQ may condition precise dates for complying with this rule on the receiving water’s physical conditions (i.e., flow temperature). DEQ may specify the compliance dates in individual permits or memorandums of understanding. DEQ may consider design flows, river travel times, and other relevant information, when establishing the specific conditions it inserts in the permits or memorandums of understanding.*]

(b) Within 90 days of adoption of these rules, the Cities of McMinnville and Lafayette must submit a program plan and time schedule to DEQ describing how and when they will modify their sewerage facility to comply with this rule;

(c) The commission will review and approve final program plans. The commission may define alternative compliance dates as program plans are approved. All proposed final program plans must be subject to public hearing before the commission considers them for approval;

(d) DEQ will, within 60 days of adoption of these rules, distribute initial waste load allocations and load allocations to the point and nonpoint sources in the basin. These allocations are considered interim and may be redistributed based upon the conclusions of the approved program plans.

(6) Multiple Discharger Variance for Mercury. The following rule is a multiple discharger variance to the fish-tissue based human health criterion for methylmercury. The variance applies to the following facilities:

Albany-Millersburg WRF (Willamette River); Canby STP (Willamette River); Cascade Pacific – Halsey Mill (Willamette River); City of Molalla (Molalla River); City of Portland Tryon Creek WWTP (Willamette River); City of Sandy (Tickle Creek); Clean Water Services Durham STP (Tualatin River); Clean Water Services Forest Grove STP (Tualatin River), Clean Water Services Hillsboro STP (Tualatin River), Clean Water Services Rock Creek STP (Tualatin River); Corvallis STP (Willamette River), Cottage Grove STP (Coast Fork Willamette River); Dallas STP (Rickreall Creek); Georgia-Pacific Halsey Mill (Willamette River); Gervais STP (Pudding River); International Paper Springfield Paper Mill (McKenzie River); Kellogg Creek WWTP (Willamette River); Lebanon WWTP (South Santiam River); McMinnville WRF (South Yamhill River); Metropolitan Wastewater Management Commission Eugene/Springfield STP (Willamette River); Newberg STP (Willamette River); Oak Lodge Services WRF (Willamette River); Saint Helens/Boise Cascade STP (Multnomah Channel); Salem Willow Lake STP (Willamette River); Siltronic Corporation (Willamette River); Silverton STP (Silver Creek); Stayton STP (North Santiam River); Sweet Home STP (South Santiam River); Teledyne Wah Chang (Willamette River); Tri-City Service District – Blue Heron (Willamette River); Tri-City Water Pollution Control Plant (Willamette River); West Linn Paper Company (Willamette River); Westrock, Newberg Mill (Willamette River); Wilsonville STP (Willamette River); Woodburn WWTP (Pudding River);

The variance will also apply to any of the following facilities for which DEQ would otherwise be required to establish mercury effluent limits during the term of the variance:

Amity STP (Salt Creek); Aumsville STP (Beaver Creek); Brooks STP (Willamette River); Brownsville STP (Calapooia River); Carlton STP (North Yamhill River); City of Estacada (Clackamas River); City of Scappoose (Multnomah Channel); Coburg WWTP (Unnamed tributary to Muddy Creek); Creswell STP (Unnamed tributary to Camas Swale Creek); Dayton STP (Yamhill River); Dundee STP (Willamette River); Halsey STP (Muddy Creek); Harrisburg Lagoon Treatment Plant (Willamette River); Hubbard STP (Mill Creek); Independence STP (Middle Willamette River); Jefferson STP (Santiam River); Junction City STP (Flat Creek); Lafayette STP (Yamhill River); Lane Community College (Russel Creek); Lowell STP (Middle Fork Willamette River); Monmouth STP (Willamette River); Mt. Angel STP (Pudding River); Oakridge STP (Middle Fork Willamette River); Philomath STP (Mary's River); Tangent STP (Calapooia River); Sheridan STP (South Yamhill River); USDA Forest Service (Clackamas River); Veneta STP (Long Tom River); Willamina STP (South Yamhill River); Yamhill STP (North Yamhill River).

(a) Findings. The EQC finds the following:

(A) The fishing use and fish-tissue based human health criterion for methyl-mercury cannot be attained within the next 20 years due to mercury from atmospheric deposition and naturally occurring mercury in native soils. Neither the sources of mercury nor the processes by which the mercury is transported to waterbodies can be remedied to meet the underlying designated use and criterion within the next 20 years.

(B) There is no currently feasible mercury treatment technology that would result in achieving water quality-based effluent limits based on the human health criterion for mercury.

(C) The requirements of the variance will not result in degrading the currently attained ambient water quality for methyl-mercury in the Willamette Basin.

(b) Term of the variance. The term of this variance is 20 years from the date of EPA approval.

(c) Application requirements. To implement the variance, a facility must provide to DEQ the following information:

(A) All mercury effluent data from the previous five years, including a minimum of two years of quarterly effluent data.

(B) A facility-specific mercury minimization program with minimum elements described in subsection (6)(f) of this rule for municipal facilities or subsection (6)(g) of this rule for industrial facilities.

(d) Highest attainable condition. Permit requirements will reflect the highest attainable condition specified in this variance. The highest attainable condition for this variance is the level currently achievable, as described in subsection (6)(e) below, for all dischargers, and a requirement to develop and implement a mercury minimization program with elements described in subsection (6)(f) of this rule for municipal dischargers and subsection (6)(g) of this rule for industrial dischargers.

(e) Highest attainable condition – level currently achievable (LCA). The highest attainable condition for all facilities covered under this variance will include the level currently achievable. This is a quantifiable expression of the effluent condition achievable with the pollutant control technologies in place at the time this variance is granted when those technologies are well maintained and operated. The LCA for this variance is the 95th percentile value of recent (e.g., two to five years) total mercury effluent data or a previously applicable LCA, whichever is lower.

(f) Highest attainable condition – mercury minimization program for municipal dischargers. The highest attainable condition for municipal dischargers will include implementing a mercury minimization program covering the term of the variance, which must contain the following minimum elements:

(A) A monitoring plan to include influent, effluent and biosolids monitoring;

(B) Regulating dental offices to ensure installation and maintenance of amalgam separators, including inspection of dental facilities for proper management and disposal of dental waste;

(C) Identifying mercury-containing materials at facilities and offices each municipal wastewater treatment facility operates and implementing any recommendations for removing mercury-containing materials;

(D) Identifying and inspecting commercial laboratories, schools and healthcare facilities that may have mercury and providing recommendations and outreach materials to these facilities;

(E) Distributing outreach materials to commercial and residential sectors;

(F) Evaluating new facilities as potential sources of mercury, regulatory oversight of such sources of mercury under the municipality’s pre-treatment program where such sources are significant industrial users, and outreach to provide recommendations on activities that would reduce mercury in the facilities’ discharges. Priority facilities should include those in the timber, paper, glass, clay, cement, concrete, gypsum, primary and fabricated metal, and electronic instrument sectors;

(G) Cleanup of legacy mercury from collection systems;

(H) Facility-specific activities to reduce mercury loading into the waterbody. These may include cost-effective and reasonable best management practices for nonpoint source controls under the control of the discharger that would make progress towards attaining the underlying designated use and criterion; and

(I) If a facility has accomplished all activities within its control, the facility may implement or fund mercury reduction activities outside the discharger's control that will make progress toward attaining the underlying designated use and criterion.

(g) Highest attainable condition – mercury minimization program for industrial dischargers. The highest attainable condition for industrial dischargers will include implementing a mercury minimization program covering the term of the variance, with the following minimum elements:

(A) A monitoring plan to include influent, effluent and biosolids monitoring;

(B) Identifying mercury-containing materials used in the facility, offices and testing laboratories the discharger operates, and developing and implementing recommendations for using substitute materials with less or no mercury;

(C) Identifying other potential sources of mercury within the facility and developing and implementing recommendations for reducing these sources;

(D) Identifying other activities within discharger's control discharger to reduce mercury loading into the waterbody. These may include cost-effective and reasonable best management practices for nonpoint source controls under the discharger's control that would make progress towards attaining the underlying designated use and criterion; and

(E) If a facility has accomplished all activities within its control, the facility may implement or fund mercury reduction activities outside the discharger's control that will make progress toward attaining the underlying designated use and criterion.

(h) State mercury reduction activities in Oregon. The state implements numerous programs that will, over time, including over the 20-year term of this variance, reduce mercury loads to Willamette Basin waterbodies, including such programs as:

(A) Oregon's Dental Amalgam Law and associated practices as required under ORS 679.520 and ORS 679.525, and subsequent federal regulations.

(B) Airborne toxic contaminant reduction from existing or newly permitted industrial sources through the Cleaner Air Oregon program and other DEQ Air Quality permitting requirements.

(C) DEQ coordination with the Oregon Department of Forestry on implementing the Forest Practices Act.

(D) DEQ coordination with the Oregon Department of Agriculture on implementing the Oregon Agriculture Water Quality Management Act.

(E) DEQ issuing general discharge permits, such as Phase I and Phase II municipal separate storm sewer system permits, industrial stormwater permits, and suction dredge mining permits, in addition to individual wastewater discharge permits.

(F) DEQ in-water and upland remediation under state laws and rules, and coordination with US EPA on Portland Harbor, Gould, and Black Butte Mine Superfund site cleanups.

(G) Regulatory and voluntary programs to reduce or recycle products containing mercury, such as automotive light switches, thermostats, and LCD screens and monitors.

(i) Re-evaluating the Highest Attainable Condition. DEQ will re-evaluate the highest attainable condition for this multiple discharger variance every five years from the date that EPA approves this variance. DEQ

will provide a written summary of this re-evaluation to EPA within 30 days of completing the re-evaluation. If DEQ fails to submit the re-evaluation to EPA within the specified timeframe, the variance will no longer be the applicable water quality standard until DEQ completes the re-evaluation and submits it to EPA.

(A) The re-evaluation will include the following elements:

(i) A summary of the mercury reduction activities completed and an analysis of mercury reductions facilities covered under this variance achieved, using the data and information provided in their annual reports; and

(ii) A determination of the feasibility of wastewater treatment technology to attain the water quality standard.

(B) DEQ will provide public notice on the availability of its draft re-evaluation and provide at least 30 days opportunity for the public to comment on the draft re-evaluation.

(C) Upon permit renewal for each facility covered under the variance, DEQ will update conditions in the permit based on the re-evaluation of the Highest Attainable Condition, as follows:

(i) DEQ will re-calculate each facility's level currently achievable, as described in OAR 340-041-0345(6)(e), utilizing the previous five years of data provided by each facility, at the time of their permit renewal. DEQ will adjust permit limits if the data shows that the level currently achievable is lower than the LCA in the previous permit.

(ii) DEQ will review updates to the facility's site-specific mercury minimization plan and, if necessary, request revisions to ensure that it is consistent with variance requirements.

(7) Outstanding Resource Waters of Oregon (ORWs): Waldo Lake and associated wetlands (hereafter, "Waldo Lake"). The current high water quality and exceptional ecological and recreation values of Waldo Lake shall be maintained and protected, except as altered by natural processes or as authorized under (7)(a)-(c), below.

(a) No new NPDES discharge or increase of an existing NPDES discharge to Waldo Lake shall be allowed, except a construction stormwater permit may be authorized for projects that will not have more than a short-term water quality impact.

(b) No new NPDES discharge or increase of an existing NPDES discharge to waters upstream of or tributary to Waldo Lake shall be allowed if such discharge would degrade the water quality of Waldo Lake, except a construction stormwater permit may be authorized for projects that will not have more than a short-term water quality impact.

(c) Any other new discharge to Waldo Lake is prohibited if such discharge would degrade the water quality or ecological or recreation values of Waldo Lake, except in the following circumstances:

(A) As needed to respond to a public health or safety emergency, including but not limited to wildfire response. The water quality impacts from such responses shall be short term and will be mitigated to the extent practicable.

(B) As needed in connection with ecological restoration or water quality improvement activities where short term water quality impacts are necessary to obtain long-term restoration or water quality improvements.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 5-2021, amend filed 02/09/2021, effective 02/09/2021
DEQ 4-2021, amend filed 01/25/2021, effective 01/25/2021

DEQ 4-2020, minor correction filed 01/27/2020, effective 01/27/2020
DEQ 3-2020, amend filed 01/24/2020, effective 01/24/2020
DEQ 13-2019, amend filed 05/16/2019, effective 05/16/2019
DEQ 38-2018, minor correction filed 04/02/2018, effective 04/02/2018
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

340-041-0350
The Three Basin Rule: Clackamas, McKenzie (above RM 15) & the North Santiam

(1) In order to preserve or improve the existing high quality water for municipal water supplies, recreation, and preservation of aquatic life, new or increased waste discharges must be prohibited, except as provided by this rule, to the waters of:

(a) The Clackamas River Subbasin;

(b) The McKenzie River Subbasin above the Hayden Bridge (river mile 15);

(c) The North Santiam River Subbasin.

(2) Except as otherwise provided for in this rule, this rule becomes effective and applies to all permits pending or applied for after the date of filing with the Secretary of State.

(3) Special Definitions. The following special definitions apply to this rule:

(a) "Waste Discharges" are defined to mean any discharge that requires and NPDES permit, WPCF permit, or 401 Certification. Individual on-site sewage disposal systems subject to issuance of a construction-installation permit; domestic sewage facilities that discharge less than 5,000 gallons per day under WPCF permit; biosolids land applied within agronomic loading rates pursuant to OAR 340-050; and reclaimed domestic waste water land applied at agronomic rates pursuant to OAR 340-055 are excluded from this definition.

(b) "Existing Discharges" are defined as those discharges from point sources which existed prior to January 28, 1994;

(c) "Existing Facilities" are defined as those for which construction started prior to January 28, 1994. Where existing facilities are exempted from requirements placed on new facilities, the exemption applies only to the specific permit(s) addressed in the subsection which allows the exemption;

(d) "New" NPDES and WPCF permits are defined to include permits for potential or existing discharges which did not previously have a permit, and existing discharges which have a permit, but request an increased load limitation;

(e) "Agronomic Loading Rate" means the application of biosolids or reclaimed effluent to the land at a rate which is designed to:

(A) Provide the quantity of plant nutrients, usually nitrogen, needed by a food crop, feed crop, fiber crop, cover crop or other vegetation grown on the land; and

(B) Minimize the quantity of nitrogen or other nutrients from land applied materials that pass below the root zone of the crop or vegetation grown on the land to groundwater.

(f) "Biosolids" means solids derived from primary, secondary, or advanced treatment of domestic wastewater which have been treated through one or more controlled processes that significantly reduce pathogens and reduce volatile solids or chemical stabilize solids to the extent that they do not attract

vectors. This term refers to domestic wastewater treatment facility solids that have undergone adequate treatment to permit their land application;

(g) "Reclaimed Wastewater" means treated effluent from a domestic wastewater treatment system which, as a result of treatment, is suitable for a direct beneficial purpose or a controlled use that could not otherwise occur.

(4) To respond to emergencies or to otherwise avoid imminent serious danger to public health or welfare, the Director or designee may allow lower water quality on a short-term basis.

(5) The Director or a designee may renew or transfer NPDES and WPCF permits for existing facilities. Existing facilities with NPDES permits may not be granted increases in their permitted mass load limitations. The following restrictions and exceptions apply:

(a) The Department may conduct an inspection prior to permit renewal. Existing sources with general permits that are found not to qualify for a general permit, and who wish to continue discharging, must apply for an individual permit;

(b) Fish hatcheries (General Permit 300) and log ponds (General Permit 400) are required to apply for an individual permit at the time of permit renewal;

(c) Additional industrial, confined animal feeding operations, or domestic waste loads that are irrigated on land at agronomic rates or that otherwise meet the conditions of section (7) of this rule is not be considered to be an increase in the permitted wasteload.

(6) The Director or a designee may issue the following General Permits or Certifications subject to the conditions of the Permit or Certification:

(a) Stormwater construction activities (General Permits 1200C and 1200CA);

(b) Underground storage tank cleanups using best available treatment technology (General Permit 1500);

(c) Non-contact cooling water (General Permit 100);

(d) Filter backwash (General Permit 200);

(e) Boiler blowdown water (General Permit 500);

(f) Suction dredging (General Permit 700) only in portions of the basins that are not designated as Scenic Waterways under ORS 390.805 to 390.925;

(g) Federal Clean Water Act Section 401 water quality certifications.

(7) Long-term general and individual stormwater permits may be allowed as required by State and/or Federal law. The following requirements apply:

(a) New stormwater discharge permit holders must maintain a monitoring and water quality evaluation program that is effective in evaluation of the in-stream water quality impacts of the discharge; and

(b) When sufficient data is available to do so, the Department will assess the water quality impacts of stormwater discharges. Within a subbasin, if the proportion of total degradation that is contributed by the stormwater is determined to be significant compared to that of other permitted sources, or if the Department determines that reducing degradation due to stormwater is cost- effective when compared to other available pollution control options, the Department may institute regulatory mechanisms or modify permit conditions to require control technologies and/or practices that result in protection that is greater than that required Statewide.

(8) Industrial waste discharge sources, confined animal feeding operations, and domestic sewage treatment facilities must meet the following conditions:

(a) No NPDES permits for new industrial or new confined animal feeding operation waste discharges, or new domestic sewage treatment facilities may be issued, except as allowed under sections (3), (4), (5), and (6) of this rule;

(b) The Department may issue WPCF permits for new industrial or confined animal feeding operation waste discharges provided:

(A) There is no waste discharge to surface water; and

(B) All groundwater quality protection requirements of OAR 340-040-0030 are met. Neither the Department nor the Commission may grant a concentration limit variance as provided in OAR 340-040-0030, unless the Commission finds that all appropriate groundwater quality protection requirements and compliance monitoring are met and there will be no measurable change in the water quality of the surface water that would be potentially affected by the proposed facility. For any variance request, a public hearing must be held prior to Commission action on the request.

(c) The Department may issue WPCF permits for new domestic sewage treatment facilities provided there is no waste discharge to surface water and provided:

(A) All groundwater quality protection requirements of OAR 340-040-0030 are met. Neither the Department nor the Commission may grant a concentration limit variance as provided in OAR 340-040-0030, unless the Commission finds that all appropriate groundwater quality protection requirements and compliance monitoring are met and there will be no measurable change in the water quality of the surface water that would be potentially affected by the proposed facility. For any variance request, a public hearing must be held and the permit application will be evaluated according to paragraphs (B) and (C) of this subsection;

(B) The Commission finds that the proposed new domestic sewage treatment facility provides a preferable means of sewage collection, treatment and disposal as compared to individual on-site sewage disposal systems. To be preferable, the Commission must find that one of the following criteria applies:

(i) The new sewage treatment facility will eliminate a significant number of failing individual on-site sewage disposal systems that cannot be otherwise reliably and cost-effectively repaired; or

(ii) The new sewage treatment facility will treat domestic sewage that would otherwise be treated by individual on-site sewage disposal systems, from which the cumulative impact to groundwater is projected to be greater than that from the new facility; or

(iii) If an individual on-site sewage disposal system, or several such systems, would not normally be utilized, a new sewage treatment facility may be allowed if the Commission finds that the social and economic benefits of the discharge outweigh the possible environmental impacts.

(C) Applicants for domestic wastewater WPCF permits must meet the following requirements:

(i) Application must be for an individual permit; and

(ii) The proposed discharge must not include wastes that incapacitate the treatment system; and

(iii) The facility must be operated or supervised by a certified wastewater treatment plant operator as required in OAR 340-049-0015, except as exempted by ORS 448.430; and

(iv) An annual written certification of proper treatment and disposal system operation must be obtained from a qualified Registered Sanitarian, Professional Engineer, or certified wastewater treatment system operator.

(9) The Environmental Quality Commission may investigate, together with any other affected State agencies, the means of maintaining at least existing minimum flow during the summer low flow period.

Statutory/Other Authority: ORS 468.020, 468B.030, 468B.035 & 468B.048
Statutes/Other Implemented: ORS 468B.030, 468B.035 & 468B.048
History:
DEQ 2-2007, f. & cert. ef. 3-15-07
DEQ 17-2003, f. & cert. ef. 12-9-03

Attachment 1: OAR 340-041-0016

Table 21 - Dissolved Oxygen & Intergravel Dissolved Oxygen Criteria

OAR 340-041-0016 - TABLE 21

DISSOLVED OXYGEN & INTERGRAVEL DISSOLVED OXYGEN CRITERIA

(Applicable to All Basins)

Class	Concentration and Period[1] (All Units are mg/L)				Use/Level of Protection
	30-D	7- D	7- Mi	Min	
Salmonid Spawning		11.0[2,3]		9.0[3]	Principal use of salmonid spawning and incubation of embryos until emergence from the gravels. Low risk of impairment to cold-water aquatic life, other native fish and invertebrates.
				8.0[4]	
Cold Water	8.0[5]		6.5	6.0	Principally cold-water aquatic life. Salmon, trout, cold-water invertebrates, and other native cold-water species exist throughout all or most of the year. Juvenile anadromous salmonids may rear throughout the year. No measurable risk level for these communities.
Cool Water	6.5		5.0	4.0	Mixed native cool-water aquatic life, such as sculpins, smelt, and lampreys. Waterbodies includes estuaries. Salmonids and other cold-water biota may be present during part or all of the year but do not form a dominant component of the community structure. No measurable risk to cool-water species, slight risk to cold-water species present.
Warm Water	5.5			4.0	Waterbodies whose aquatic life beneficial uses are characterized by introduced, or native, warm-water species.
No Risk	No Change from Background				The only DO criterion that provides no additional risks is "no change from background". Waterbodies accorded this level of protection include marine waters and waters in Wilderness areas.

Note:
Shaded values present the absolute minimum criteria, unless the Department believes adequate data exists to apply the multiple criteria and associated periods.

[1] 30-D = 30-day mean minimum as defined in OAR 340-41-006.
7-D = 7-day mean minimum as defined in OAR 340-41-006.
7-Mi = 7-day minimum mean as defined in OAR 340-41-006.
Min = Absolute minimums for surface samples when applying the averaging period, spatial median of IGDO.

[2] When Intergravel DO levels are 8.0 mg/L or greater, DO levels may be as low as 9.0 mg/L, without triggering a violation.

[3] If conditions of barometric pressure, altitude and temperature preclude achievement of the footnoted criteria, then 95 percent saturation applies.

[4] Intergravel DO criterion, spatial median minimum.

[5] If conditions of barometric pressure, altitude, and temperature preclude achievement of 8.0 mg/L, then 90 percent saturation applies.

Attachment 2: OAR 340-041-8033

Table 30 - Aquatic Life Water Quality Criteria for Toxic Pollutants

Table 31 - Aquatic Life Water Quality Guidance Values for Toxic Pollutants

Table 40 - Human Health Water Quality Criteria for Toxic Pollutants

OAR 340-041-8033
Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

The concentration for each compound listed in Table 30 is a criterion established for waters of the state in order to protect aquatic life. The aquatic life criteria apply to waterbodies where the protection of fish and aquatic life is a designated use. All values are expressed as micrograms per liter (µg/L). Compounds are listed in alphabetical order with the corresponding information: the Chemical Abstract Service (CAS) number, whether there is a human health criterion for the pollutant (i.e. "y"= yes, "n" = no), and the associated aquatic life freshwater and saltwater acute and chronic criteria. *Italicized* pollutants are not identified as priority pollutants by EPA. Dashes in the table column indicate that there is no aquatic life criterion.

Unless otherwise noted in the table below, the acute criterion is the Criterion Maximum Concentration (CMC) applied as a one-hour average concentration, and the chronic criterion is the Criterion Continuous Concentration (CCC) applied as a 96-hour (4 days) average concentration. The CMC and CCC criteria may not be exceeded more than once every three years. Footnote A, associated with eleven pesticide pollutants in Table 30, describes the exception to the frequency and duration of the toxics criteria stated in this paragraph.

OAR 340-041-8033
Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Human Health Criterion	Freshwater (µg/L)		Saltwater (µg/L)	
				Acute Criterion (CMC)	Chronic Criterion (CCC)	Acute Criterion (CMC)	Chronic Criterion (CCC)
1	Aldrin	309002	y	3 [A]	--	1.3 [A]	--
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
2	*Alkalinity*		n	--	20,000 [B]	--	--
[B] *Criterion shown is the minimum (i.e. CCC in water may not be below this value in order to protect aquatic life).*							

OAR 340-041-8033
Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Human Health Criterion	Freshwater (µg/L)		Saltwater (µg/L)	
				Acute Criterion (CMC)	Chronic Criterion (CCC)	Acute Criterion (CMC)	Chronic Criterion (CCC)
3	*Ammonia*	7664417	n	*The ammonia criteria are pH and temperature dependent — See ammonia criteria Tables 30(a)-(c) at end of Table 30.*[M]		*The ammonia criteria are pH, temperature and salinity dependent. Values for saltwater criteria (total ammonia) can be calculated from the tables specified in Ambient Water Quality Criteria for Ammonia (Saltwater)—1989 (EPA 440/5-88-004) See DEQ's calculator for calculating saltwater ammonia criteria at: http://www.deq.state.or.us/wq/standards/toxics.htm*	
[M] *The acute criteria in Table 30(a) apply in waterbodies where salmonids are a designated use in OAR 340-041-0101 through OAR 340-041-0340. The acute criteria in Table 30(b) apply in waterbodies where salmonids are not a designated use. The chronic criteria in Table 30(c) apply where fish and aquatic life is a designated use. It is not necessary to account for the presence or absence of salmonids or the presence of any early life stage of fish for the chronic criteria. Refer to DEQ's beneficial use website at: http://www.deq.state.or.us/wq/standards/uses.htm for additional information on salmonid beneficial use designations, including tables and maps.*							
4	Arsenic	7440382	y	340 [C, D]	150 [C, D]	69 [C, D]	36 [C, D]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [D] *Criterion is applied as total inorganic arsenic (i.e. arsenic (III) + arsenic (V)).*							
5	BHC Gamma (Lindane)	58899	y	0.95	0.08 [A]	0.16 [A]	--
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
6	Cadmium	7440439	n	*See* **E**	*See* **C, F**	40 [C]	8.8 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.*							

OAR 340-041-8033
Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Human Health Criterion	Freshwater (µg/L)		Saltwater (µg/L)	
				Acute Criterion (CMC)	Chronic Criterion (CCC)	Acute Criterion (CMC)	Chronic Criterion (CCC)
[E] *The freshwater criterion for this metal is expressed as "total recoverable" and is a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote E at bottom of Table 30.*							
[F] *The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote F at bottom of Table 30.*							
7	Chlordane	57749	y	2.4 [A]	0.0043 [A]	0.09 [A]	0.004 [A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
8	*Chloride*	16887006	n	860,000	230,000	--	--
9	*Chlorine*	7782505	n	19	11	13	7.5
10	*Chlorpyrifos*	2921882	n	0.083	0.041	0.011	0.0056
11	Chromium III	16065831	n	*See* **C, F**	*See* **C, F**	--	--
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [F] *The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote F at bottom of Table 30.*							
12	Chromium VI	18540299	n	16 [C]	11 [C]	1100 [C]	50 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.*							
13	Copper	7440508	y	*See* **C, N**	*See* **C, N**	4.8 [C]	3.1 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [N] *The freshwater criterion for copper is a function of the concentration of ions, alkalinity, organic carbon, pH and temperature in the water column. To calculate the criterion, use the Biotic Ligand Model referenced in endnote N at the bottom of Table 30. The acute copper criterion (CMC) is applied as a one-hour average concentration. The chronic criterion (CCC) is applied as a 96-hour (4 days) average concentration. See endnote N also for procedures and information.*							

OAR 340-041-8033
Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Human Health Criterion	Freshwater (µg/L)		Saltwater (µg/L)	
				Acute Criterion (CMC)	Chronic Criterion (CCC)	Acute Criterion (CMC)	Chronic Criterion (CCC)
*[**Note**: The Environmental Quality Commission adopted these revised copper criteria on 11/02/2016. However, the revised criteria become effective for federal Clean Water Act purposes upon approval by the U.S. Environmental Protection Agency.]*							
14	Cyanide	57125	y	22 [J]	5.2 [J]	1 [J]	1 [J]
[J] *This criterion is expressed as µg free cyanide (CN)/L.*							
15	DDT 4,4'	50293	y	1.1 [A, G]	0.001 [A, G]	0.13 [A, G]	0.001 [A, G]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.* [G] *This criterion applies to DDT and its metabolites (i.e. the total concentration of DDT and its metabolites should not exceed this value).*							
16	*Demeton*	8065483	n	--	0.1	--	0.1
17	Dieldrin	60571	y	0.24	0.056	0.71[A]	0.0019[A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
18	Endosulfan	115297	n	0.22 [A, H]	0.056 [A, H]	0.034 [A, H]	0.0087 [A, H]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.* [H] *This value is based on the criterion published in Ambient Water Quality Criteria for Endosulfan (EPA 440/5-80-046) and should be applied as the sum of alpha- and beta-endosulfan.*							
19	Endosulfan Alpha	959988	y	0.22 [A]	0.056 [A]	0.034 [A]	0.0087 [A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
20	Endosulfan Beta	33213659	y	0.22 [A]	0.056 [A]	0.034 [A]	0.0087 [A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
21	Endrin	72208	y	0.086	0.036	0.037 [A]	0.0023 [A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
22	*Guthion*	86500	n	--	0.01	--	0.01

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Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Human Health Criterion	Freshwater (µg/L)		Saltwater (µg/L)	
				Acute Criterion (CMC)	Chronic Criterion (CCC)	Acute Criterion (CMC)	Chronic Criterion (CCC)
23	Heptachlor	76448	y	0.52 [A]	0.0038 [A]	0.053 [A]	0.0036 [A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
24	Heptachlor Epoxide	1024573	y	0.52 [A]	0.0038 [A]	0.053 [A]	0.0036 [A]
[A] *See expanded endnote A at bottom of Table 30 for alternate frequency and duration of this criterion.*							
25	*Iron (total)*	7439896	n	--	1000	--	--
26	Lead	7439921	n	*See* **C , F**	*See* **C , F**	210 [C]	8.1 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [F] *The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote F at bottom of Table 30.*							
27	*Malathion*	121755	n	--	0.1	--	0.1
28	Mercury (total)	7439976	n	2.4	0.012	2.1	0.025
29	*Methoxychlor*	72435	y	--	0.03	--	0.03
30	*Mirex*	2385855	n	--	0.001	--	0.001
31	Nickel	7440020	y	*See* **C , F**	*See* **C , F**	74 [C]	8.2 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [F] *The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote F at bottom of Table 30.*							
32	*Parathion*	56382	n	0.065	0.013	--	--
33	Pentachlorophenol	87865	y	*See* **I**	*See* **I**	13	7.9
[I] *Freshwater aquatic life values for pentachlorophenol are expressed as a function of pH, and are calculated as follows: CMC=(exp(1.005(pH)-4.869); CCC=exp(1.005(pH)-5.134).*							
34	*Phosphorus Elemental*	7723140	n	--	--	--	0.1

OAR 340-041-8033
Table 30
Aquatic Life Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Human Health Criterion	Freshwater (µg/L)		Saltwater (µg/L)	
				Acute Criterion (CMC)	Chronic Criterion (CCC)	Acute Criterion (CMC)	Chronic Criterion (CCC)
35	Polychlorinated Biphenyls (PCBs)	NA	y	2 [K]	0.014 [K]	10 [K]	0.03 [K]
[K] *This criterion applies to total PCBs (e.g.* determined as Aroclors or congeners)							
36	Selenium	7782492	y	*See* **C , L**	4.6 [C]	290 [C]	71 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [L] *The CMC=(1/[(f1/CMC1)+(f2/CMC2)]µg/L) * CF where f1 and f2 are the fractions of total selenium that are treated as selenite and selenate, respectively, and CMC1 and CMC2 are 185.9 µg/L and 12.82 µg/L, respectively. See expanded endnote F for the Conversion Factor (CF) for selenium.*							
37	Silver	7440224	n	*See* **C , F**	0.10 [C]	1.9 [C]	--
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [F] *The freshwater acute criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote F at bottom of Table 30.*							
38	*Sulfide Hydrogen Sulfide*	7783064	n	--	2	--	2
39	Toxaphene	8001352	y	0.73	0.0002	0.21	0.0002
40	*Tributyltin (TBT)*	688733	n	0.46	0.063	0.37	0.01
41	Zinc	7440666	y	*See* **C , F**	*See* **C , F**	90 [C]	81 [C]
[C] *Criterion is expressed in terms of "dissolved" concentrations in the water column.* [F] *The freshwater criterion for this metal is expressed as a function of hardness (mg/L) in the water column. To calculate the criterion, use formula under expanded endnote F at bottom of Table 30.*							

Expanded Endnotes A, E, F, N

Endnote A: Alternate Frequency and Duration for Certain Pesticides

This criterion is based on EPA recommendations issued in 1980 that were derived using guidelines that differed from EPA's 1985 Guidelines which update minimum data requirements and derivation procedures. The CMC may not be exceeded at any time and the CCC may not be exceeded based on a 24-hour average. The CMC may be applied using a one hour averaging period not to be exceeded more than once every three years, if the CMC values given in Table 30 are divided by 2 to obtain a value that is more comparable to a CMC derived using the 1985 Guidelines.

Endnote E: Equation for Hardness-Dependent Freshwater Cadmium Acute Criteria

The freshwater criterion for this metal is expressed as total recoverable with two significant figures, and is a function of hardness (mg/L) in the water column. Criteria values based on hardness are calculated using the following formula (CMC refers to the acute criterion):

$$\mathbf{CMC} = (\exp(m_A*[\ln(\text{hardness})] + b_A))$$

Chemical	m_A	b_A	m_C	b_C
Cadmium	1.128	-3.828	N/A	N/A

Endnote F: Equations for Hardness-Dependent Freshwater Metals Criteria and Conversion Factor Table

The freshwater criterion for this metal is expressed as dissolved with two significant figures, and is a function of hardness (mg/L) in the water column. Criteria values based on hardness are calculated using the following formulas (CMC refers to the acute criterion; CCC refers to the chronic criterion):

$$\textbf{CMC} = (\exp(m_A*[\ln(\text{hardness})] + b_A))*CF$$

$$\textbf{CCC} = (\exp(m_C*[\ln(\text{hardness})] + b_C))*CF$$

"CF" is the conversion factor used for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved fraction in the water column.

Values for Calculating Hardness-Dependent Metals Criteria				
Chemical	**m_A**	**b_A**	**m_C**	**b_C**
Cadmium	N/A	N/A	0.7409	-4.719
Chromium III	0.8190	3.7256	0.8190	0.6848
Lead	1.273	-1.460	1.273	-4.705
Nickel	0.8460	2.255	0.8460	0.0584
Silver	1.72	-6.59	--	--
Zinc	0.8473	0.884	0.8473	0.884

The conversion factors (CF) below must be used in the equations above for the hardness-dependent metals in order to convert total recoverable metals criteria to dissolved metals criteria. For metals that are not hardness-dependent (i.e. arsenic, chromium VI, selenium, and silver (chronic)), or are saltwater criteria, the criterion value associated with the metal in Table 30 already reflects a dissolved criterion based on its conversion factor below.

Conversion Factor (CF) Table for Dissolved Metals				
Chemical	Freshwater		Saltwater	
	Acute	Chronic	Acute	Chronic
Arsenic	1.000	1.000	1.000	1.000
Cadmium	N/A	1.101672-[(ln hardness)(0.041838)]	0.994	0.994
Chromium III	0.316	0.860	--	--
Chromium VI	0.982	0.962	0.993	0.993
Copper	N/A	N/A	0.83	0.83
Lead	1.46203-[(ln hardness)(0.145712)]	1.46203-[(ln hardness)(0.145712)]	0.951	0.951
Nickel	0.998	0.997	0.990	0.990
Selenium	0.996	0.922	0.998	0.998
Silver	0.85	0.85	0.85	--
Zinc	0.978	0.986	0.946	0.946

Endnote N: Deriving freshwater copper criteria

The freshwater copper criteria at any time are the Biotic Ligand Model (BLM) derived Instantaneous Water Quality Criteria (IWQC) output based on a concurrently measured set of model input parameter values. The Biotic Ligand Model uses multiple ambient water quality parameters to derive 1-hour acute exposure (CMC) and 96-hour chronic exposure (CCC) water quality criteria (IWQC) for copper based on the site specific water chemistry that determines the toxicity of copper to aquatic life. If measured data for one or more of the model input parameters used to derive the acute and chronic IWQC is not available, the procedures in section (1) or (2) of this endnote will be used as specified to substitute an estimate or a default value for the missing input parameter. BLM results (IWQC) based on sufficient measured input parameter data are more accurate and supersede results based on estimates or default values. The acceptable BLM software to calculate the IWQC include version 2.2.3, referenced in "Aquatic Life Ambient Freshwater Quality Criteria – Copper": EPA-822-R-07-001, February 2007, and version 2.2.4. The criteria are expressed as dissolved copper in micrograms per liter (to the nearest one-tenth).

(1) Input Parameter Substitution and Estimation Procedures to Derive BLM Criteria (IWQC)

If the measured value for any input parameter needed to derive an IWQC using the BLM is not available, DEQ will substitute an estimated input parameter value according to the procedures described in this section [Endnote N (1)]. If the data required to determine the estimated parameter value is not available, DEQ will use default values derived according to the procedures in Endnote N (2).

(a) Total recoverable concentration measurements will be substituted for dissolved concentration measurements that are not available. For alkalinity, calcium, chloride, magnesium, potassium, sodium and sulfate, total recoverable concentration measurements will be used as a direct substitute for dissolved concentration measurements. Total organic carbon (TOC) measurements will be multiplied by 0.83 to convert the TOC value to an equivalent dissolved organic carbon (DOC) value; except where sufficient TOC and DOC data are available for a site, DEQ will calculate and apply a site-specific translator in place of 0.83 to convert TOC values to DOC for use in the BLM.

(b) Alkalinity, calcium, chloride, magnesium, potassium, sodium and sulfate:
If data for any of these BLM input parameters are missing from a particular dataset, DEQ will estimate its value based on the relationship of the ion or alkalinity to specific conductance measurements for that data set using the regression analysis equations in Table 1. Specific conductance measurements must be concurrent with the other BLM input parameters dataset.

Table N-1	
Parameter	**Regression Equation**
Alkalinity	$Alk. = \exp^{(0.88 \cdot [\ln(SpC)] - 0.41)}$
Calcium	$Ca = \exp^{(0.96 \cdot [\ln(SpC)] - 2.29)}$
Chloride	$Cl = \exp^{(1.15 \cdot [\ln(SpC)] - 3.82)}$
Magnesium	$Mg = \exp^{(0.91 \cdot [\ln(SpC)] - 3.09)}$
Potassium	$K = \exp^{(0.84 \cdot [\ln(SpC)] - 3.74)}$
Sodium	$Na = \exp^{(0.86 \cdot [\ln(SpC)] - 2.22)}$
Sulfate	$SO_4 = \exp^{(1.45 \cdot [\ln(SpC)] - 5.59}$

Where, "SpC" is a measurement of specific conductance in µmhos/cm, "ln" is the natural logarithm, and "exp" is a mathematical constant that is the base of the natural logarithm.

(c) pH
If concurrent pH data is missing from the sample dataset, DEQ will use a representative pH value determined by interpolating from data available for the site or proximate monitoring locations where conditions (such as type of water body, stream flow and geology) are similar to the site. DEQ will use the available data and methods to produce the best practicable estimate of pH for the site and time for which the IWQC is being derived.

(d) Temperature
If concurrent temperature data is missing from the sample dataset, DEQ will use a monthly mean temperature based on data available for the site or proximate monitoring locations where conditions (such as type of water body and stream flow) are similar to the site.

(e) Humic Acid
If sufficient high quality data on the percentage of humic acid as a proportion of DOC is available for a site, DEQ will use that value in the BLM in place of the default value of 10% used in the model.

(2) Default Action Values

If the measured value for DOC, alkalinity, calcium, chloride, magnesium, potassium, sodium or sulfate is not available to derive an IWQC using the BLM, and the parameter value cannot be estimated as specified in section (1) above, DEQ will use a conservative input value for the missing parameter as described in this section [Endnote N (2)] to derive a default action value using the Biotic Ligand Model. The default action value will be used for Clean Water Act purposes until measured or estimated input parameter data are available to derive accurate copper criteria (IWQC) based on site specific water chemistry.

(a) The default input parameter values for DOC, alkalinity calcium, chloride, magnesium, potassium, sodium and sulfate will be the percentile value from the distribution of the high quality data available for surface waters in the region as shown in Table N-2.

Table N-2 Percentile of data distribution to be used as default value by region		
Region	**DOC** percentile	**Alkalinity and Ions** percentile
Willamette	20th	20th
Coastal	20th	20th
Cascades	20th	20th
Eastern	15th	15th
Columbia River	20th	20th

(b) The regional default values for each parameter and region will be updated periodically as additional high quality data becomes available and is added to DEQ's database.
(c) The regional default values for each parameter are available on DEQ's website.
(d) The regions listed in Table N-2 are comprised of the following EPA Level III ecoregions or waterbody:
(i) Willamette: the Willamette Valley
(ii) Coastal: Coast Range and Klamath Mountains
(iii) Cascades: Cascades
(iv) Eastern: Eastern Cascades Slopes and Foothills, Columbia Plateau, Blue Mountains, Northern Basin and Range and Snake River Plain
(v) Columbia River: Columbia River mainstem in Oregon

(3) General Policies
(a) The copper BLM derives instantaneous criteria results (IWQC) that vary at a site over time reflecting the effect of local water chemistry on copper toxicity to aquatic organisms. DEQ will apply the BLM criteria for Clean Water Act purposes to protect the water body during the most bioavailable or toxic conditions.
(b) For assessing waters of the state, DEQ will use approaches that give preference to the use of BLM criteria derived with site-specific measured input parameter data.

Table 30(a): Ammonia Acute Criteria Values (One-hour Average)—Salmonid Species Present
Temperature and pH-Dependent and expressed as Total Ammonia Nitrogen (mg/L TAN)

Criteria cannot be exceeded more than once every three years

$$Acute\ Criterion = MIN\left(\left(\frac{0.275}{1+10^{7.204-pH}}+\frac{39.0}{1+10^{pH-7.204}}\right),\left(0.7249\times\left(\frac{0.0114}{1+10^{7.204-pH}}+\frac{1.6181}{1+10^{pH-7.204}}\right)\times\left(23.12\times 10^{0.036\times(20-T)}\right)\right)\right)$$

	Temperature (°C)																
pH	**0-14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	33	33	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	31	31	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	30	30	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0
6.8	28	28	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	26	26	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7.0	24	24	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	8.0	7.3
7.1	22	22	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	20	20	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6.0
7.3	18	18	17	16	14	13	12	11	10	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.3
7.4	15	15	15	14	13	12	11	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.5	13	13	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
7.6	11	11	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	9.6	9.6	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	3.0
7.8	8.1	8.1	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
7.9	6.8	6.8	6.6	6.0	5.6	5.1	4.7	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8.0	5.6	5.6	5.4	5.0	4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
8.1	4.6	4.6	4.5	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
8.2	3.8	3.8	3.7	3.5	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	3.1	3.1	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
8.4	2.6	2.6	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
8.5	2.1	2.1	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
8.6	1.8	1.8	1.7	1.6	1.5	1.3	1.2	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.59	0.54
8.7	1.5	1.5	1.4	1.3	1.2	1.1	1.0	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.2	1.2	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1.0	1.0	1.0	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
9.0	0.88	0.88	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Table 30(b): Ammonia Acute Criteria Values (One-hour Average*)—Salmonid Species Absent
Temperature and pH-Dependent and expressed as Total Ammonia Nitrogen (mg/L TAN)

Criteria cannot be exceeded more than once every three years

$$Acute\ Criterion = 0.7249 \times \frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}} \times MIN\left(51.93, 23.12 \times 10^{0.036\times(20-T)}\right)$$

	Temperature (°C)																				
pH	**0-10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	51	48	44	41	37	34	32	29	27	25	23	21	19	18	16	15	14	13	12	11	9.9
6.6	49	46	42	39	36	33	30	28	26	24	22	20	18	17	16	14	13	12	11	10	9.5
6.7	46	44	40	37	34	31	29	27	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0
6.8	44	41	38	35	32	30	27	25	23	21	20	18	17	15	14	13	12	11	10	9.2	8.5
6.9	41	38	35	32	30	28	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9
7.0	38	35	33	30	28	25	23	21	20	18	17	15	14	13	12	11	10	9.4	8.6	7.9	7.3
7.1	34	32	30	27	25	23	21	20	18	17	15	14	13	12	11	10	9.3	8.5	7.9	7.2	6.7
7.2	31	29	27	25	23	21	19	18	16	15	14	13	12	11	9.8	9.1	8.3	7.7	7.1	6.5	6.0
7.3	27	26	24	22	20	18	17	16	14	13	12	11	10	9.5	8.7	8.0	7.4	6.8	6.3	5.8	5.3
7.4	24	22	21	19	18	16	15	14	13	12	11	9.8	9.0	8.3	7.7	7.0	6.5	6.0	5.5	5.1	4.7
7.5	21	19	18	17	15	14	13	12	11	10	9.2	8.5	7.8	7.2	6.6	6.1	5.6	5.2	4.8	4.4	4.0
7.6	18	17	15	14	13	12	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5
7.7	15	14	13	12	11	10	9.3	8.6	7.9	7.3	6.7	6.2	5.7	5.2	4.8	4.4	4.1	3.8	3.5	3.2	2.9
7.8	13	12	11	10	9.3	8.5	7.9	7.2	6.7	6.1	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.2	2.9	2.7	2.5
7.9	11	9.9	9.1	8.4	7.7	7.1	6.6	3.0	5.6	5.1	4.7	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.1
8.0	8.8	8.2	7.6	7.0	6.4	5.9	5.4	5.0	4.6	4.2	3.9	3.6	3.3	3.0	2.8	2.6	2.4	2.2	2.0	1.9	1.7
8.1	7.2	6.8	6.3	5.8	5.3	4.9	4.5	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4
8.2	6.0	5.6	5.2	4.8	4.4	4.0	3.7	3.4	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2
8.3	4.9	4.6	4.3	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.96
8.4	4.1	3.8	3.5	3.2	3.0	2.7	2.5	2.3	2.1	2.0	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79
8.5	3.3	3.1	2.9	2.7	2.4	2.3	2.1	1.9	1.8	1.6	1.5	1.4	1.3	1.2	1.1	0.98	0.90	0.83	0.77	0.71	0.65
8.6	2.8	2.6	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.3	1.2	1.1	1.0	0.96	0.88	0.81	0.75	0.69	0.63	0.58	0.54
8.7	2.3	2.2	2.0	1.8	1.7	1.6	1.4	1.3	1.2	1.1	1.0	0.94	0.87	0.80	0.74	0.68	0.62	0.57	0.53	0.49	0.45
8.8	1.9	1.8	1.7	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37
8.9	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.93	0.85	0.79	0.72	0.67	0.61	0.56	0.52	0.48	0.44	0.40	0.37	0.34	0.32
9.0	1.4	1.3	1.2	1.1	1.0	0.93	0.86	0.79	0.73	0.67	0.62	0.57	0.52	0.48	0.44	0.41	0.37	0.34	0.32	0.29	0.27

Table 30(c): Ammonia Chronic Criteria Values (30-day Rolling Average*)

Temperature and pH-Dependent and expressed as Total Ammonia Nitrogen (mg/L TAN)

* The highest four-day average within the 30-day averaging period must not be more than 2.5 times the chronic value

Criteria cannot be exceeded more than once every three years

$$Chronic\ Criterion = 0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028\times(20-MAX(T,7))}\right)$$

	Temperature (°C)																							
pH	**0-7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
6.5	4.9	4.6	4.3	4.1	3.8	3.6	3.3	3.1	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.5	1.4	1.3	1.2	1.1
6.6	4.8	4.5	4.3	4.0	3.8	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1
6.7	4.8	4.5	4.2	3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1
6.8	4.6	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1
6.9	4.5	4.2	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0
7.0	4.4	4.1	3.8	3.6	3.4	3.2	3.0	2.8	2.6	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	0.99
7.1	4.2	3.9	3.7	3.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95
7.2	4.0	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.96	0.90
7.3	3.8	3.5	3.3	3.1	2.9	2.7	2.6	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.97	0.91	0.85
7.4	3.5	3.3	3.1	2.9	2.7	2.5	2.4	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.0	0.96	0.90	0.85	0.79
7.5	3.2	3.0	2.8	2.7	2.5	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.83	0.78	0.73
7.6	2.9	2.8	2.6	2.4	2.3	2.1	2.0	1.9	1.8	1.6	1.5	1.4	1.4	1.3	1.2	1.1	1.1	0.98	0.92	0.86	0.81	0.76	0.71	0.67
7.7	2.6	2.4	2.3	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60
7.8	2.3	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53
7.9	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.0	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47
8.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.1	1.0	0.94	0.88	0.83	0.78	0.73	0.68	0.64	0.60	0.56	0.53	0.50	0.44	0.44	0.41
8.1	1.5	1.5	1.4	1.3	1.2	1.1	1.1	0.99	0.92	0.87	0.81	0.76	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35
8.2	1.3	1.2	1.2	1.1	1.0	0.96	0.90	0.84	0.79	0.74	0.70	0.65	0.61	0.57	0.54	0.50	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30
8.3	1.1	1.1	0.99	0.93	0.87	0.82	0.76	0.72	0.67	0.63	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26
8.4	0.95	0.89	0.84	0.79	0.74	0.69	0.65	0.61	0.57	0.53	0.50	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.30	0.28	0.26	0.25	0.23	0.22
8.5	0.80	0.75	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.45	0.42	0.40	0.37	0.35	0.33	0.31	0.29	0.27	0.25	0.24	0.22	0.21	0.20	0.18
8.6	0.68	0.64	0.60	0.56	0.53	0.49	0.46	0.43	0.41	0.38	0.36	0.33	0.31	0.29	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.16	0.15
8.7	0.57	0.54	0.51	0.47	0.44	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13
8.8	0.49	0.46	0.43	0.40	0.38	0.35	0.33	0.31	0.29	0.27	0.26	0.24	0.23	0.21	0.20	0.19	0.17	0.16	0.15	0.14	0.13	0.13	0.12	0.11
8.9	0.42	0.39	0.37	0.34	0.32	0.30	0.28	0.27	0.25	0.23	0.22	0.21	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.12	0.11	0.10	0.09
9.0	0.36	0.34	0.32	0.30	0.28	0.26	0.24	0.23	0.21	0.20	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	0.11	0.10	0.09	0.09	0.08

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TABLE 31
Aquatic Life Water Quality Guidance Values for Toxic Pollutants

Effective April 18, 2014

Water Quality Guidance Values Summary [A]

The concentration for each compound listed in Table 31 is a guidance value that DEQ may use in application of Oregon's Toxic Substances Narrative (340-041-0033(2)) to waters of the state in order to protect aquatic life. All values are expressed as micrograms per liter (µg/L) except where noted. Compounds are listed in alphabetical order with the corresponding EPA number (from National Recommended Water Quality Criteria: 2002, EPA-822-R-02-047), corresponding Chemical Abstract Service (CAS) number, aquatic life freshwater acute and chronic guidance values, and aquatic life saltwater acute and chronic guidance values.

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Table 31
Aquatic Life Water Quality Guidance Values for Toxic Pollutants

EPA No.	Pollutant	CAS Number	Freshwater		Saltwater	
			Acute	Chronic	Acute	Chronic
56	Acenaphthene	83329	1,700	520	970	710
17	Acrolein	107028	68	21	55	
18	Acrylonitrile	107131	7,550	2,600		
1	Antimony	7440360	9,000	1,600		
19	Benzene	71432	5,300		5,100	700
59	Benzidine	92875	2,500			
3	Beryllium	7440417	130	5.3		
19 B	BHC (Hexachlorocyclohexane-Technical)	319868	100		0.34	
21	Carbon Tetrachloride	56235	35,200		50,000	

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Table 31
Aquatic Life Water Quality Guidance Values for Toxic Pollutants

EPA No.	Pollutant	CAS Number	Freshwater		Saltwater	
			Acute	Chronic	Acute	Chronic
	Chlorinated Benzenes		250	50	160	129
	Chlorinated naphthalenes		1,600		7.5	
	Chloroalkyl Ethers		238,000			
26	Chloroform	67663	28,900	1,240		
45	Chlorophenol 2-	95578	4,380	2,000		
	Chlorophenol 4-	106489			29,700	
52	Methyl-4-chlorophenol 3-	59507	30			
5a	Chromium (III)	16065831			10,300	
109	DDE 4,4'-	72559	1,050		14	
110	DDD 4,4'-	72548	0.06		3.6	
	Diazinon	333415	0.08	0.05		
	Dichlorobenzenes		1,120	763	1,970	
29	Dichloroethane 1,2-	107062	118,000	20,000	113,000	
	Dichloroethylenes		11,600		224,000	
46	Dichlorophenol 2,4-	120832	2,020	365		
31	Dichloropropane 1,2-	78875	23,000	5,700	10,300	3,040
32	Dichloropropene 1,3-	542756	6,060	244	790	
47	Dimethylphenol 2,4-	105679	2,120			
	Dinitrotoluene		330	230	590	370
16	Dioxin (2,3,7,8-TCDD)	1746016	0.01	38 pg/L		
85	Diphenylhydrazine 1,2-	122667	270			

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Table 31
Aquatic Life Water Quality Guidance Values for Toxic Pollutants

EPA No.	Pollutant	CAS Number	Freshwater		Saltwater	
			Acute	Chronic	Acute	Chronic
33	Ethylbenzene	100414	32,000		430	
86	Fluoranthene	206440	3,980		40	16
	Haloethers		360	122		
	Halomethanes		11,000		12,000	6,400
89	Hexachlorobutadiene	87683	90	9.3	32	
90	Hexachlorocyclopentadiene	77474	7	5.2	7	
91	Hexachloroethane	67721	980	540	940	
93	Isophorone	78591	117,000		12,900	
94	Naphthalene	91203	2,300	620	2,350	
95	Nitrobenzene	98953	27,000		6,680	
	Nitrophenols		230	150	4,850	
26 B	Nitrosamines	35576911	5,850		3,300,000	
	Pentachlorinated ethanes		7,240	1,100	390	281
54	Phenol	108952	10,200	2,560	5,800	
	Phthalate esters		940	3	2,944	3.4
	Polynuclear Aromatic Hydrocarbons				300	
	Tetrachlorinated Ethanes		9,320			
37	Tetrachloroethane 1,1,2,2-	79345		2,400	9,020	
	Tetrachloroethanes		9,320			

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Table 31
Aquatic Life Water Quality Guidance Values for Toxic Pollutants

EPA No.	Pollutant	CAS Number	Freshwater		Saltwater	
			Acute	Chronic	Acute	Chronic
38	Tetrachloroethylene	127184	5,280	840	10,200	450
	Tetrachlorophenol 2,3,5,6					440
12	Thallium	7440280	1,400	40	2,130	
39	Toluene	108883	17,500		6,300	5,000
	Trichlorinated ethanes		18,000			
41	Trichloroethane 1,1,1-	71556			31,200	
42	Trichloroethane 1,1,2-	79005		9,400		
43	Trichloroethylene	79016	45,000	21,900	2,000	
55	Trichlorophenol 2,4,6-	88062		970		

The following chemicals/compounds/classes are of concern due to the potential for toxic effects to aquatic organisms; however, no guidance values are designated. If these compounds are identified in the waste stream, then a review of the scientific literature may be appropriate for deriving guidance values.

- Polybrominated diphenyl ethers (PBDE)
- Polybrominated biphenyls (PBB)
- Pharmaceuticals
- Personal care products
- Alkyl Phenols
- Other chemicals with Toxic effects

Footnotes:

A Values in Table 31 are applicable to all basins.

B This number was assigned to the list of non-priority pollutants in National Recommended Water Quality Criteria: 2002 (EPA-822-R-02-047).

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TABLE 40
Human Health Water Quality Criteria for Toxic Pollutants

Effective April 18, 2014

Human Health Criteria Summary

The concentration for each pollutant listed in Table 40 was derived to protect Oregonians from potential adverse health impacts associated with long-term exposure to toxic substances associated with consumption of fish, shellfish, and water. The "organism only" criteria are established to protect fish and shellfish consumption and apply to waters of the state designated for fishing. The "water + organism" criteria are established to protect the consumption of drinking water, fish, and shellfish, and apply where both fishing and domestic water supply (public and private) are designated uses. All criteria are expressed as micrograms per liter (µg/L), unless otherwise noted. Pollutants are listed in alphabetical order. Additional information includes the Chemical Abstract Service (CAS) number, whether the criterion is based on carcinogenic effects (can cause cancer in humans), and whether there is an aquatic life criterion for the pollutant (i.e. "y"= yes, "n" = no). All the human health criteria were calculated using a fish consumption rate of 175 grams per day unless otherwise noted. A fish consumption rate of 175 grams per day is approximately equal to 23 8-ounce fish meals per month. For pollutants categorized as carcinogens, values represent a cancer risk of one additional case of cancer in one million people (i.e. 10^{-6}), unless otherwise noted. All metals criteria are for total metal concentration, unless otherwise noted. Italicized pollutants represent non-priority pollutants. The human health criteria revisions established by OAR 340-041-0033 and shown in Table 40 do not become applicable for purposes of ORS chapter 468B or the federal Clean Water Act until approved by EPA pursuant to 40 CFR 131.21 (4/27/2000).

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
1	Acenaphthene	83329	n	n	95	99
2	Acrolein	107028	n	n	0.88	0.93
3	Acrylonitrile	107131	y	n	0.018	0.025
4	Aldrin	309002	y	y	0.0000050	0.0000050
5	Anthracene	120127	n	n	2900	4000
6	Antimony	7440360	n	n	5.1	64
7	Arsenic (inorganic) [A]	7440382	y	y	2.1	2.1(freshwater) 1.0 (saltwater)
[A] *The arsenic criteria are expressed as total inorganic arsenic. The "organism only" freshwater criterion is based on a risk level of approximately 1 x 10^{-5}, and the "water + organism" criterion is based on a risk level of 1 x 10^{-4}.*						
8	Asbestos [B]	1332214	y	n	7,000,000 fibers/L	--
[B] *The human health risks from asbestos are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
9	*Barium* [C]	7440393	n	n	1000	--
[C] *The human health criterion for barium is the same as originally published in the 1976 EPA Red Book which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value was also published in the 1986 EPA Gold Book. Human health risks are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
10	Benzene	71432	y	n	0.44	1.4
11	Benzidine	92875	y	n	0.000018	0.000020
12	Benz(a)anthracene	56553	y	n	0.0013	0.0018
13	Benzo(a)pyrene	50328	y	n	0.0013	0.0018

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
14	Benzo(b)fluoranthene 3,4	205992	y	n	0.0013	0.0018
15	Benzo(k)fluoranthene	207089	y	n	0.0013	0.0018
16	BHC Alpha	319846	y	n	0.00045	0.00049
17	BHC Beta	319857	y	n	0.0016	0.0017
18	BHC Gamma (Lindane)	58899	n	y	0.17	0.18
19	Bromoform	75252	y	n	3.3	14
20	Butylbenzyl Phthalate	85687	n	n	190	190
21	Carbon Tetrachloride	56235	y	n	0.10	0.16
22	Chlordane	57749	y	y	0.000081	0.000081
23	Chlorobenzene	108907	n	n	74	160
24	Chlorodibromomethane	124481	y	n	0.31	1.3
25	Chloroethyl Ether bis 2	111444	y	n	0.020	0.053
26	Chloroform	67663	n	n	260	1100
27	Chloroisopropyl Ether bis 2	108601	n	n	1200	6500
28	Chloromethyl ether, bis	542881	y	n	0.000024	0.000029
29	Chloronaphthalene 2	91587	n	n	150	160
30	Chlorophenol 2	95578	n	n	14	15
31	Chlorophenoxy Herbicide (2,4,5,-TP) [D]	93721	n	n	10	--

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
[D] *The Chlorophenoxy Herbicide (2,4,5,-TP) criterion is the same as originally published in the 1976 EPA Red Book which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value was also published in the 1986 EPA Gold Book. Human health risks are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
32	Chlorophenoxy Herbicide (2,4-D) [E]	94757	n	n	100	--
[E] *The Chlorophenoxy Herbicide (2,4-D) criterion is the same as originally published in the 1976 EPA Red Book which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value was also published in the 1986 EPA Gold Book. Human health risks are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
33	Chrysene	218019	y	n	0.0013	0.0018
34	Copper [F]	7440508	n	y	1300	--
[F] *Human health risks from copper are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
35	Cyanide [G]	57125	n	y	130	130
	[G] *The cyanide criterion is expressed as total cyanide (CN)/L.*					
36	DDD 4,4'	72548	y	n	0.000031	0.000031
37	DDE 4,4'	72559	y	n	0.000022	0.000022
38	DDT 4,4'	50293	y	y	0.000022	0.000022
39	Dibenz(a,h)anthracene	53703	y	n	0.0013	0.0018
40	Dichlorobenzene(m) 1,3	541731	n	n	80	96
41	Dichlorobenzene(o) 1,2	95501	n	n	110	130

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
42	Dichlorobenzene(p) 1,4	106467	n	n	16	19
43	Dichlorobenzidine 3,3'	91941	y	n	0.0027	0.0028
44	Dichlorobromomethane	75274	y	n	0.42	1.7
45	Dichloroethane 1,2	107062	y	n	0.35	3.7
46	Dichloroethylene 1,1	75354	n	n	230	710
47	Dichloroethylene trans 1,2	156605	n	n	120	1000
48	Dichlorophenol 2,4	120832	n	n	23	29
49	Dichloropropane 1,2	78875	y	n	0.38	1.5
50	Dichloropropene 1,3	542756	y	n	0.30	2.1
51	Dieldrin	60571	y	y	0.0000053	0.0000054
52	Diethyl Phthalate	84662	n	n	3800	4400
53	Dimethyl Phthalate	131113	n	n	84000	110000
54	Dimethylphenol 2,4	105679	n	n	76	85
55	Di-n-butyl Phthalate	84742	n	n	400	450
56	Dinitrophenol 2,4	51285	n	n	62	530
57	*Dinitrophenols*	25550587	n	n	62	530
58	Dinitrotoluene 2,4	121142	y	n	0.084	0.34
59	Dioxin (2,3,7,8-TCDD)	1746016	y	n	0.00000000051	0.00000000051

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
60	Diphenylhydrazine 1,2	122667	y	n	0.014	0.020
61	Endosulfan Alpha	959988	n	y	8.5	8.9
62	Endosulfan Beta	33213659	n	y	8.5	8.9
63	Endosulfan Sulfate	1031078	n	n	8.5	8.9
64	Endrin	72208	n	y	0.024	0.024
65	Endrin Aldehyde	7421934	n	n	0.030	0.030
66	Ethylbenzene	100414	n	n	160	210
67	Ethylhexyl Phthalate bis 2	117817	y	n	0.20	0.22
68	Fluoranthene	206440	n	n	14	14
69	Fluorene	86737	n	n	390	530
70	Heptachlor	76448	y	y	0.0000079	0.0000079
71	Heptachlor Epoxide	1024573	y	y	0.0000039	0.0000039
72	Hexachlorobenzene	118741	y	n	0.000029	0.000029
73	Hexachlorobutadiene	87683	y	n	0.36	1.8
74	*Hexachlorocyclo-hexane-Technical*	608731	y	n	0.0014	0.0015
75	Hexachlorocyclopentadiene	77474	n	n	30	110
76	Hexachloroethane	67721	y	n	0.29	0.33
77	Indeno(1,2,3-cd)pyrene	193395	y	n	0.0013	0.0018

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
78	Isophorone	78591	y	n	27	96
79	Manganese [H]	7439965	n	n	--	100
[H] *The "fish consumption only" criterion for manganese applies only to salt water and is for total manganese. This EPA recommended criterion predates the 1980 human health methodology and does not utilize the fish ingestion BCF calculation method or a fish consumption rate.*						
80	Methoxychlor [I]	72435	n	y	100	--
[I] *The human health criterion for methoxychlor is the same as originally published in the 1976 EPA Red Book which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value was also published in the1986 EPA Gold Book. Human health risks are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
81	Methyl Bromide	74839	n	n	37	150
82	Methyl-4,6-dinitrophenol 2	534521	n	n	9.2	28
83	Methylene Chloride	75092	y	n	4.3	59
84	Methylmercury (mg/kg) [J]	22967926	n	n	--	0.040 mg/kg
[J] *This value is expressed as the fish tissue concentration of methylmercury. Contaminated fish and shellfish is the primary human route of exposure to methylmercury.*						
85	Nickel	7440020	n	y	140	170
86	Nitrates [K]	14797558	n	n	10000	--
[K] *The human health criterion for nitrates is the same as originally published in the 1976 EPA Red Book which predates the 1980 methodology and did not utilize the fish ingestion BCF approach. This same criterion value was also published in the 1986 EPA Gold Book. Human health risks are primarily from drinking water, therefore no "organism only" criterion was developed. The "water + organism" criterion is based on the Maximum Contaminant Level (MCL) established under the Safe Drinking Water Act.*						
87	Nitrobenzene	98953	n	n	14	69

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Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
88	Nitrosamines	35576911	y	n	0.00079	0.046
89	Nitrosodibutylamine, N	924163	y	n	0.0050	0.022
90	Nitrosodiethylamine, N	55185	y	n	0.00079	0.046
91	Nitrosodimethylamine, N	62759	y	n	0.00068	0.30
92	Nitrosodi-n-propylamine, N	621647	y	n	0.0046	0.051
93	Nitrosodiphenylamine, N	86306	y	n	0.55	0.60
94	Nitrosopyrrolidine, N	930552	y	n	0.016	3.4
95	Pentachlorobenzene	608935	n	n	0.15	0.15
96	Pentachlorophenol	87865	y	y	0.15	0.30
97	Phenol	108952	n	n	9400	86000
98	Polychlorinated Biphenyls (PCBs) [L]	NA	y	y	0.0000064	0.0000064
[L] *This criterion applies to total PCBs (e.g. determined as Aroclors or congeners).*						
99	Pyrene	129000	n	n	290	400
100	Selenium	7782492	n	y	120	420
101	Tetrachlorobenzene, 1,2,4,5-	95943	n	n	0.11	0.11
102	Tetrachloroethane 1,1,2,2	79345	y	n	0.12	0.40
103	Tetrachloroethylene	127184	y	n	0.24	0.33
104	Thallium	7440280	n	n	0.043	0.047

OAR 340-041-8033
Table 40
Human Health Water Quality Criteria for Toxic Pollutants

No.	Pollutant	CAS Number	Carcinogen	Aquatic Life Criterion	Human Health Criteria for the Consumption of:	
					Water + Organism (µg/L)	Organism Only (µg/L)
105	Toluene	108883	n	n	720	1500
106	Toxaphene	8001352	y	y	0.000028	0.000028
107	Trichlorobenzene 1,2,4	120821	n	n	6.4	7.0
108	Trichloroethane 1,1,2	79005	y	n	0.44	1.6
109	Trichloroethylene	79016	y	n	1.4	3.0
110	Trichlorophenol 2,4,6	88062	y	n	0.23	0.24
111	Trichlorophenol, 2, 4, 5-	95954	n	n	330	360
112	Vinyl Chloride	75014	y	n	0.023	0.24
113	Zinc	7440666	n	y	2100	2600

Attachment 3: Basin-Specific Tables and Figures

OAR 340-041-0101 (Main Stem Columbia River): Figure 1, Table 101A, Table 101B, Figure 101A

OAR 340-041-0121 (Mainstem Snake River): Figure 1, Table 121A, Table 121B

OAR 340-041-0130 (Deschutes Basin): Figure 1, Table 130A, Figure 130A, Figure 130B

OAR 340-041-0140 (Goose and Summer Lakes Basin): Figure 1, Table 140A, Table 140B

OAR 340-041-0151 (Grand Ronde Basin): Figure 1, Table 151A, Figure 151A, Figure 151B

OAR 340-041-0160 (Hood Basin): Figure 1, Table 160A, Figure 160A, Figure 160B

OAR 340-041-0170 (John Day Basin): Figure 1, Figure 170A, Figure 170B

OAR 340-041-0180 (Klamath Basin): Figure 1, Table 180A, Figure 180A

OAR 340-041-0190 (Malheur Lake Basin): Figure 1, Table 190A, Table 190B

OAR 340-041-0201 (Malheur River Basin): Figure 1, Table 201A, Figure 201A

OAR 340-041-0220 (Mid Coast Basin): Figure 1, Table 220A, Figure 220A, Figure 220B, Figure 220C, Figure 220D, Figure 220E, Figure 220F, Figure 220G, Figure 220H

OAR 340-041-0230 (North Coast Basin): Figure 1, Table 230A, Figure 230A, Figure 230B, Figure 230C, Figure 230D, Figure 230E, Figure 230F, Figure 230G, Figure 230H

OAR 340-041-0250 (Owyhee Basin): Figure 1, Table 250A, Table 250B

OAR 340-041-0260 (Powder/Burnt Basin): Figure 1, Table 260A, Figure 260A

OAR 340-041-0271 (Rogue Basin): Figure 1, Table 271A, Figure 271A, Figure 271B

OAR 340-041-0286 (Sandy Basin): Figure 1, Table 286A, Figure 286A, Figure 286B

OAR 340-041-0300 (South Coast Basin): Figure 1, Table 300A, Figure 300A, Figure 300B, Figure 300C, Figure 300D

OAR 340-041-0310 (Umatilla Basin): Figure 1, Table 310A, Figure 310A, Figure 310B

OAR 340-041-0315 (West Division Main Canal, Umatilla Basin): Table 315

OAR 340-041-0320 (Umpqua Basin): Figure 1, Table 320A, Figure 320A, Figure 320B, Figure 320C

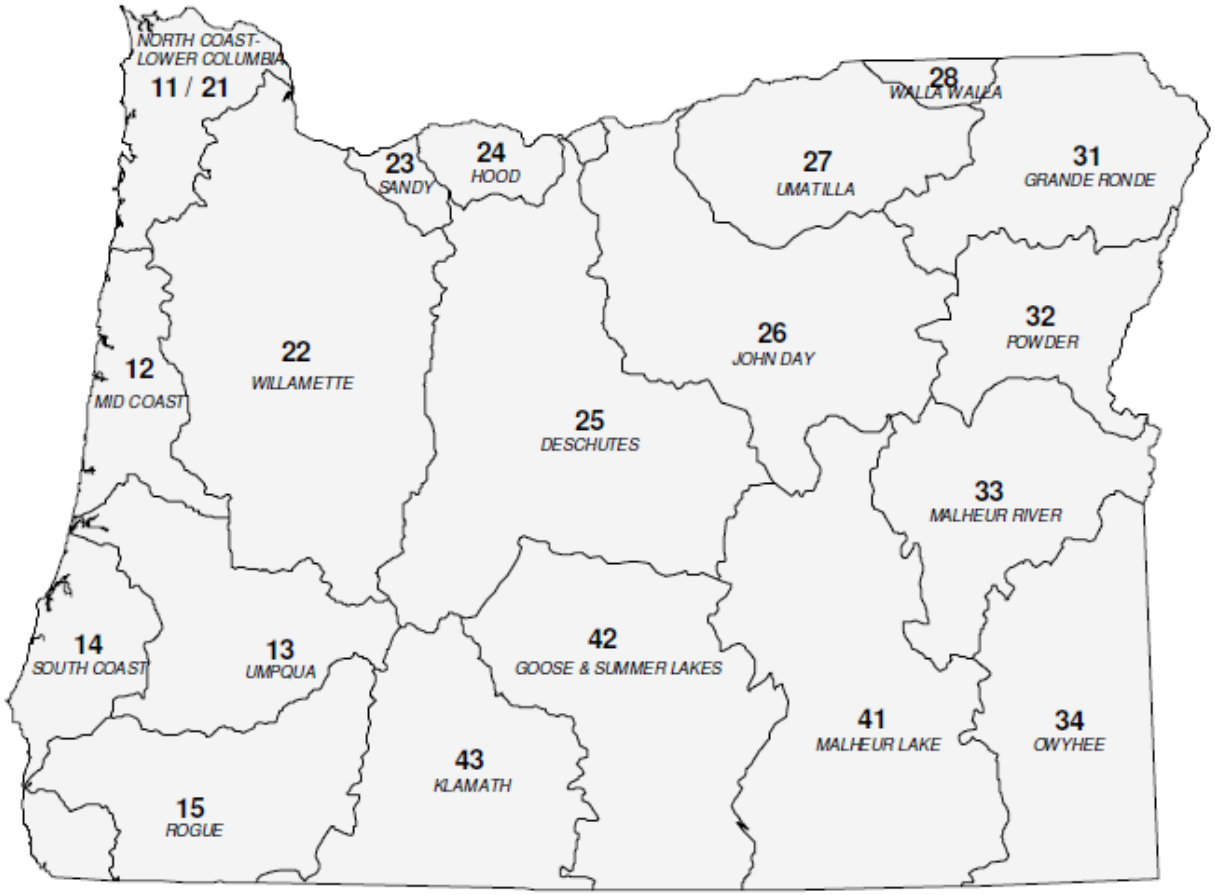
OAR 340-041-0330 (Walla Walla Basin): Figure 1, Table 330A, Figure 310A, Figure 310B

OAR 340-041-0340 (Willamette Basin): Figure 1, Table 340A, Figure 340A, Figure 340B

State of Oregon Department of Environmental Quality

OAR 340-041-0101
Tables and Figures
Basin-Specific Criteria, Beneficial Uses to be Protected in the Main Stem Columbia River

Figure 1: Oregon Basin Index Map



n Name	Basin #	OAR #
S	25	340-041-0130
UMMER LKS	42	340-041-0140
ONDE	31	340-041-0151
	24	340-041-0160
	26	340-041-0170
	43	340-041-0180
LAKE	41	340-041-0190
RIVER	33	340-041-0201
	12	340-041-0220
AST-LWR COL	11-21	340-041-0230
	34	340-041-0250
	32	340-041-0260
	15	340-041-0271
	23	340-041-0286
AST	14	340-041-0300
A	27	340-041-0310
	13	340-041-0320
ALLA	28	340-041-0330
TTE	22	340-041-0340

OAR 340-041-0101
Table 101A
Designated Beneficial Uses
Main stem Columbia River

(November 2003)

Beneficial Uses	Columbia River Mouth to RM 86	Columbia River RM 86 to 309
Public Domestic Water Supply[1]	X	X
Private Domestic Water Supply[1]	X	X
Industrial Water Supply	X	X
Irrigation	X	X
Livestock Watering	X	X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing[3]	X	X
Boating	X	X
Water Contact Recreation[3]	X	X
Aesthetic Quality	X	X
Hydro Power		X
Commercial Navigation & Transportation	X	X

[1] With adequate pretreatment and natural quality to meet drinking water standards.

[2] See also Table 101B for fish use designations for this river.

[3] See also Figure 101A for coastal water contact use and shellfish harvesting designations.

OAR 340-041-0101
Table 101B
Beneficial Use Designations – Fish Uses
Main stem Columbia River

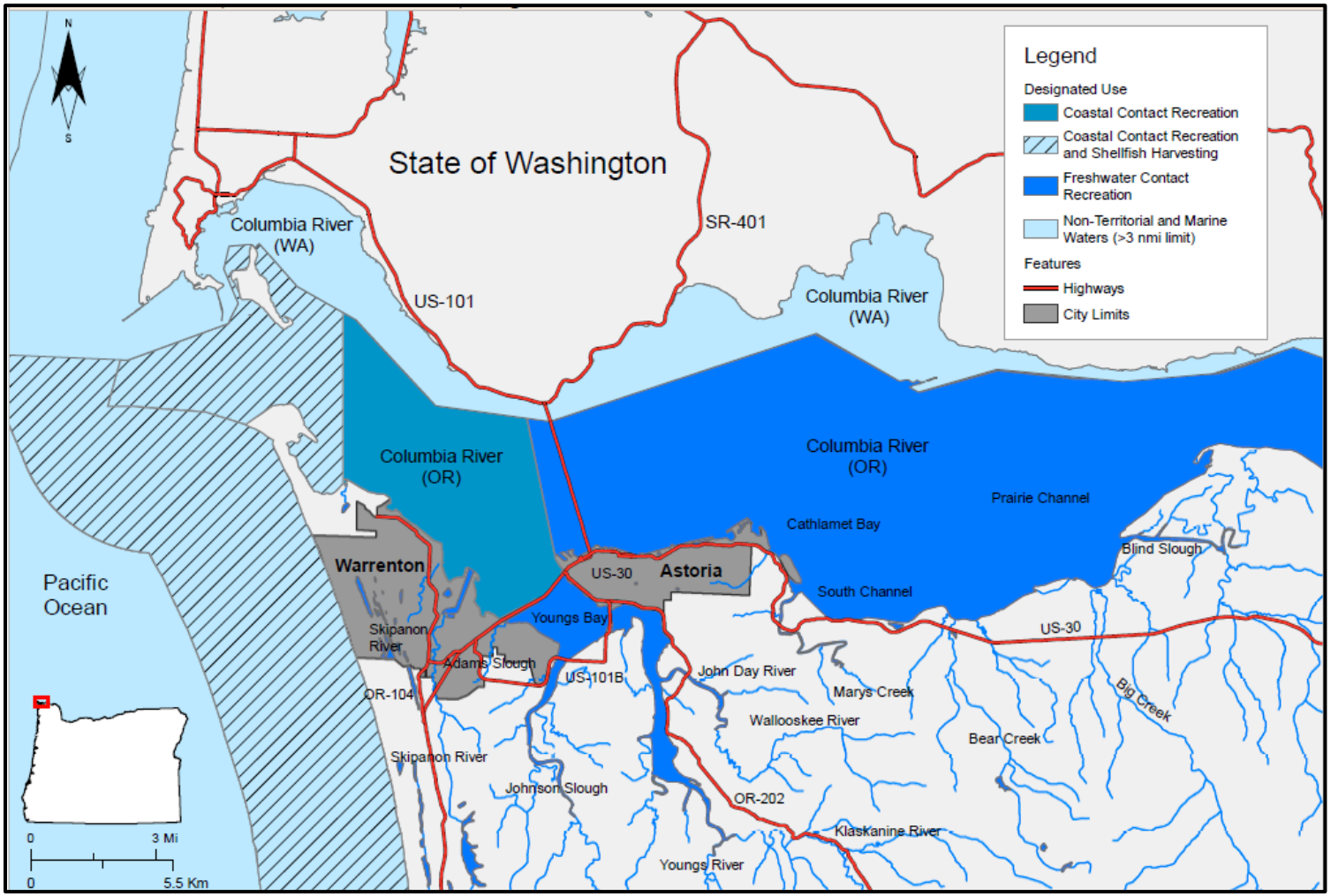
(November 2003)

Geographic Extent of Use	Salmon and Steelhead Migration Corridors (20°C)	Salmon and Steelhead Spawning through Fry Emergence	Shad and Sturgeon Spawning and Rearing
Mainstem Columbia River			
Beacon Rock to Upstream of Ives Island (RM 141,5 to RM 143.5)		October 15 – March 31	
Columbia River, mouth to WA border (RM 309)	X		
Columbia River (RM 146 to RM 203)			X

State of Oregon Department of Environmental Quality

OAR 340-041-0101

Figure 101A - Water Contact Recreation and Shellfish Harvesting Designated Uses, Columbia River, Columbia River Basin, Oregon



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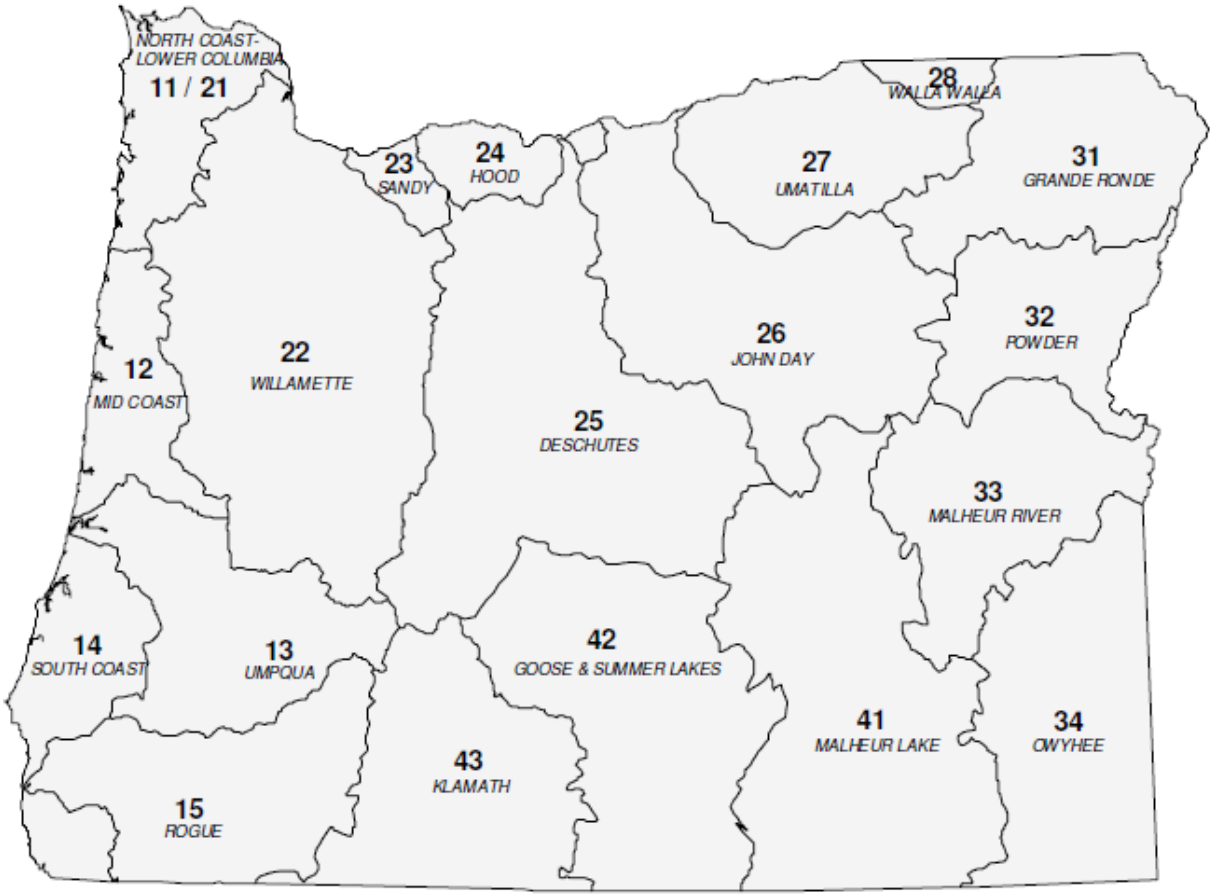
OAR 340-041-0121
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0121
Table 121A
Designated Beneficial Uses
Mainstem Snake River

Beneficial Uses	Snake River RM 176 to 409
Public Domestic Water Supply[1]	X
Private Domestic Water Supply[1]	X
Industrial Water Supply	X
Irrigation	X
Livestock Watering	X
Fish & Aquatic Life[2]	X
Wildlife & Hunting	X
Fishing	X
Boating	X
Water Contact Recreation	X
Aesthetic Quality	X
Hydro Power	X
Commercial Navigation & Transportation	X

[1] With adequate pretreatment and natural quality that meets drinking water standards.

[2] See also Table 121B for fish use designations for this river.

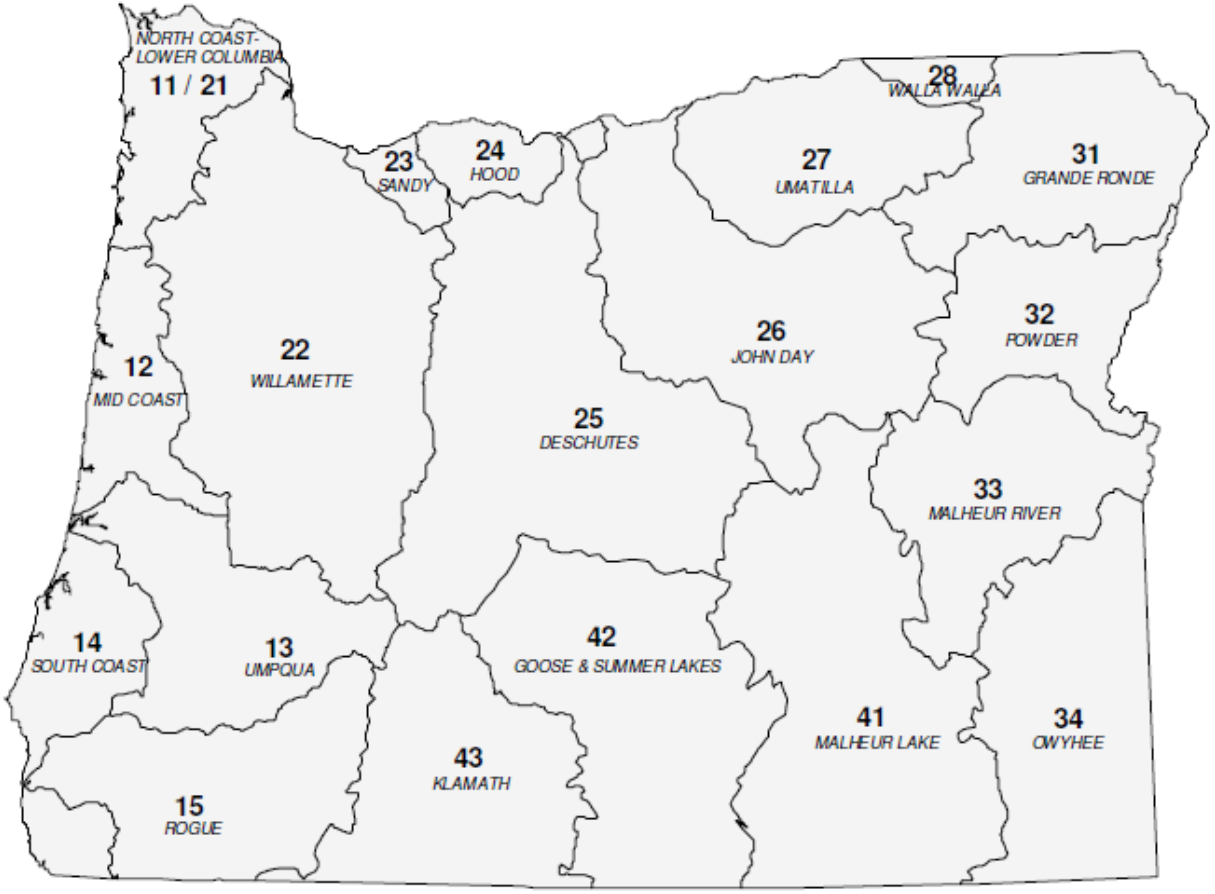
OAR 340-041-0121
Table 121B
Beneficial Use Designations - Fish Uses
Mainstem Snake River

Geographic Extent of use	Salmon and Steelhead Migration Corridors (20°C)	Redband or Lahontan Cutthroat Trout (20°C)	Salmon and Steelhead Spawning Through Fry Emergence
Mainstem Snake River			
Oregon/Washington Border to Hells Canyon Dam (RM 169 to 247.5)	X		October 23-April 15
Hells Canyon Dam to Idaho Border (RM 247.5 to RM 409)		X	

State of Oregon Department of Environmental Quality

OAR 340-041-0130
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0130
Table 130A
Designated Beneficial Uses
Deschutes Basin

Beneficial Uses	Deschutes River Main Stem from Mouth to Pelton Regulating Dam	Deschutes River Main Stem from Pelton Regulating Dam to Bend Diversion Dam and for the Crooked River Main Stem	Deschutes River Main Stem above Bend Diversion Dan & for the Metolious River Main Stem	All Other Basin Stems
Public Domestic Water Supply[1]	X	X	X	X
Private Domestic Water Supply[1]	X	X	X	X
Industrial Water Supply	X	X	X	X
Irrigation	X	X	X	X
Livestock Watering	X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X
Wildlife & Hunting	X	X	X	X
Fishing	X	X	X	X
Boating	X	X	X	X
Water Contact Recreation	X	X	X	X
Aesthetic Quality	X	X	X	X
Hydro Power		X		
Commercial Navigation & Transportation				

[1] With adequate pretreatment (filtration and disinfection) and natural quality that meets drinking water standards.

[2] See also Figures 130A and 130B for fish use designations for this river.

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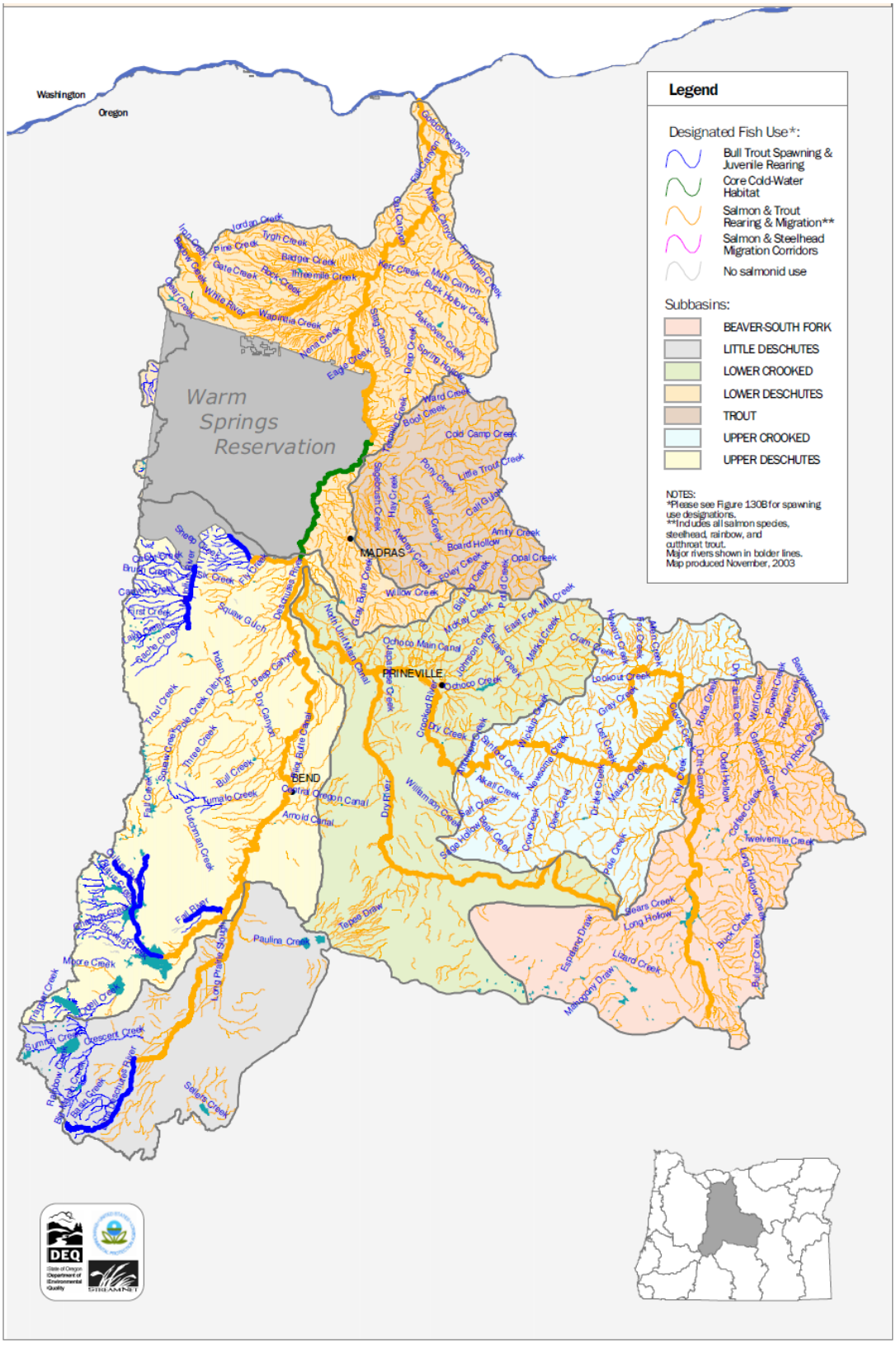
OAR 340-041-0130 – Figure 130A

Fish Use Designations
Deschutes Basin, Oregon



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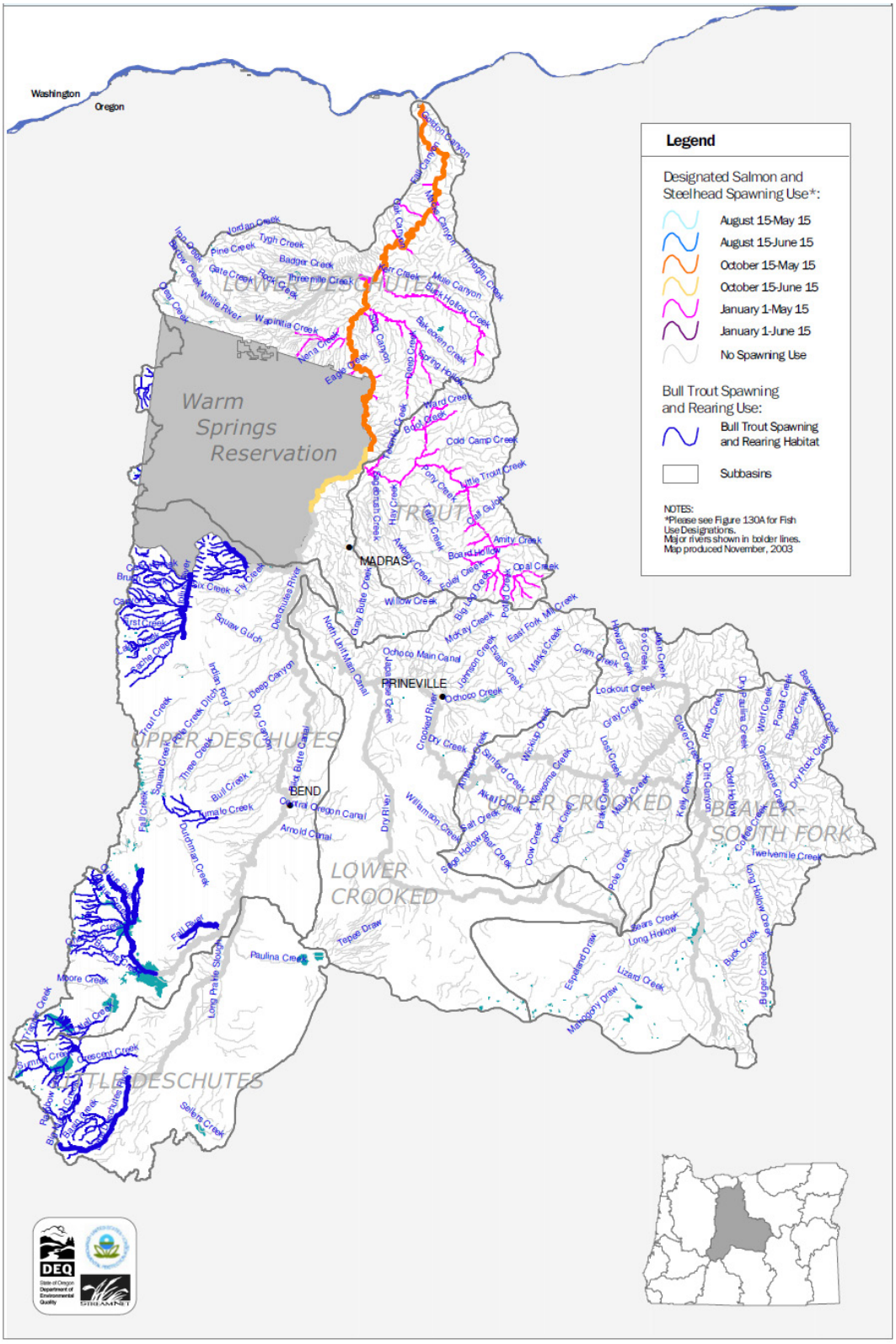
OAR 340-041-0130 – Figure 130B

Salmon and Steelhead Spawning Use Designations
Deschutes Basin, Oregon



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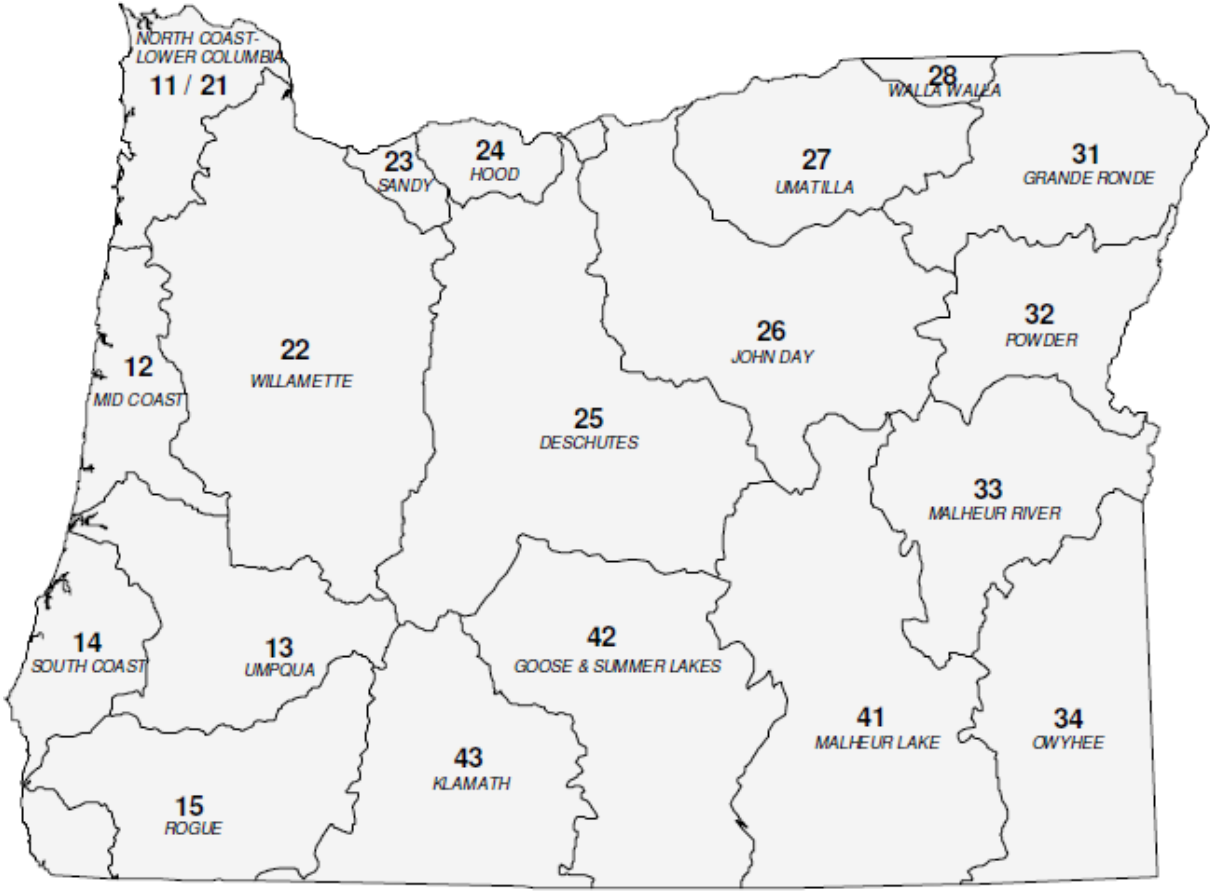
OAR 340-041-0140
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0140
Table 140A
Designated Beneficial Uses
Goose and Summer Lakes Basin

Beneficial Uses	Goose Lake	Freshwater Lakes & Reservoirs	Highly Alkaline & Saline Lakes	Freshwater Streams
Public Domestic Water Supply[1]		X		X
Private Domestic Water Supply[1]		X		X
Industrial Water Supply		X	X	X
Irrigation		X		X
Livestock Watering	X	X		X
Fish & Aquatic Life[2]	X	X	X	X
Wildlife & Hunting	X	X	X	X
Fishing	X	X	X	X
Boating	X	X	X	X
Water Contact Recreation	X	X	X	X
Aesthetic Quality	X	X	X	X
Hydro Power				
Commercial Navigation & Transportation				

[1] With adequate pretreatment (filtration and disinfection) and natural quality to meet drinking water standards.

[2] See also Table 140B for fish use designations for this basin.

OAR 340-041-0140
Table 140B
Beneficial Use Designations – Fish Uses
Goose and Summer Lakes Basin, Oregon

Geographic Extent of Use	Redband or Lahontan Cutthroat Trout (20°C)	Cool Water Species (No Salmonid Use)
Summer Lake Subbasin		
Ft. Rock subbasin*: Silver Creek, Buck Creek and Bridge Creek	X	
Ft. Rock subbasin*: all other streams		X
Alkali Lake subbasin*		X
All other Summer Lake subbasin streams	X	
All other Goose and Summer Lakes basin streams within Oregon	X	
All other Highly Alkaline & Saline Lakes in this basin.		X

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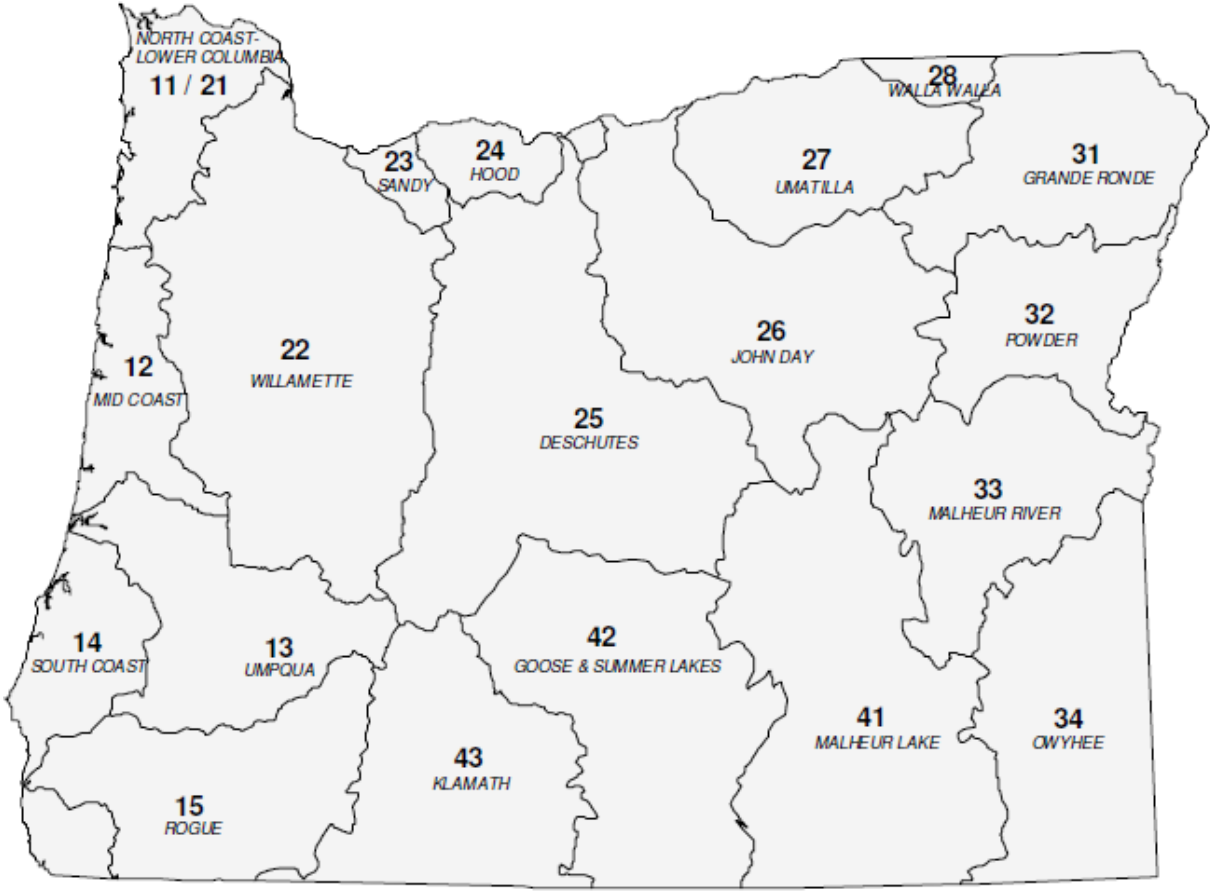
OAR 340-041-0151
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0151
Table 151A
Designated Beneficial Uses
Grand Ronde Basin

Beneficial Uses	Main Stem Grand Ronde River (RM 39 to 165)	All Other Basin Waters
Public Domestic Water Supply[1]	X	X
Private Domestic Water Supply[1]	X	X
Industrial Water Supply	X	X
Irrigation	X	X
Livestock Watering	X	X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing	X	X
Boating	X	X
Water Contact Recreation	X	X
Aesthetic Quality	X	X
Hydro Power	X	X
Commercial Navigation & Transportation		

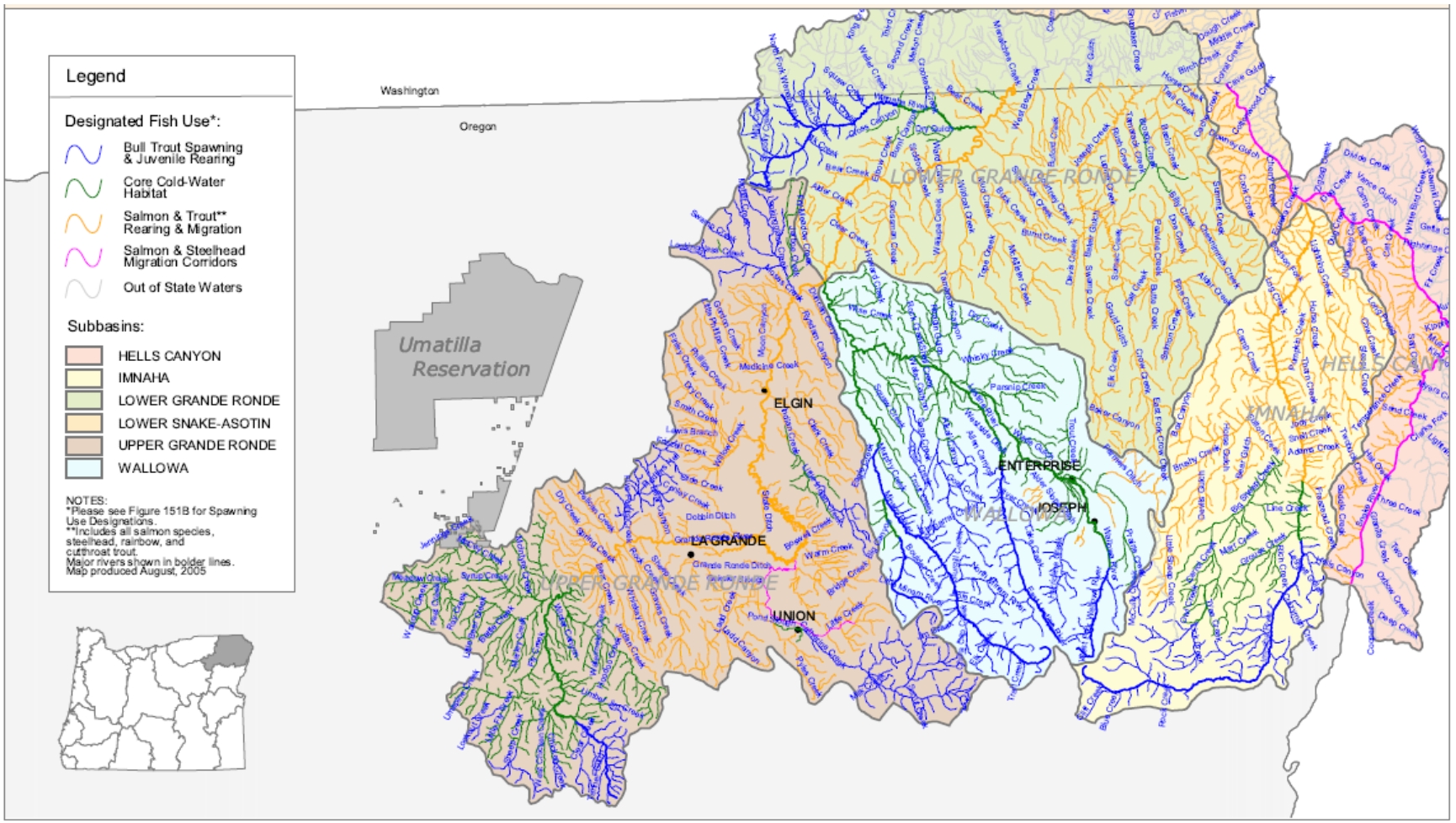
[1] With adequate pretreatment (filtration and disinfection) and natural quality to meet drinking water standards.

[2] See also Figures 151A and 151B for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0151

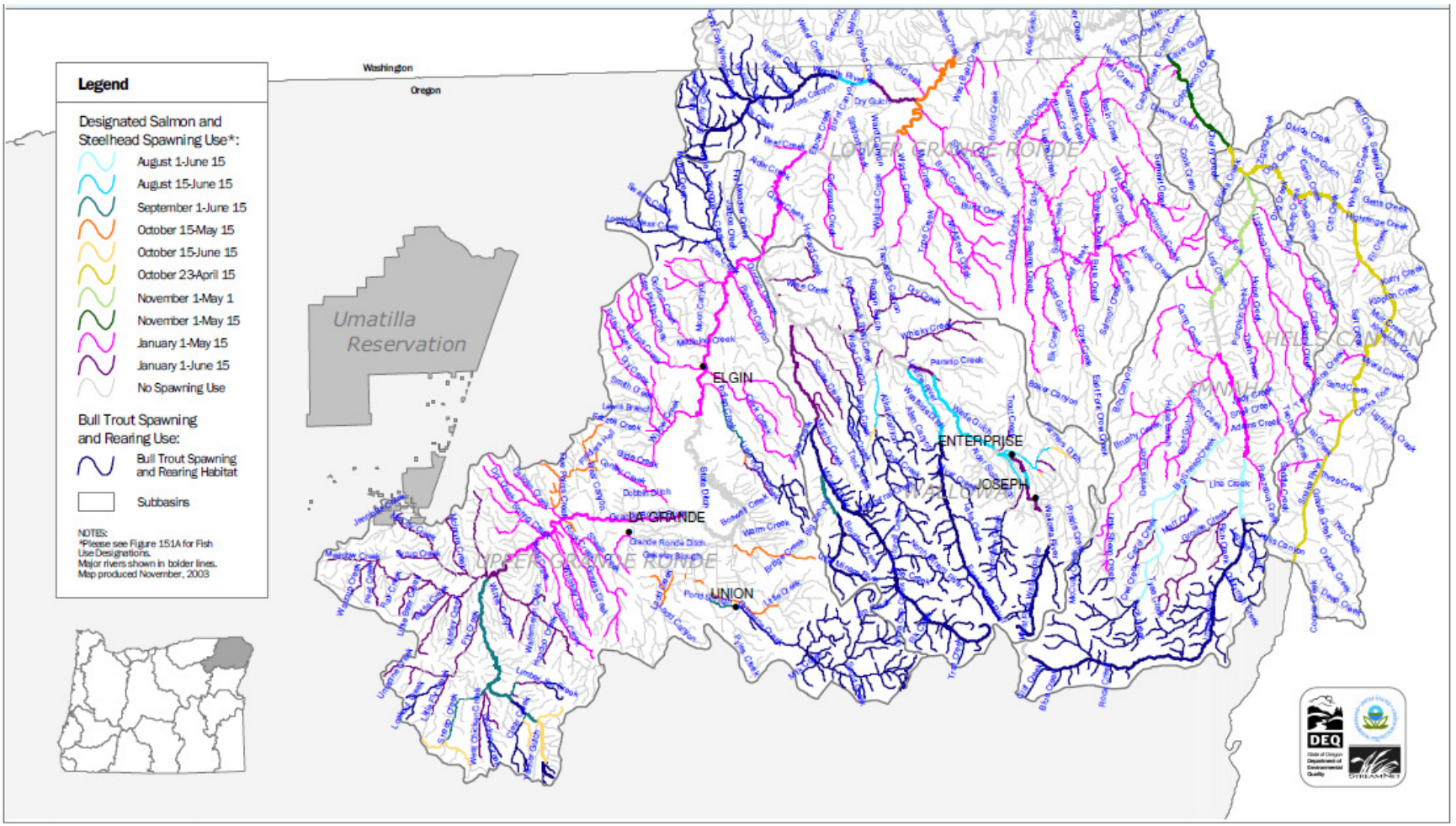
Figure 151A: Fish Use Designations*
Grande Ronde Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0151

Figure 151B: Salmon and Steelhead Use Designations*
Grande Ronde Basin, Oregon



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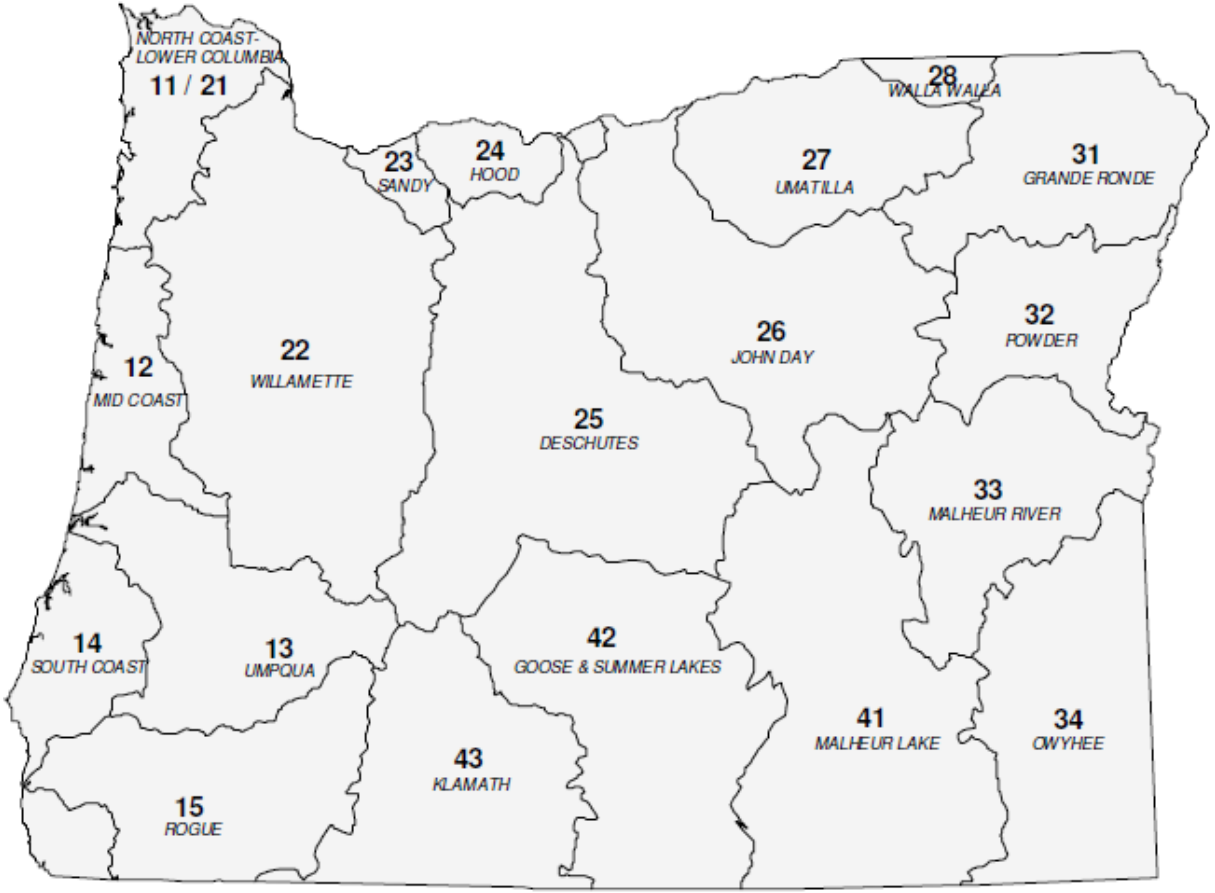
OAR 340-041-0160
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0160
Table 160A
Designated Beneficial Uses
Hood Basin

Beneficial Uses	Hood River Basin Streams
Public Domestic Water Supply[1]	X
Private Domestic Water Supply[1]	X
Industrial Water Supply	X
Irrigation	X
Livestock Watering	X
Fish & Aquatic Life[2]	X
Wildlife & Hunting	X
Fishing	X
Boating	X
Water Contact Recreation	X
Aesthetic Quality	X
Hydro Power	X
Commercial Navigation & Transportation	

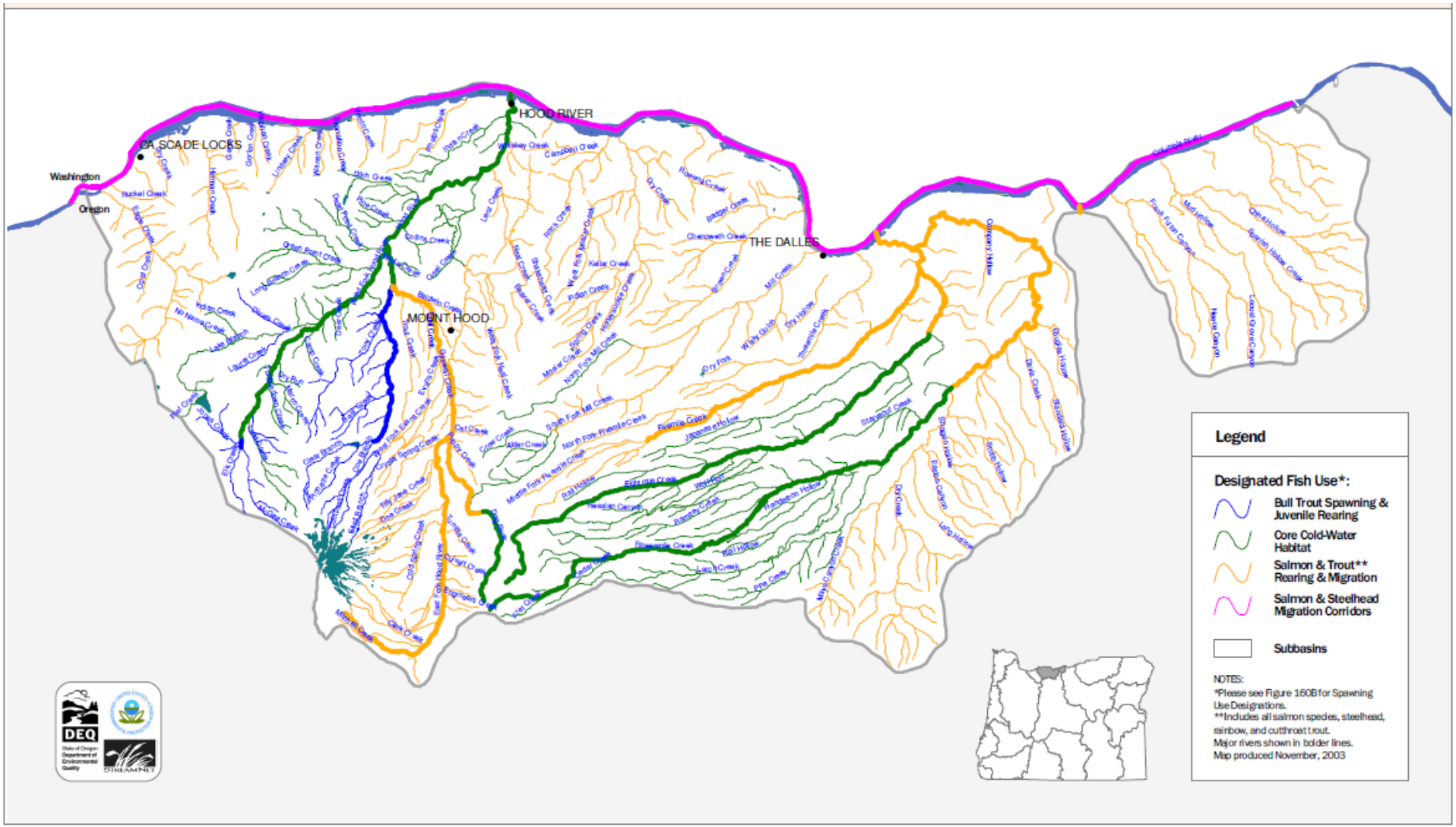
[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

[2] See also Figures 160A and 160B for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0160

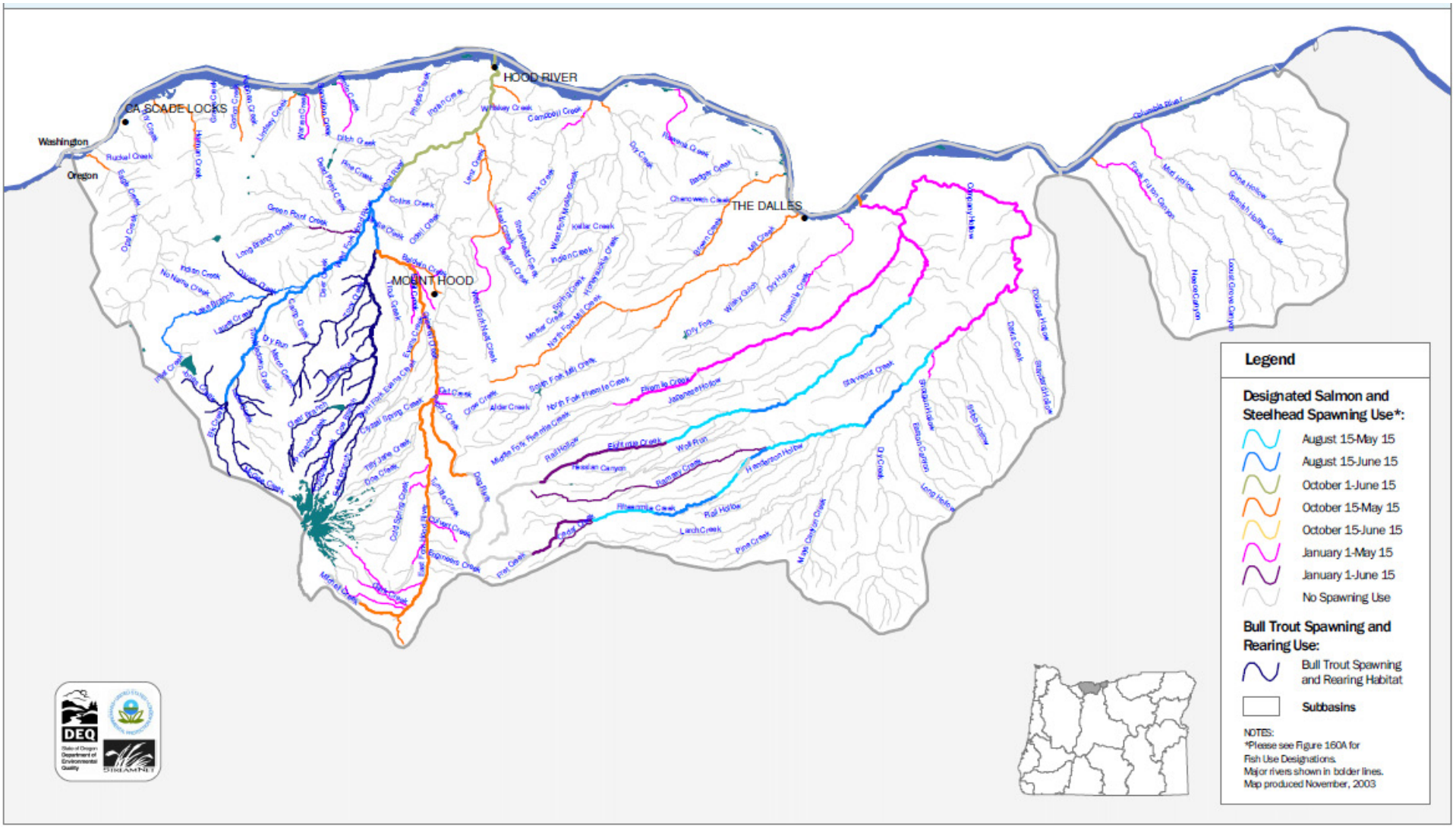
Figure 160A: Fish Use Designations*
Hood Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0160

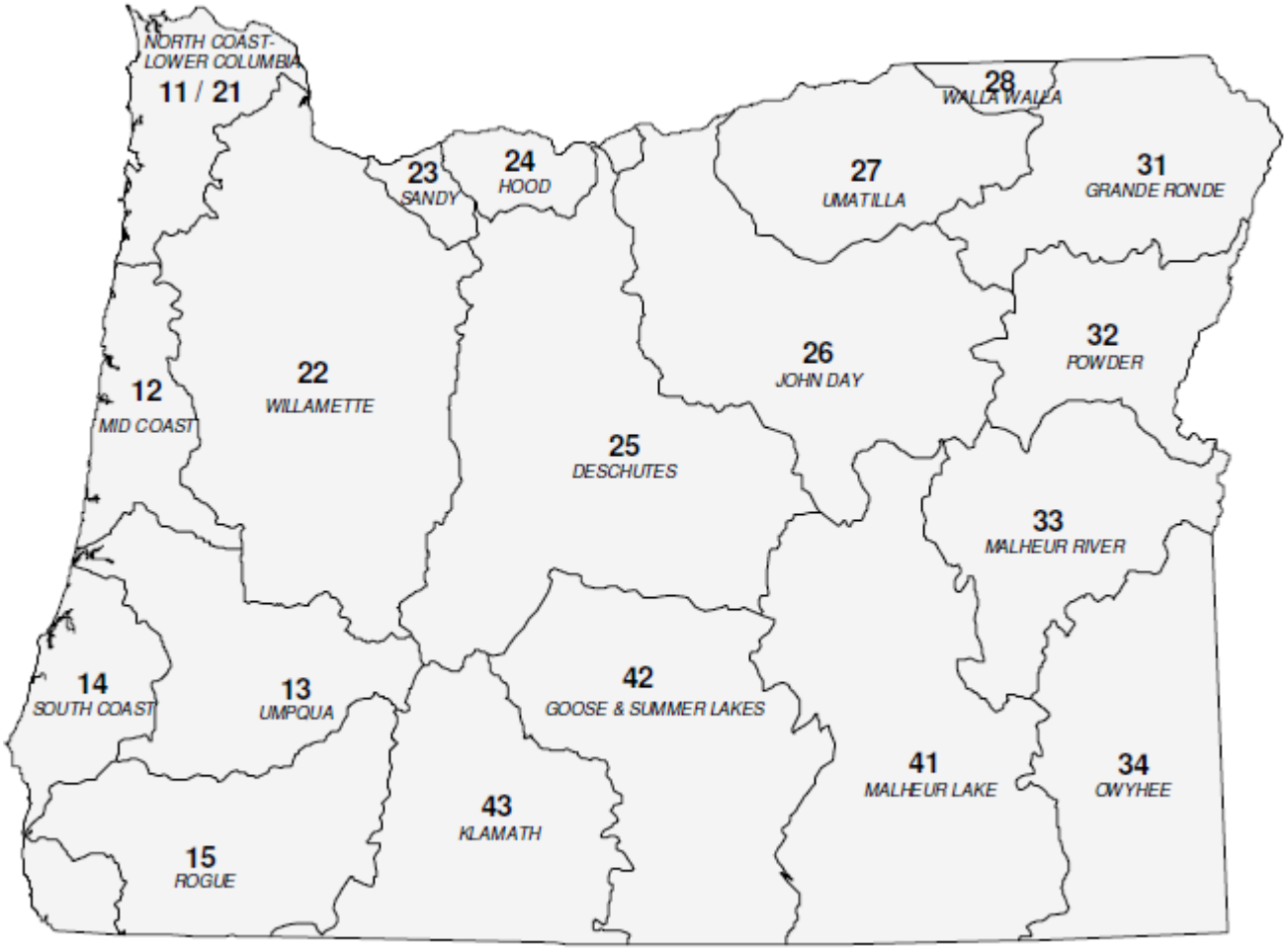
Figure 160B: Salmon and Steelhead Spawning Use Designations*
Hood Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0170
Tables and Figures

Figure 1: Oregon Basin Index Map

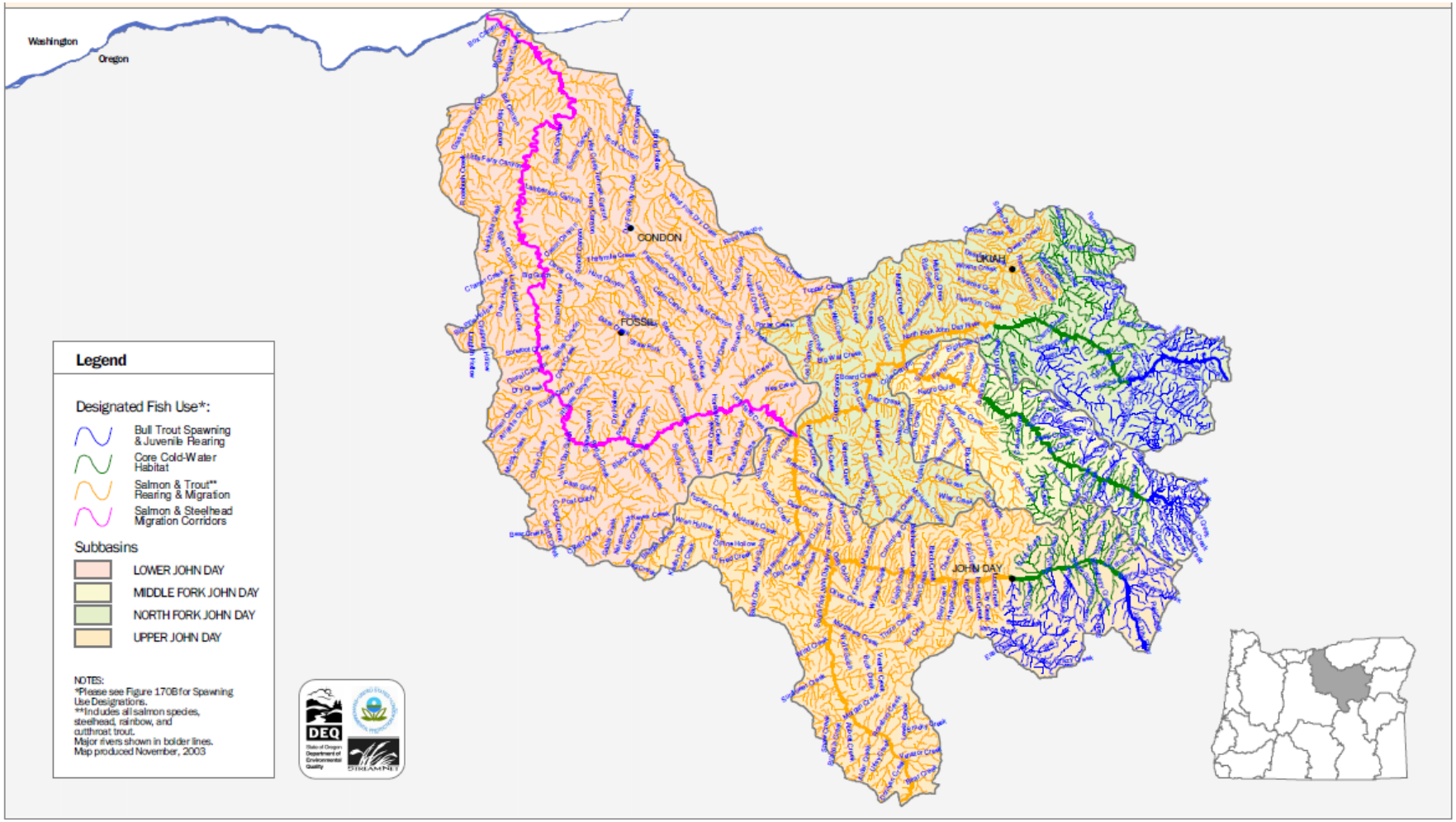


Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

State of Oregon Department of Environmental Quality

OAR 340-041-0170

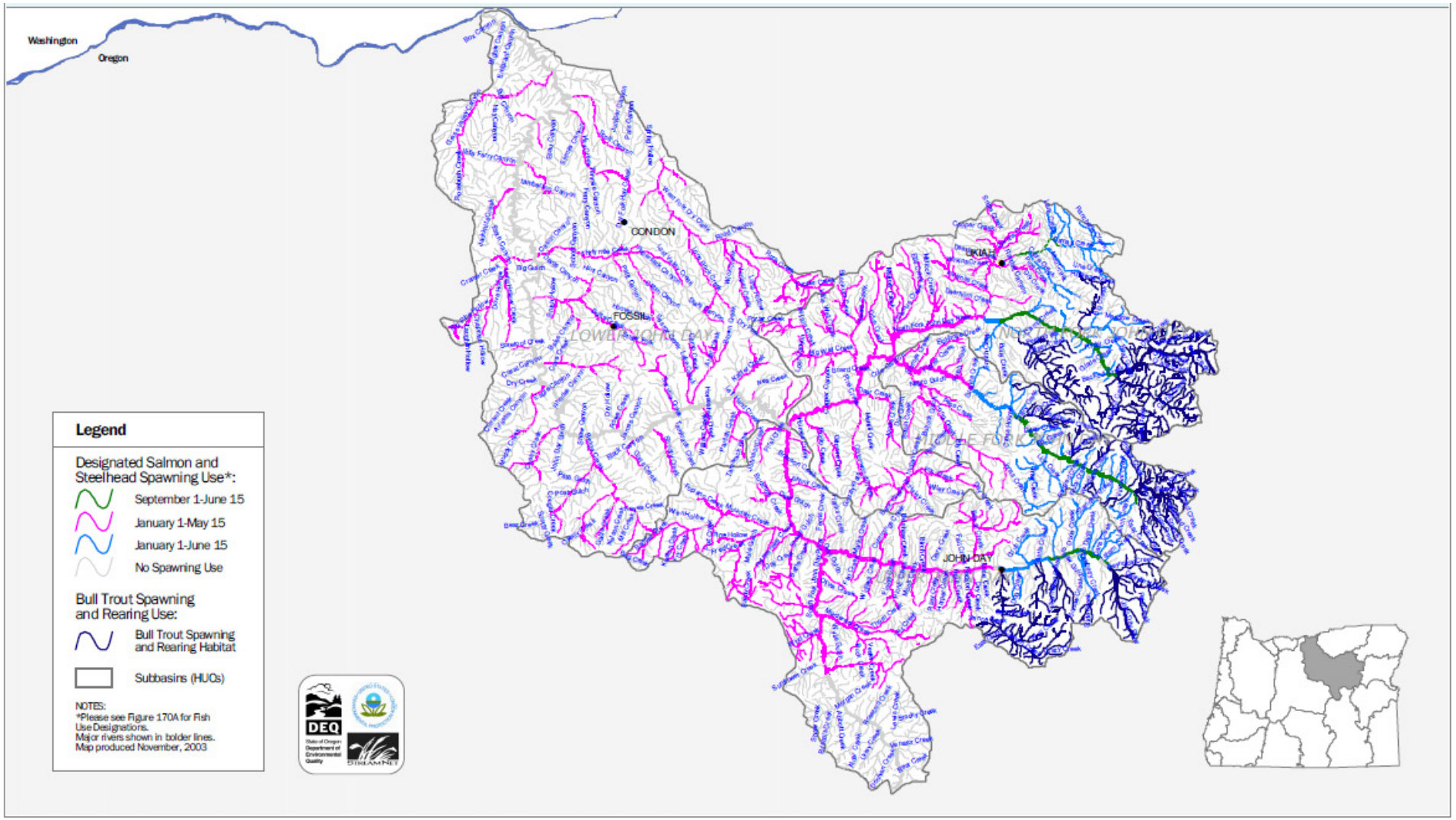
Figure 170A: Fish Use Designations*
John Day Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0170

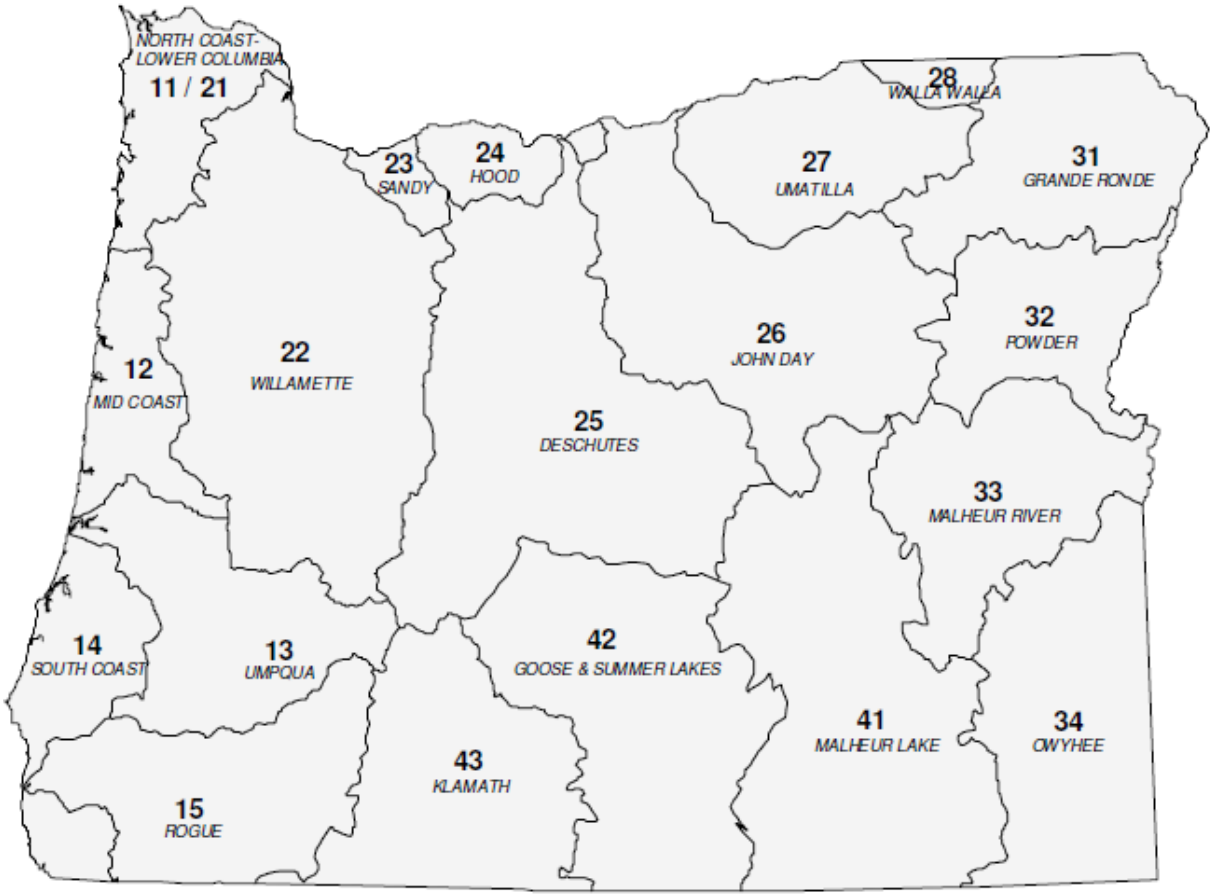
Figure 170B: Salmon and Steelhead Use Designations*
John Day Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0180 Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0180
Table 180A
Designated Beneficial Uses
Klamath Basin

Beneficial Uses	Klamath River from Klamath Lake to Keno Dam (RM 255 to 232.5)	Lost River (Rm 5 to 65) & Lost River Diversion Channel	All Other Basin Waters
Public Domestic Water Supply[1]	X	X	X
Private Domestic Water Supply[1]	X	X	X
Industrial Water Supply	X	X	X
Irrigation	X	X	X
Livestock Watering	X	X	X
Fish & Aquatic Life[2]	X	X	X
Wildlife & Hunting	X	X	X
Fishing	X	X	X
Boating	X	X	X
Water Contact Recreation	X	X	X
Aesthetic Quality	X	X	X
Hydro Power	X		
Commercial Navigation & Transportation	X		

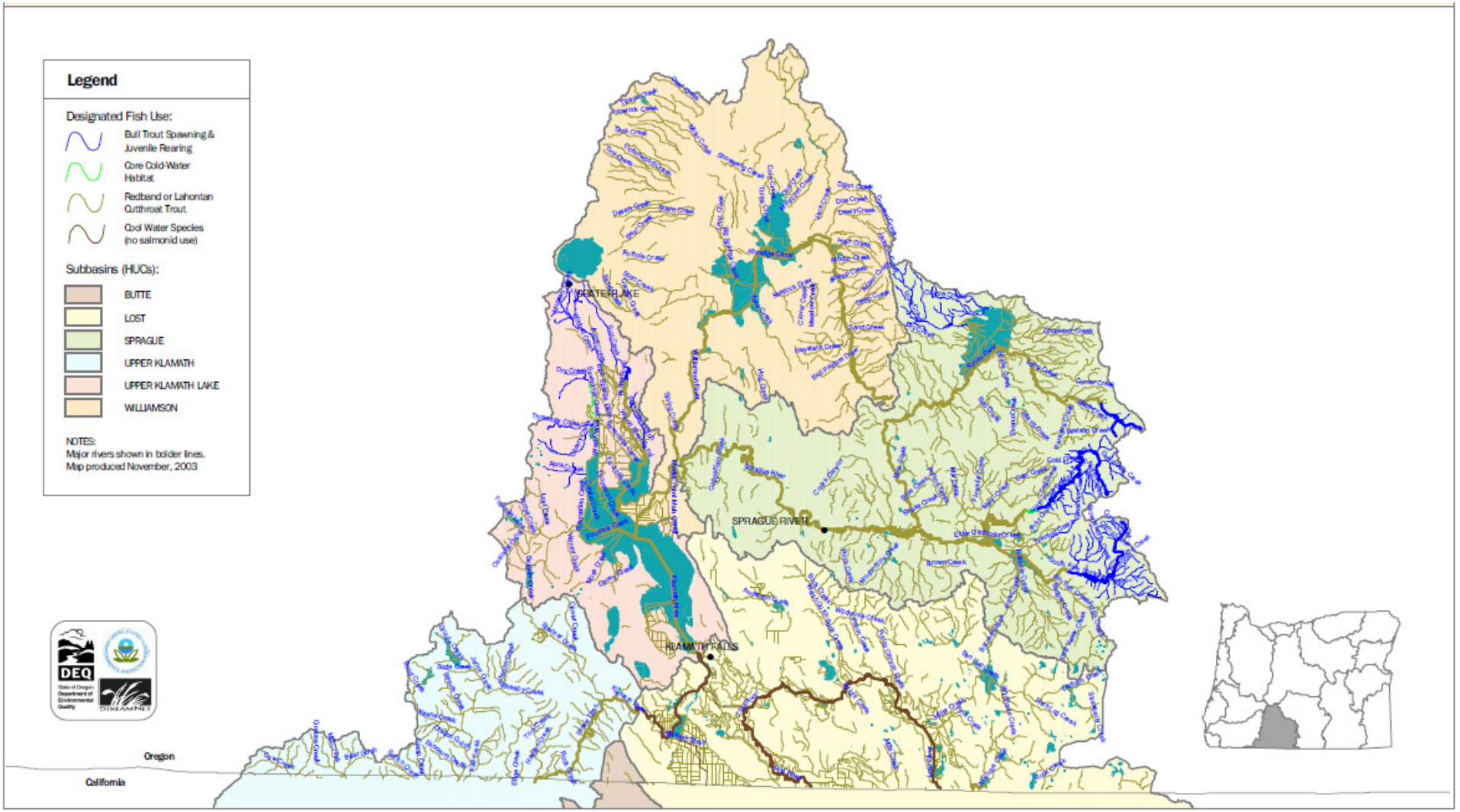
[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

[2] See also Figure 180A for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0180

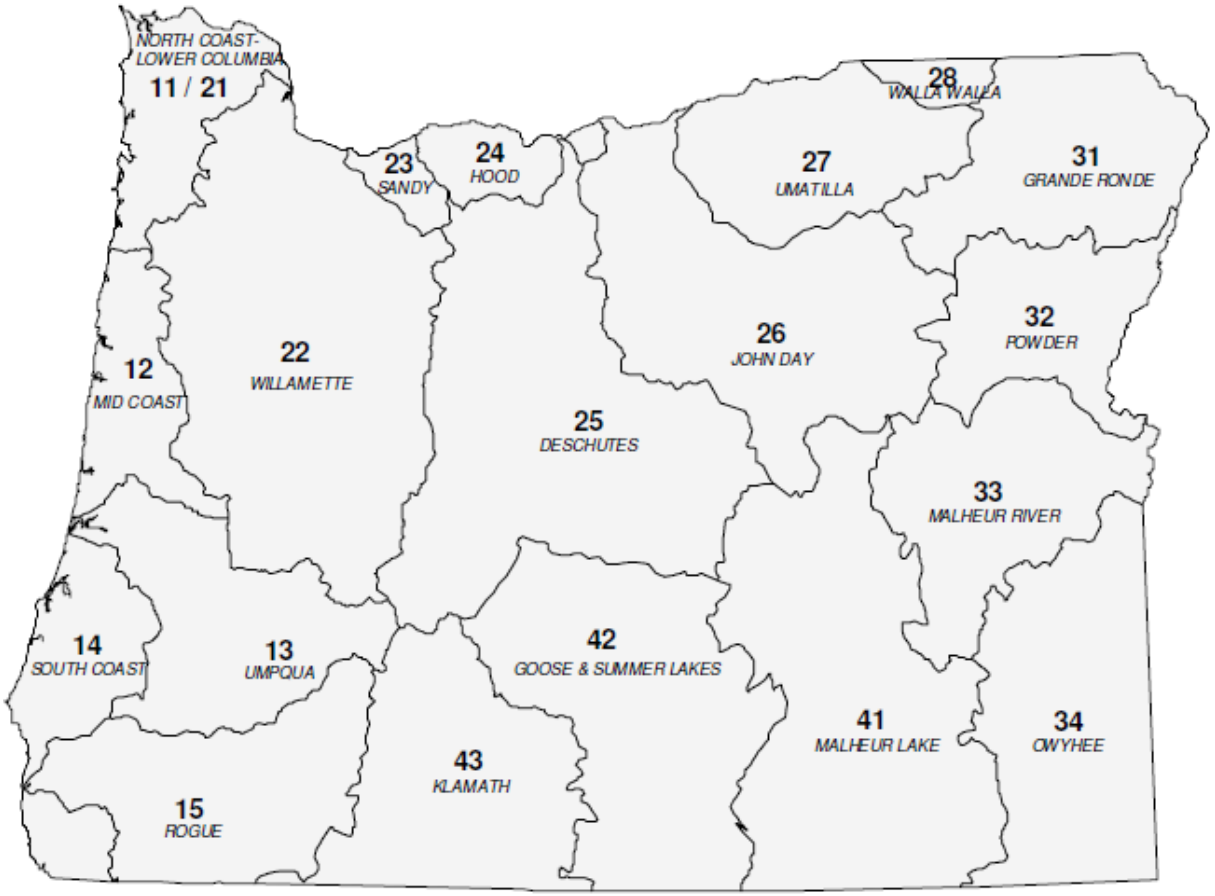
Figure 180A: Fish Use Designations
Klamath Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0190
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0190
Table 190A
Designated Beneficial Uses
Malheur Lake Basin

Beneficial Uses	Natural Lakes	All Rivers & Tributaries
Public Domestic Water Supply[1]		X
Private Domestic Water Supply[1]		X
Industrial Water Supply		X
Irrigation	X	X
Livestock Watering	X	X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing	X	X
Boating	X	X
Water Contact Recreation	X	X
Aesthetic Quality	X	X
Hydro Power		
Commercial Navigation & Transportation		

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Table 190B for fish use designations for this basin.

OAR 340-041-0190 - Table 190B
Beneficial Use Designations – Fish Uses Malheur Lake Basin, Oregon

Geographic Extent of Use	Redband and Hybrid Trout (20°C)	Lahontan Trout* (20°C)	Borax Lake Chub	Cool Water Species (no salmonid use)
Alvord Lake Subbasin				
Waters associated with Borax Lake and Lower Borax Lake, including lake outflows, Harney County, Oregon.			X	
Willow Creek from headwaters to the Willow Creek Well.		X		
Little Whitehorse Creek from headwaters to confluence with Whitehorse Creek		X		
Whitehorse Creek from headwaters to confluence with East Channel; including upper tributaries Little Whitehorse Creek, Cottonwood Creek and Doolittle Creek		X		
Antelope Creek from headwaters to confluence with unnamed tributary, approximately 4 RM upstream of confluence with Little Antelope Creek		X		
Denio Creek from headwaters to mouth		X		

OAR 340-041-0190 - Table 190B
Beneficial Use Designations – Fish Uses Malheur Lake Basin, Oregon

Geographic Extent of Use	Redband and Hybrid Trout (20°C)	Lahontan Trout* (20°C)	Borax Lake Chub	Cool Water Species (no salmonid use)
Alvord Lake Subbasin				
Van Horn Creek from headwaters to mouth		X		
Group of streams NE of Alvord Desert: Pike Creek, Little Alvord Creek, Big Alvord Creek, Cottonwood, Willow Creek, Mesquito Creek, Bueno Vista Creek, and Little McCoy Creek		X		
Mann Creek from headwaters to mouth, House Creek from headwaters to mouth	X			
Little Trout Creek and Big Trout Creek from headwaters to confluences with Trout Creek	X			
Segment of Trout Creek from confluence with Big Trout Creek to confluence with Stoney Creek	X			
Pueblo Slough, from Tum-Tum Lake to Van Horn Creek				X (Alvord Chub)

OAR 340-041-0190 - Table 190B
Beneficial Use Designations – Fish Uses Malheur Lake Basin, Oregon

Geographic Extent of Use	Redband and Hybrid Trout (20°C)	Lahontan Trout* (20°C)	Borax Lake Chub	Cool Water Species (no salmonid use)
Alvord Lake Subbasin				
Segment of Trout Creek from confluence with Stoney Creek to approximately 12 RM upstream of Alvord Lake; Segment of South Fork Trout Creek from confluence with Trout Creek upstream approximately 2 RM; Alvord Lake				X (Alvord Chub)
All other Alvord Lake subbasin waters				X (no fish use)
Upper Quinn Subbasin				
Indian Creek from approximately 1.3 RM below headwaters to approximately .25 RM below confluence with Spring Creek (approximately 5.1 RM total)	X			
Sage Creek from headwaters to mouth		X		

OAR 340-041-0190 - Table 190B
Beneficial Use Designations – Fish Uses Malheur Lake Basin, Oregon

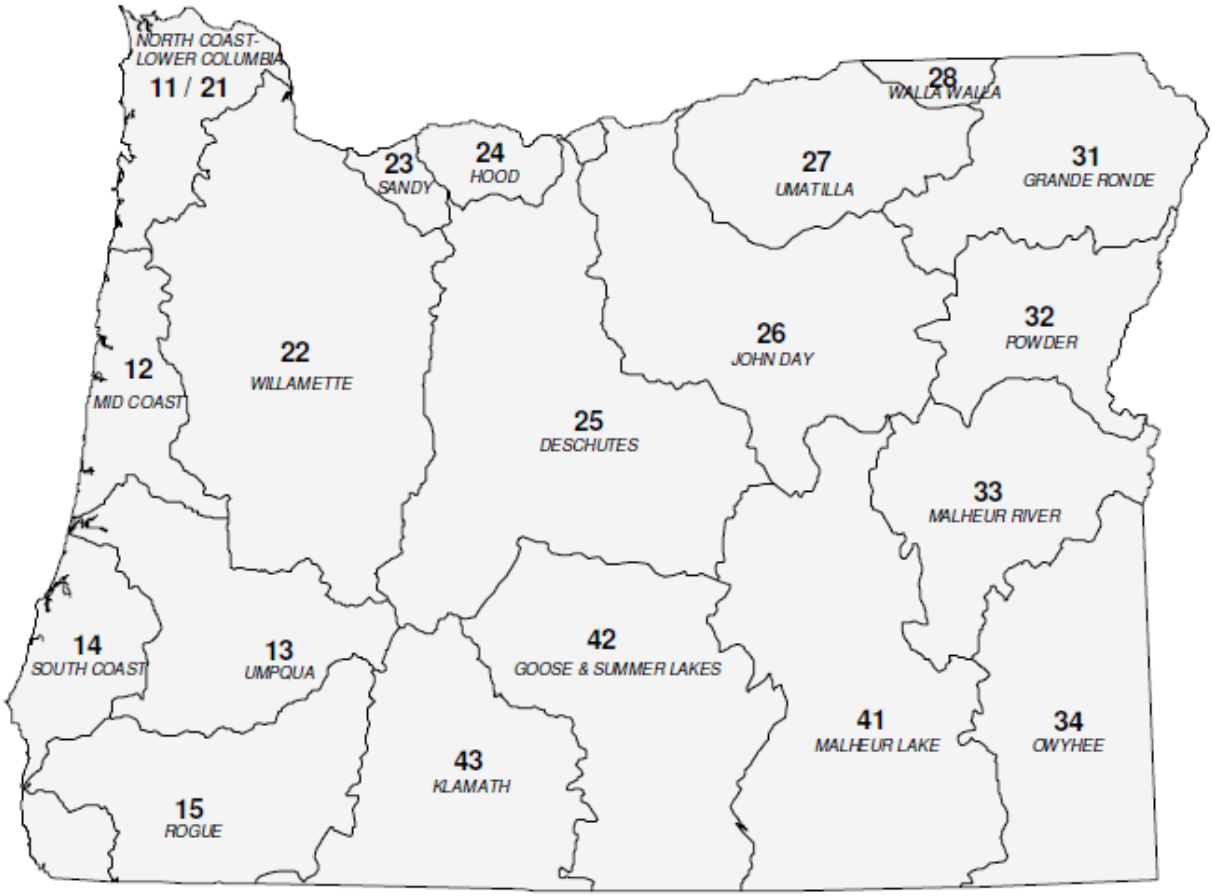
Geographic Extent of Use	Redband and Hybrid Trout (20°C)	Lahontan Trout* (20°C)	Borax Lake Chub	Cool Water Species (no salmonid use)
Upper Quinn Subbasin				
Line Canyon Creek from headwaters to mouth		X		
All other Upper Quinn subbasin waters				X
All Other				
All other Malheur Lake Basin Waters (includes the Silver, Silvies, Harney-Malheur, Donner and Blitzen, Guano, and Thousand-Virgin subbasins)	X			

*Spawning in these reaches occurs April 1-July 15.

State of Oregon Department of Environmental Quality

OAR 340-041-0201 Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0201
Table 201A
Designated Beneficial Uses
Malheur River Basin

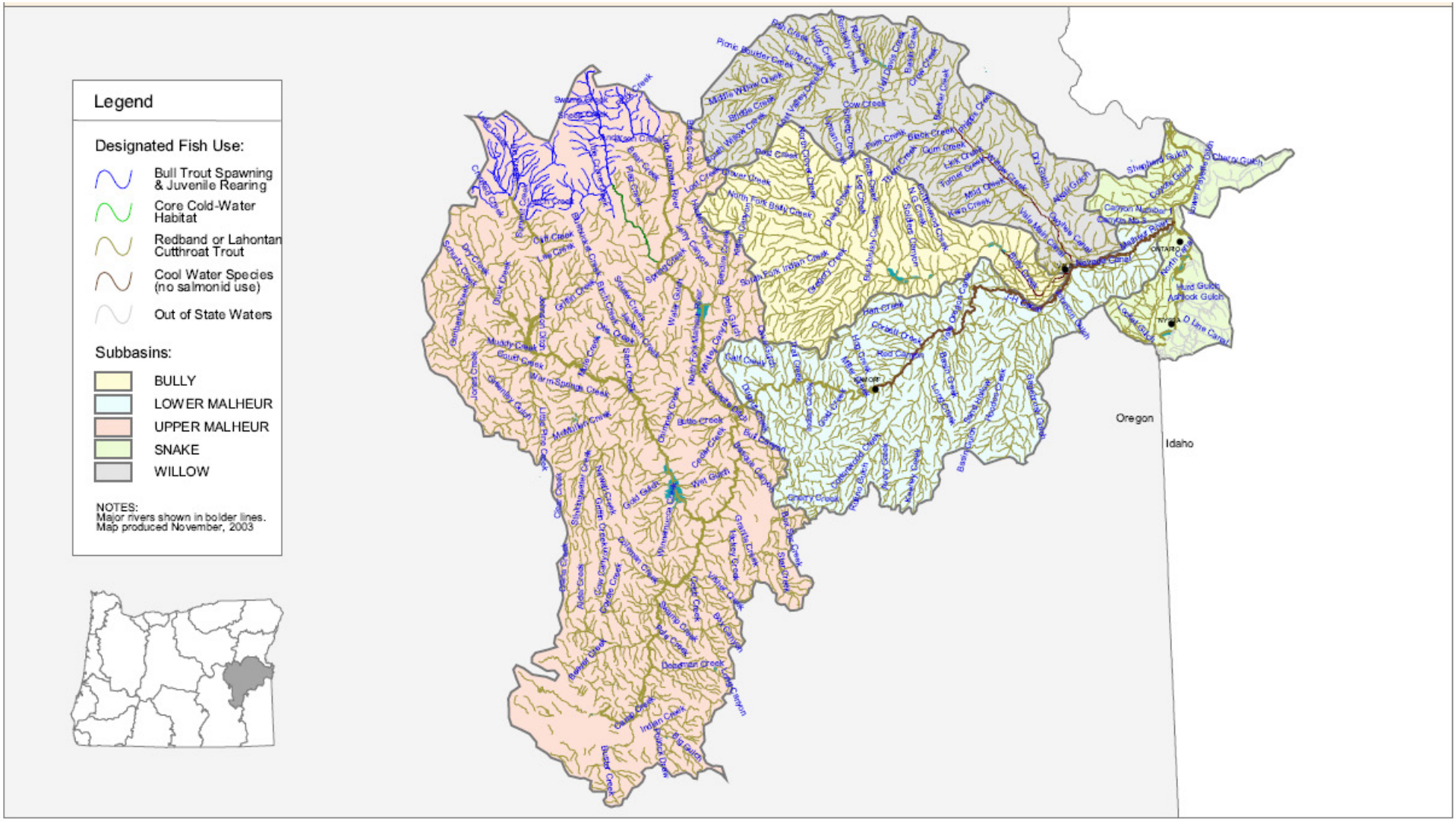
Beneficial Uses	Malheur River (Namorf to Mouth) Willow Creek (Brogan to Mouth) Bully Creek (Reservoir to Mouth)	Willow Creek (Malheur Reservoir to Brogan) Malheur River (Beulah Dam & Warm Springs Dams to Namorf)	RESERVOIRS Malheur Bully Creek Beulah Warm Springs	Malheur River & Tributaries Upstream from Reservoirs
Public Domestic Water Supply[1]	X	X	X	X
Private Domestic Water Supply[1]	X	X	X	X
Industrial Water Supply	X	X	X	X
Irrigation	X	X	X	X
Livestock Watering	X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X
Wildlife & Hunting	X	X	X	X
Fishing	X	X	X	X
Boating	X	X	X	X
Water Contact Recreation	X	X	X	X
Aesthetic Quality	X	X	X	X
Hydro Power				
Commercial Navigation & Transportation				

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Figure 201A for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0201

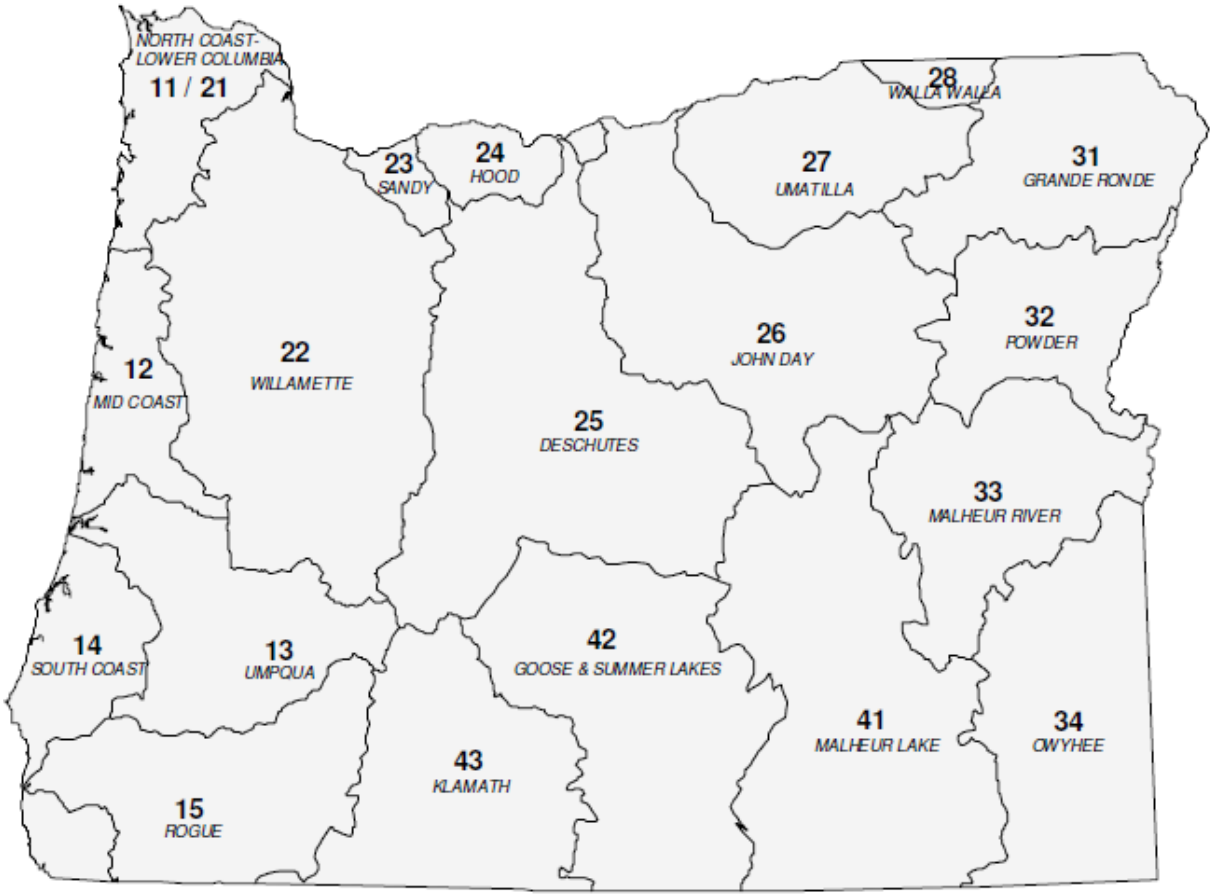
Figure 201A: Fish Use Designations
Malheur River Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220
Tables and Figures

Figure 1: Oregon Basin Index Map



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JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
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NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0220
Table 220A
Designated Beneficial Uses - Mid Coast Basin

Beneficial Uses	Estuaries & Adjacent Marine Waters	All Steams & Tributaries Thereto
Public Domestic Water Supply[1]		X
Private Domestic Water Supply[1]		X
Industrial Water Supply	X	X
Irrigation		X
Livestock Watering		X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing[3]	X	X
Boating	X	X
Water Contact Recreation[3]	X	X
Aesthetic Quality	X	X
Hydro Power		X
Commercial Navigation & Transportation	X	

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

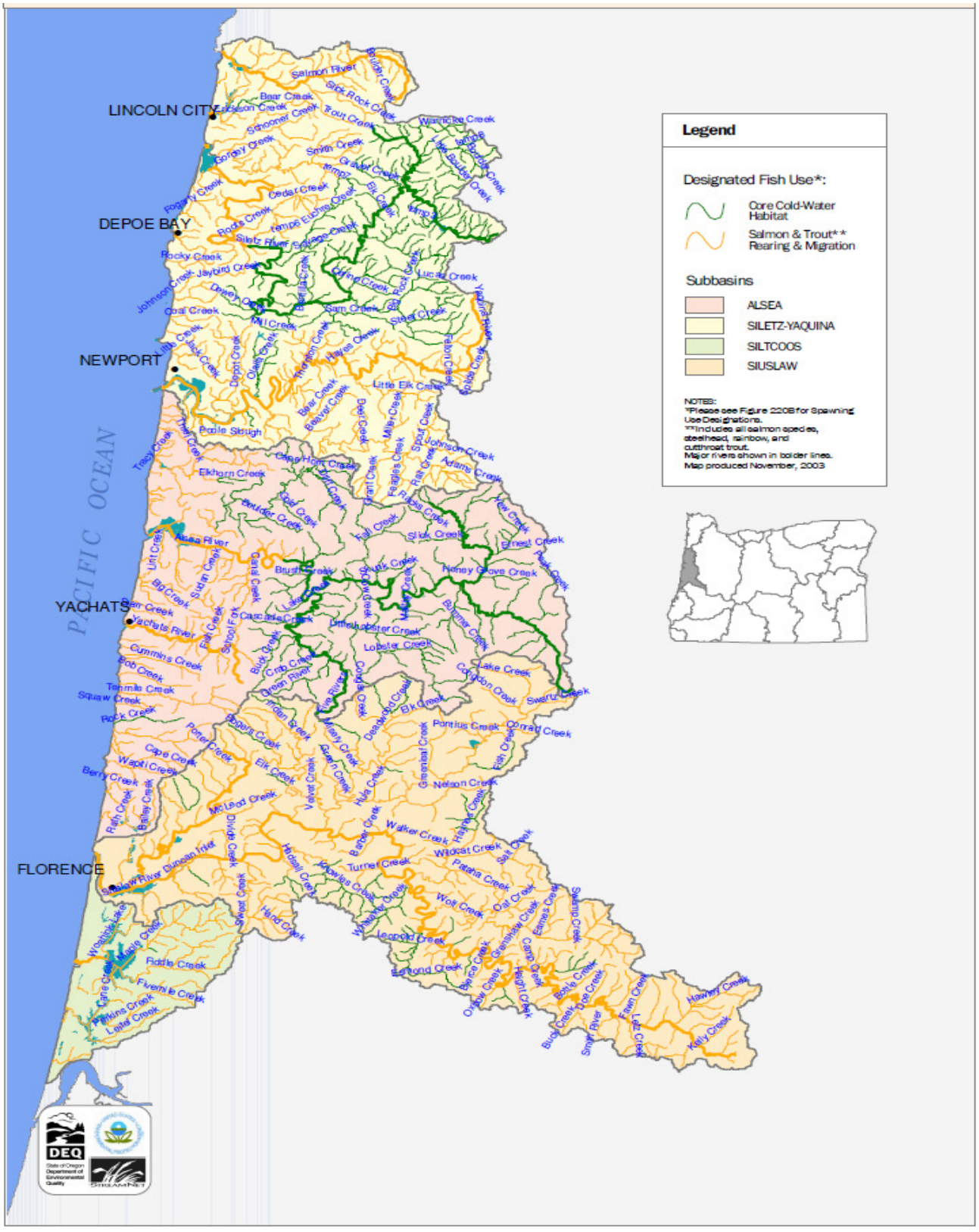
[2] See also Figures 230A and 230B for fish use designations for this basin.

[3] For coastal water contact recreation and shellfish harvesting uses, see also Figures 220C (Salmon River Estuary), 220D (Siletz Bay), 220E (Yaquina Bay), 220F (Alsea River Estuary), 220G (Yachats River Estuary), and 220H (Siuslaw River Estuary)

State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220A

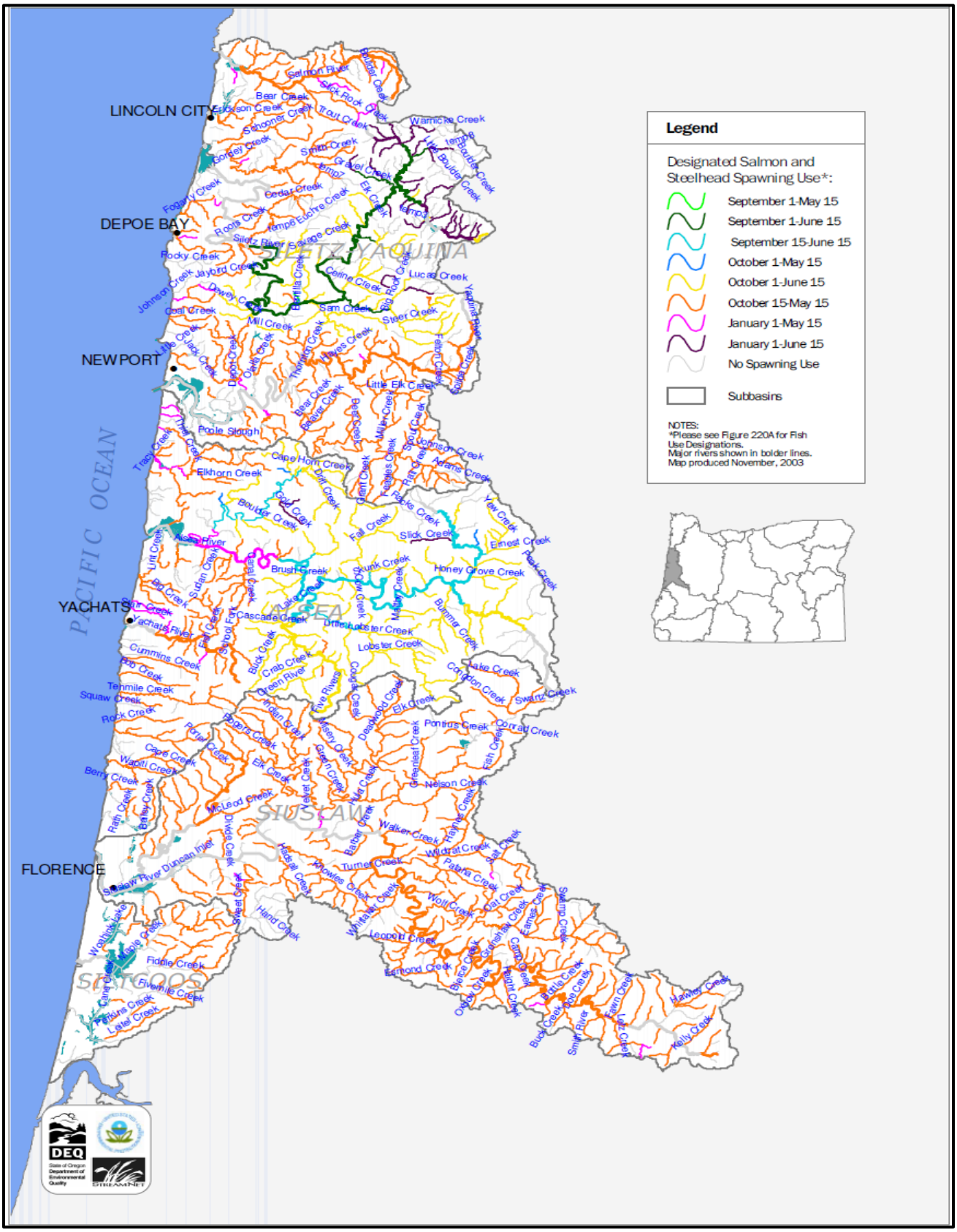
Fish Use Designations* - Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220B

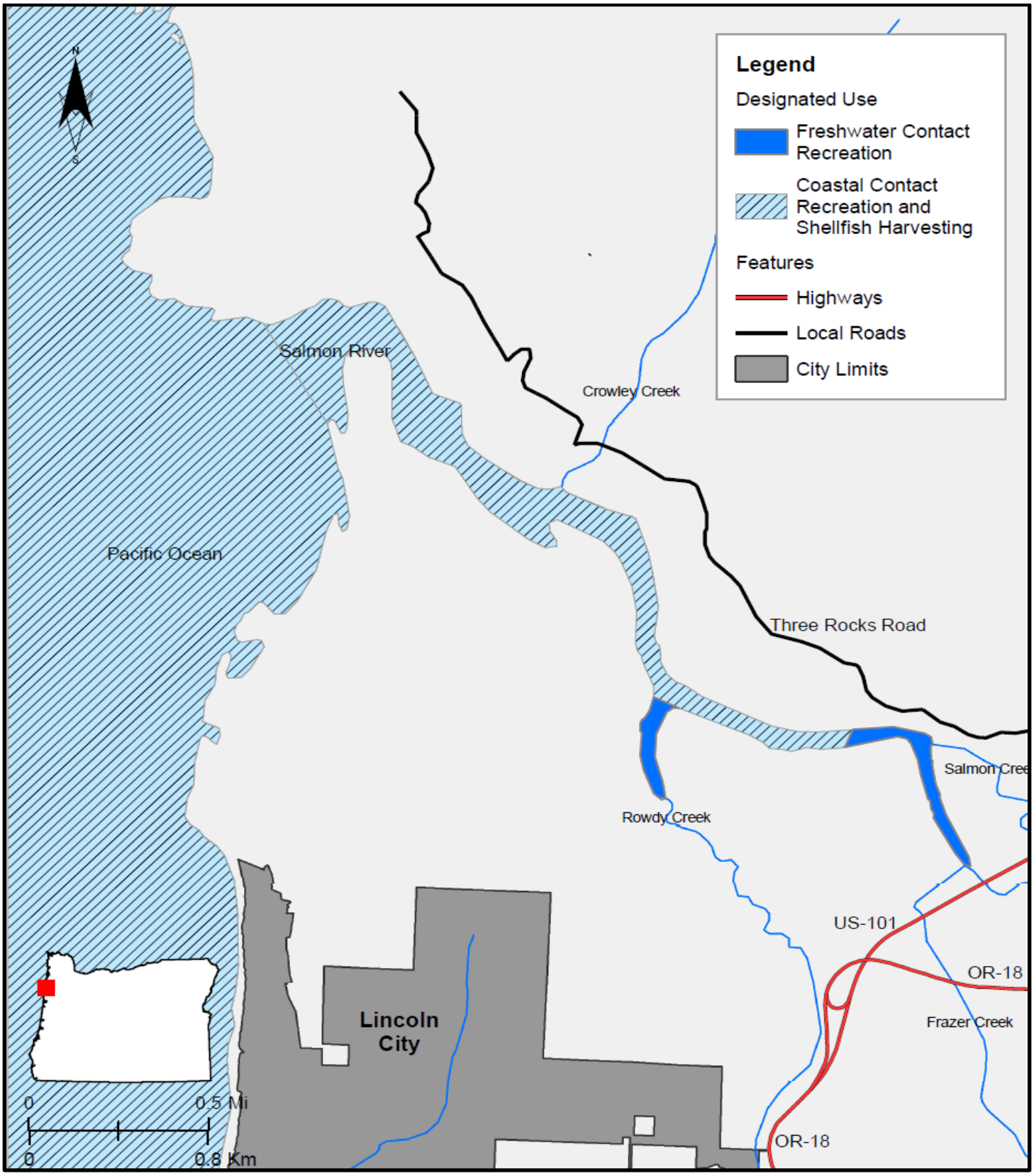
Salmon and Steelhead Use Designations* - Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220C

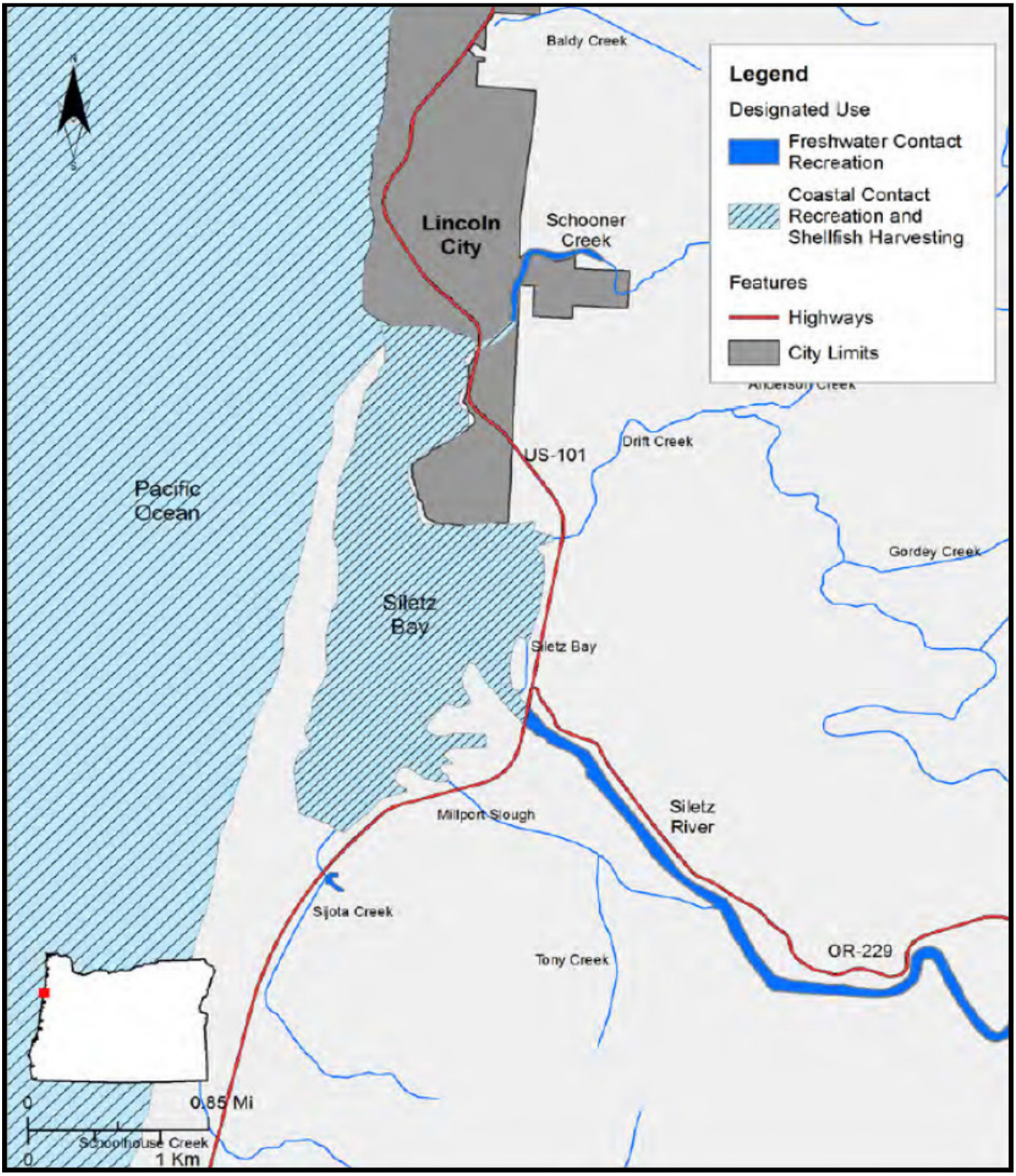
Water Contact Recreation and Shellfish Harvesting Designated Uses
Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220D

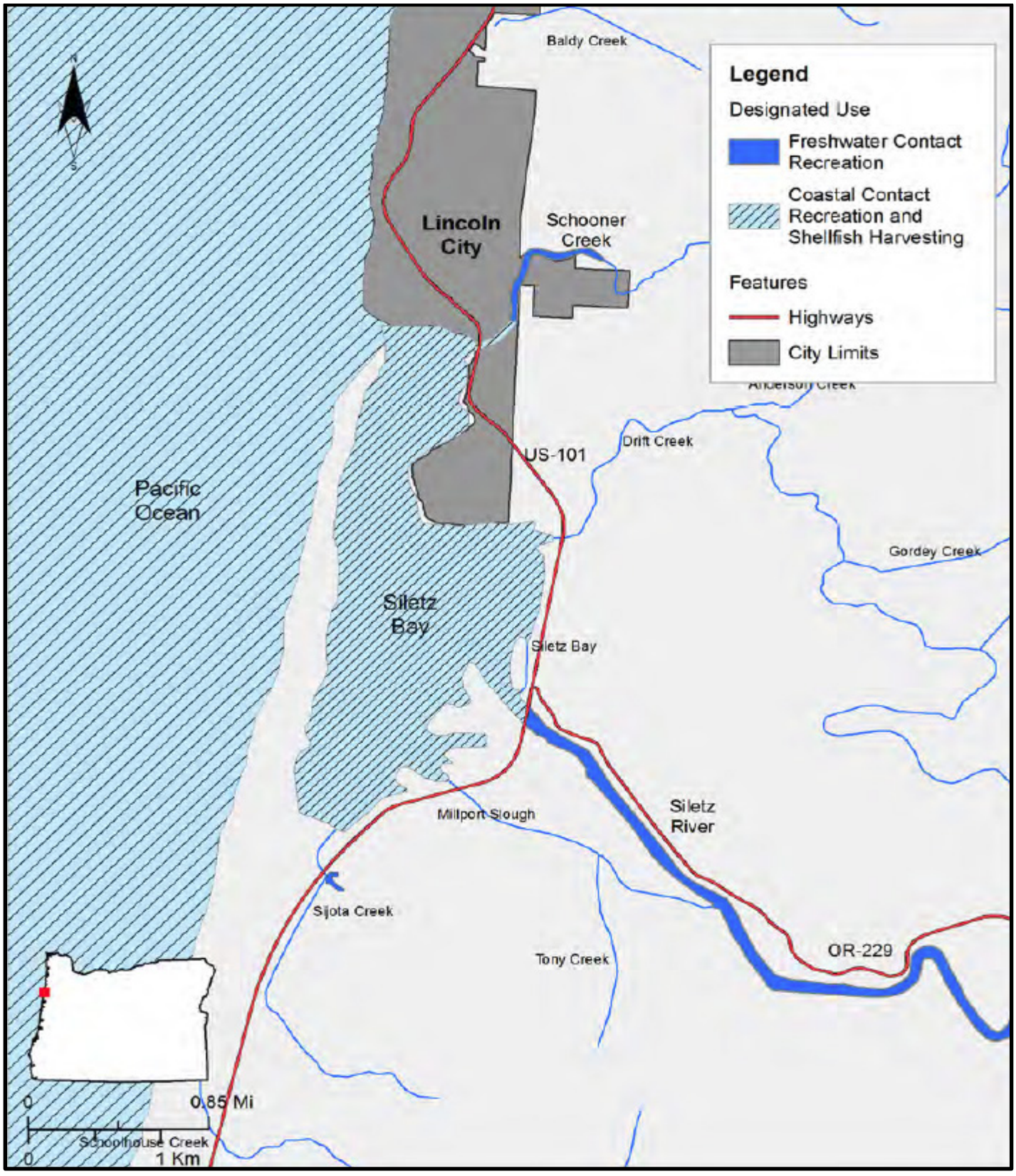
Water Contact Recreation and Shellfish Harvesting Designated Uses
Siletz River, Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220E

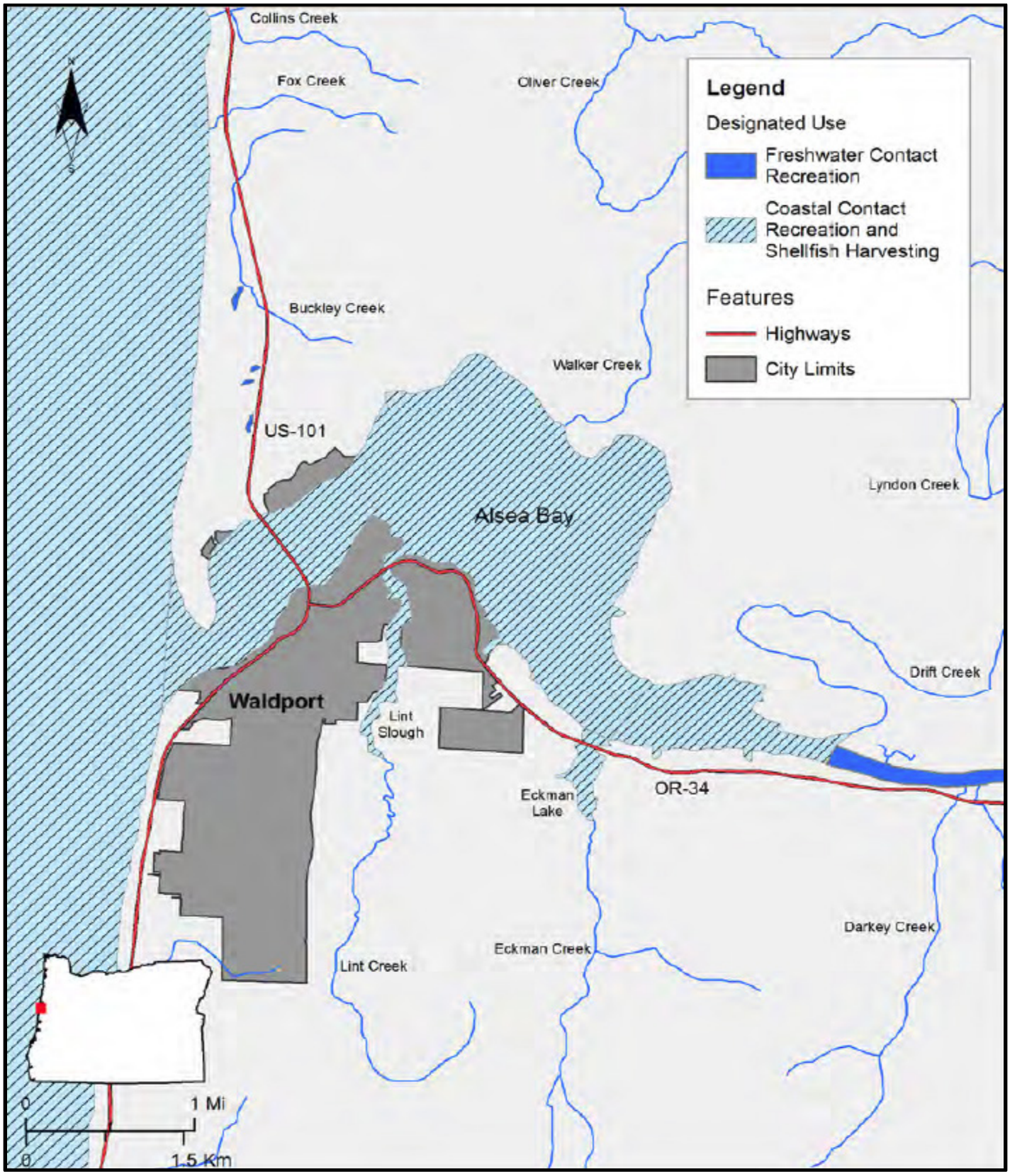
Water Contact Recreation and Shellfish Harvesting Designated Uses
Yaquina Bay, Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220F

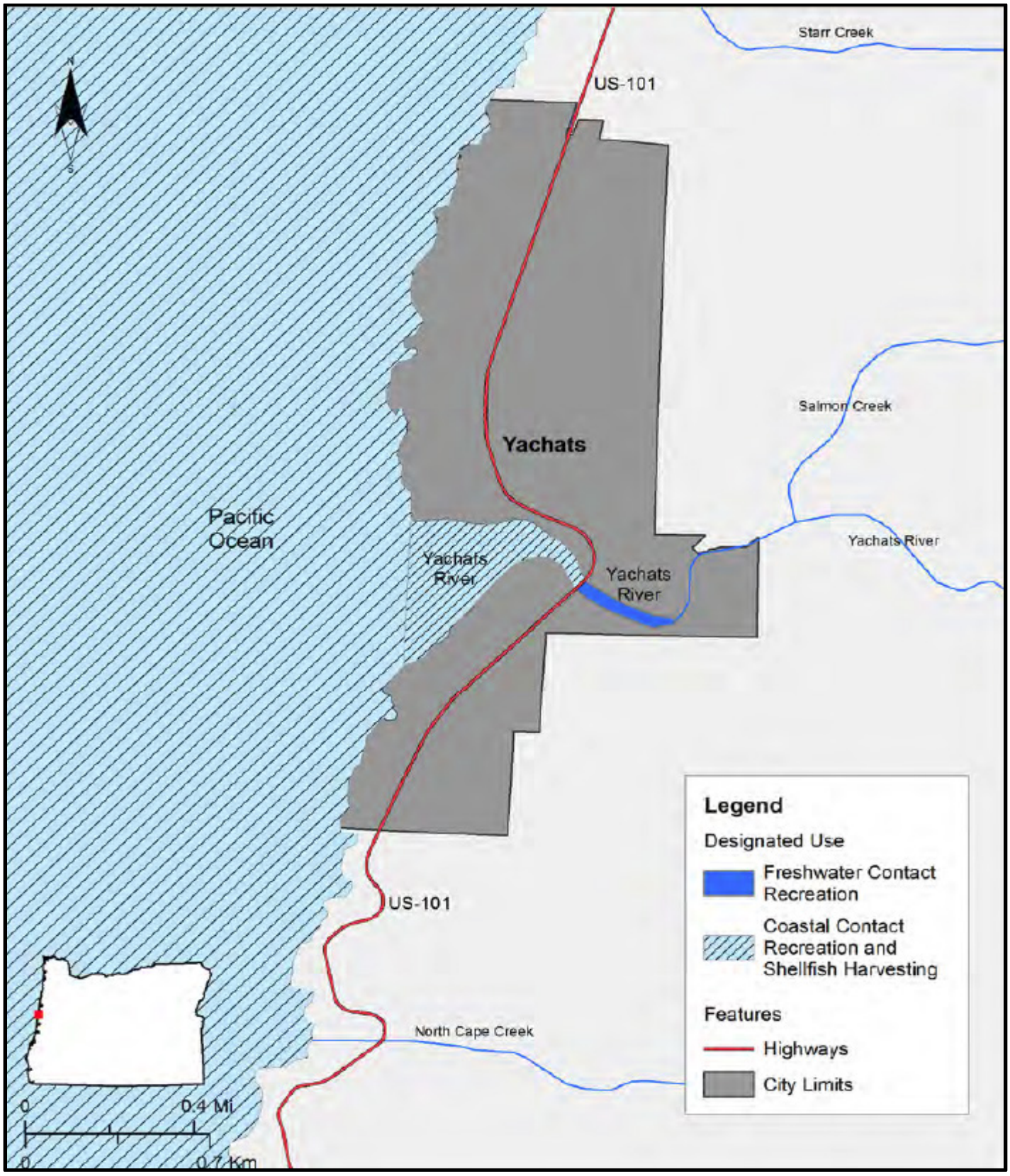
Water Contact Recreation and Shellfish Harvesting Designated Uses
Alsea River, Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220G

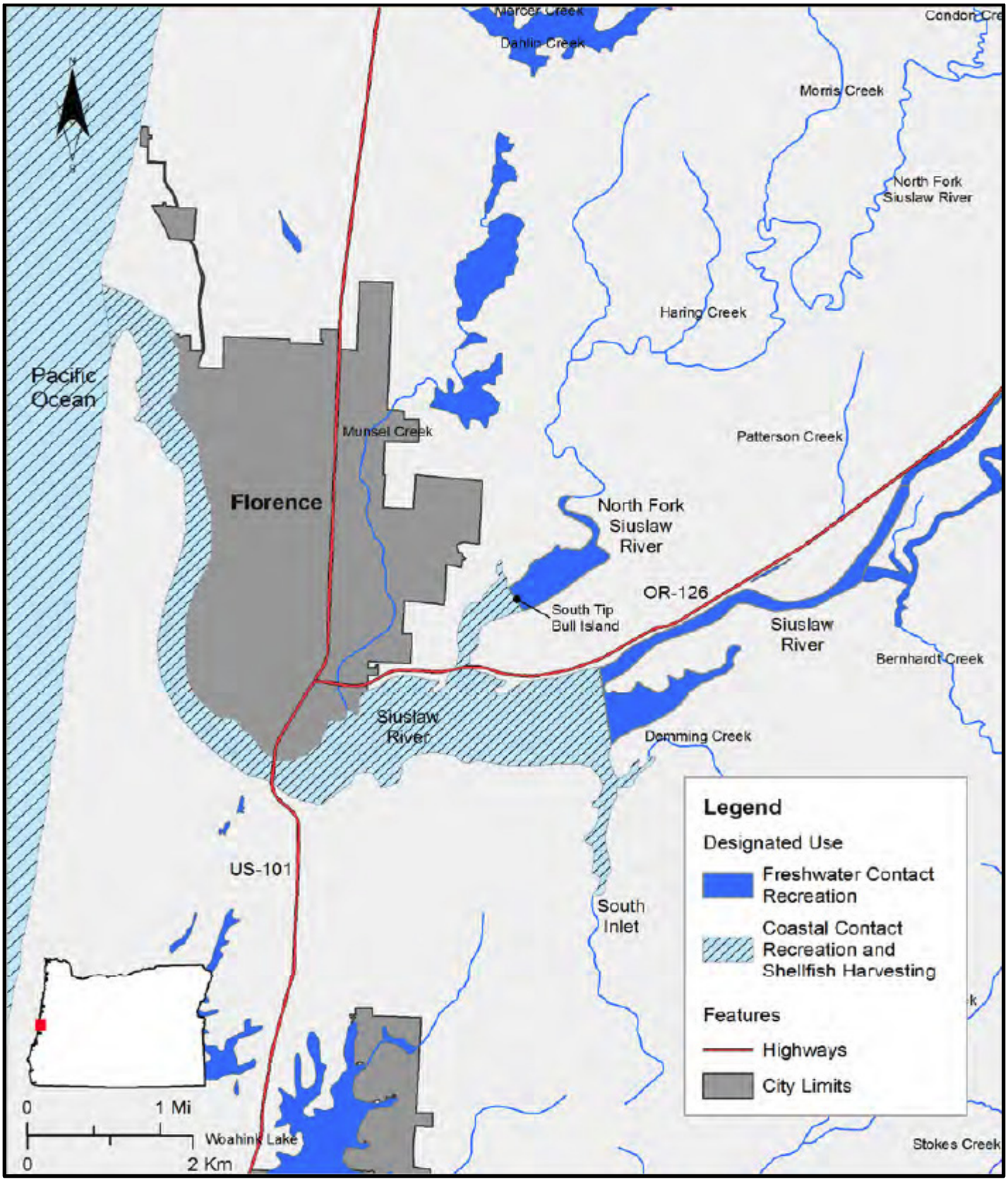
Water Contact Recreation and Shellfish Harvesting Designated Uses
Yachats River, Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0220 – Figure 220H

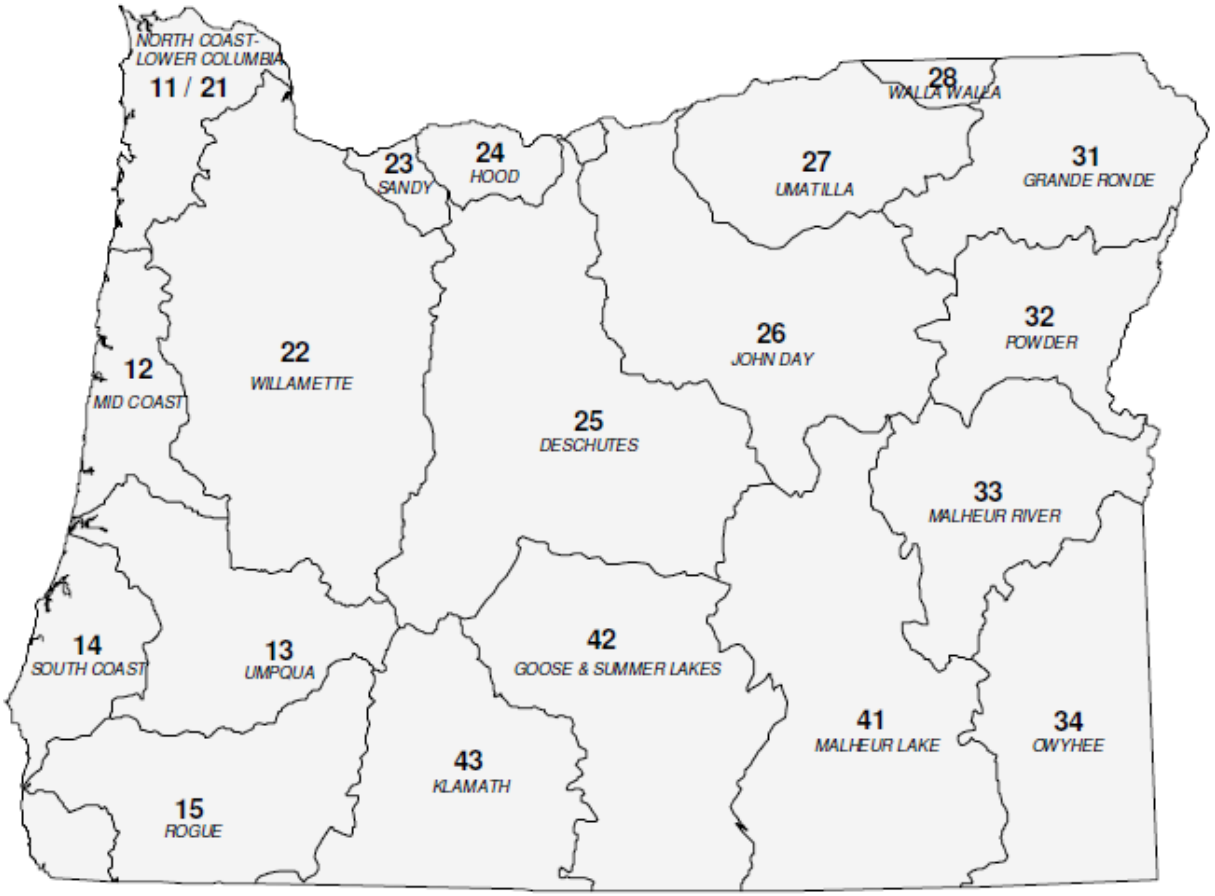
Water Contact Recreation and Shellfish Harvesting Designated Uses
Siuslaw River, Mid Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
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NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0230
Table 230A
Designated Beneficial Uses
North Coast Basin

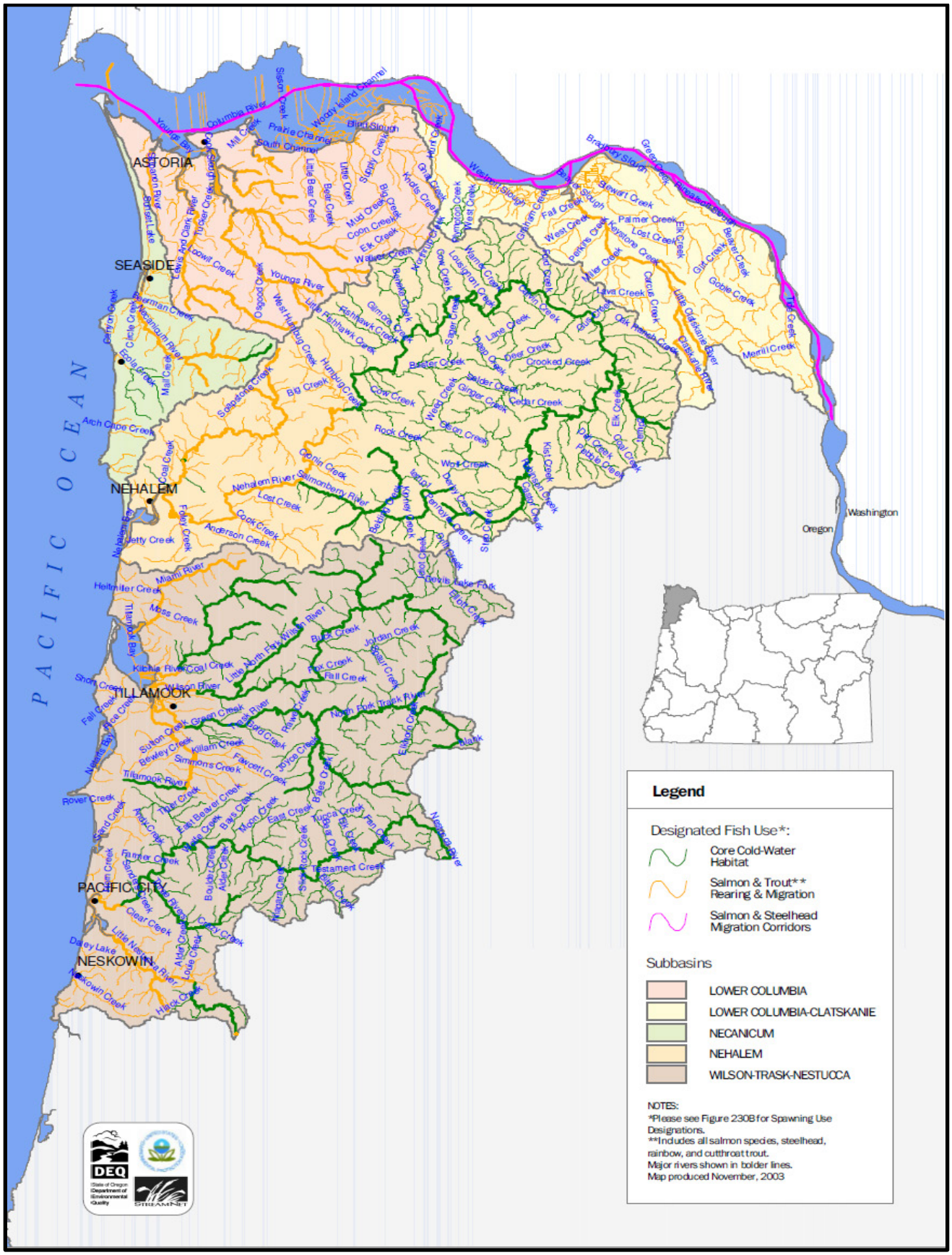
Beneficial Uses	Estuaries & Adjacent Maine Waters	All Steams & Tributaries Thereto
Public Domestic Water Supply[1]		X
Private Domestic Water Supply[1]		X
Industrial Water Supply	X	X
Irrigation		X
Livestock Watering		X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing	X	X
Boating	X	X
Water Contact Recreation	X	X
Aesthetic Quality	X	X
Hydro Power		
Commercial Navigation & Transportation	X	

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Figures 230A and 230B for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230A

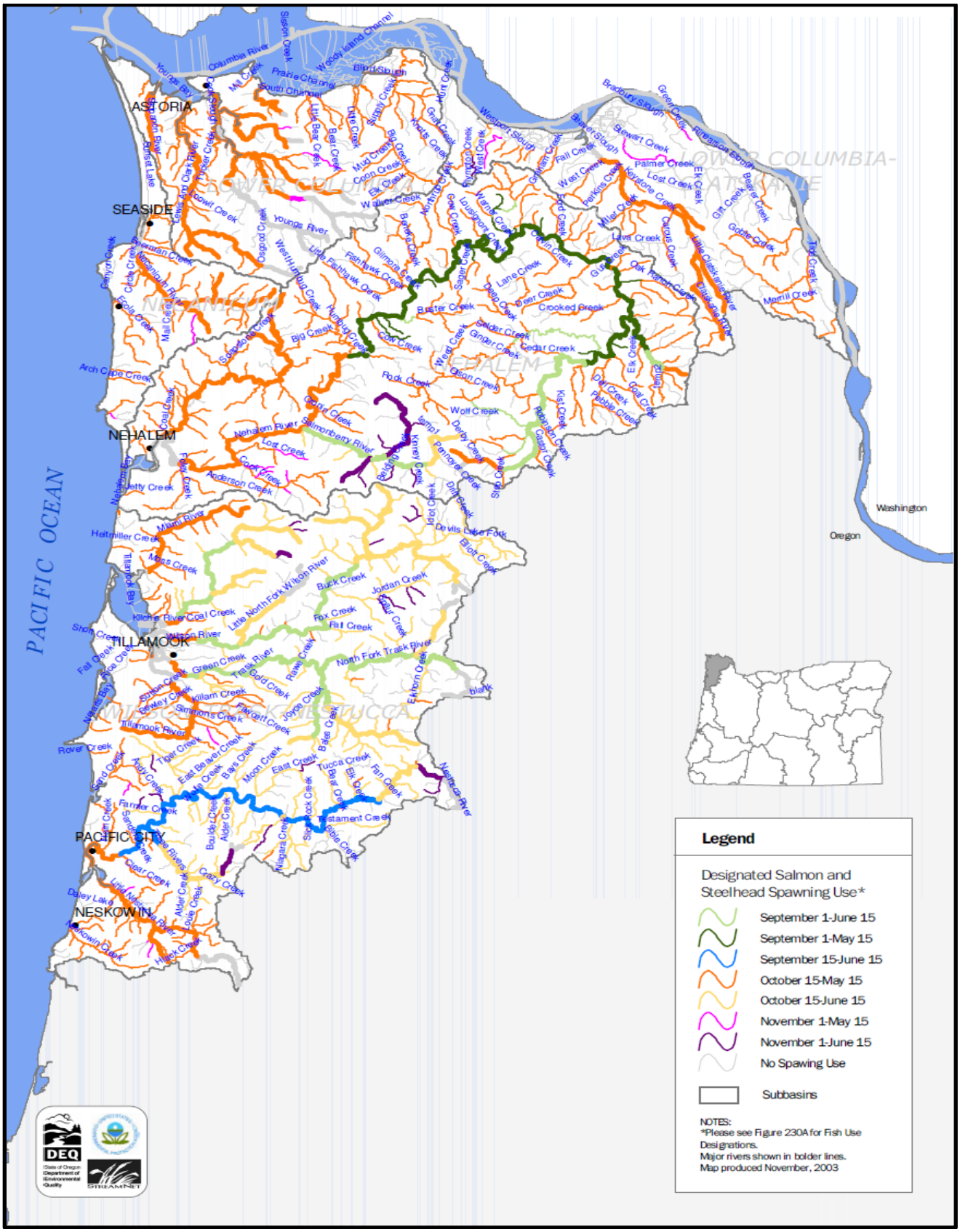
Fish Use Designations* - North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230B

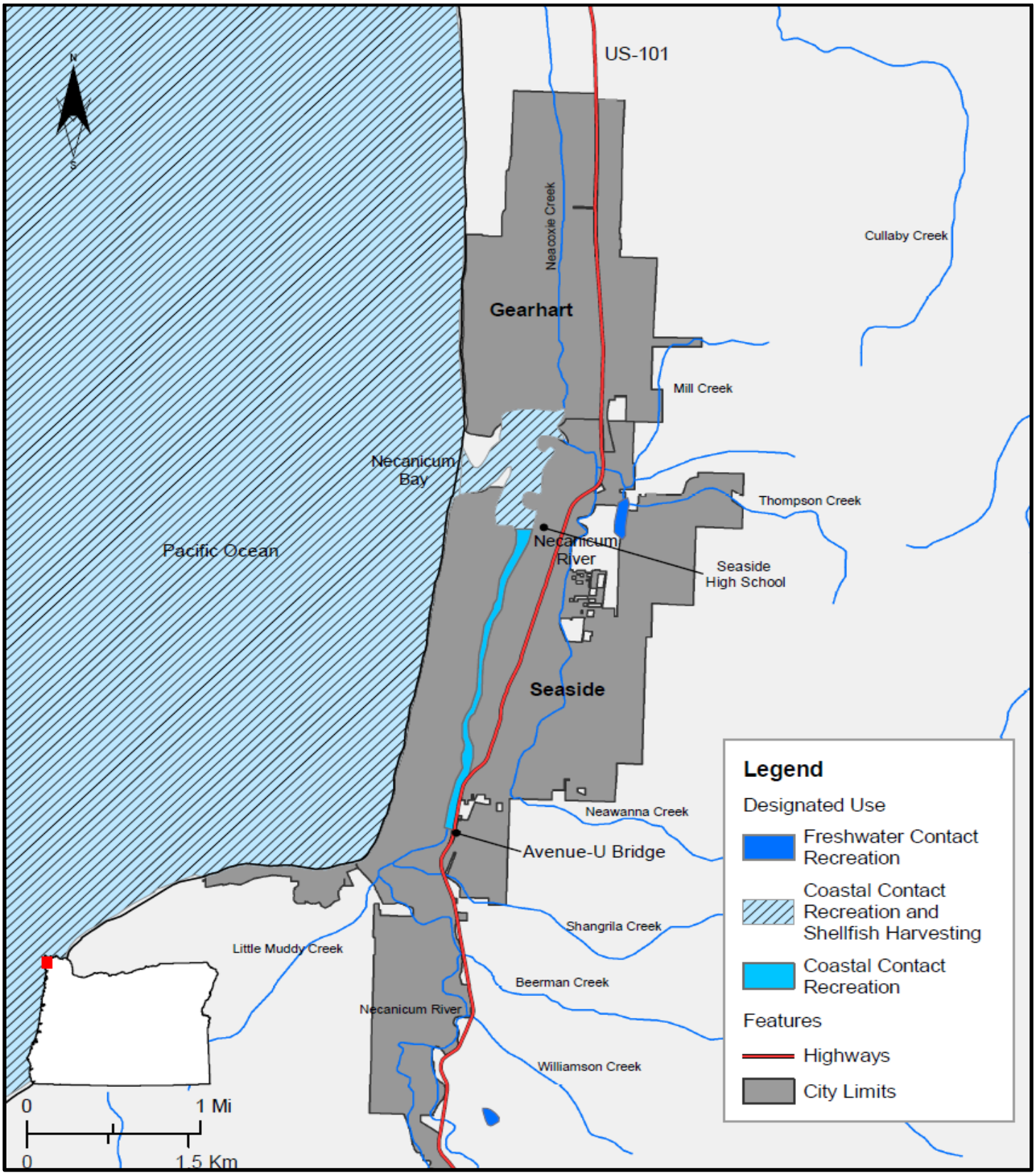
Salmon and Steelhead Spawning Use Designations*
North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230C

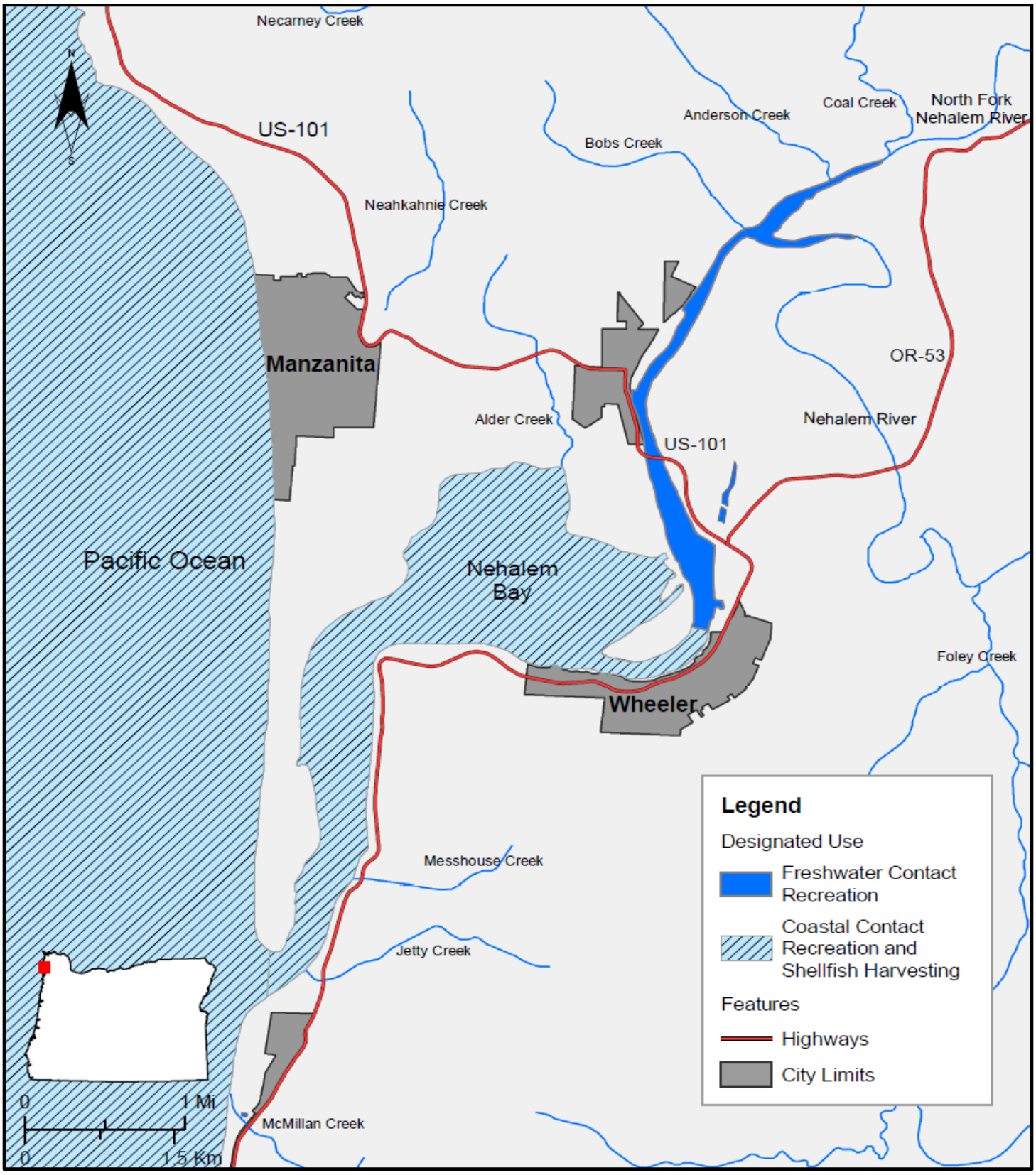
Water Contact Recreation and Shellfish Harvesting Designated Uses
Necanicum Bay, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230D

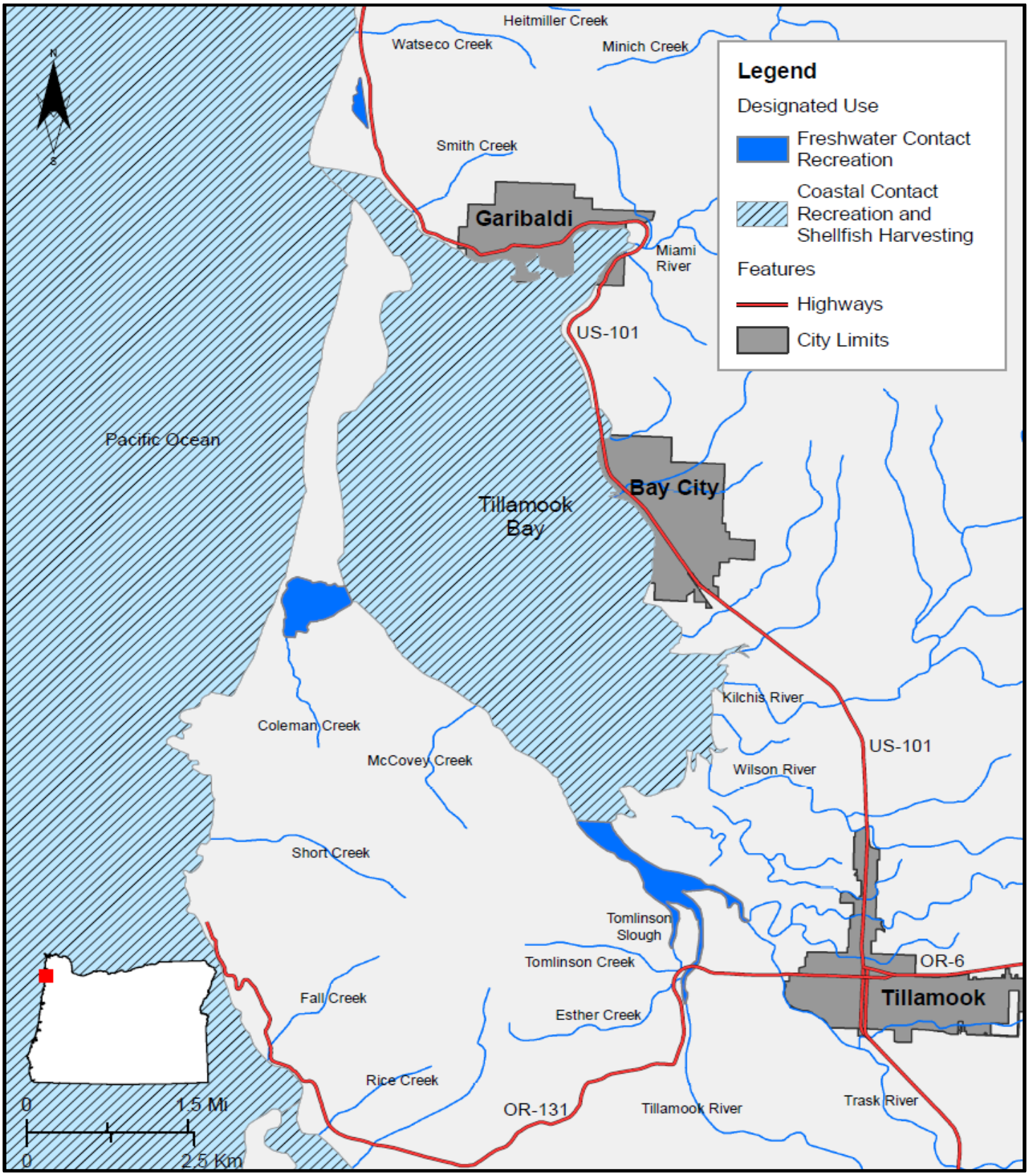
Water Contact Recreation and Shellfish Harvesting Designated Uses
Nehalem Bay, North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230E

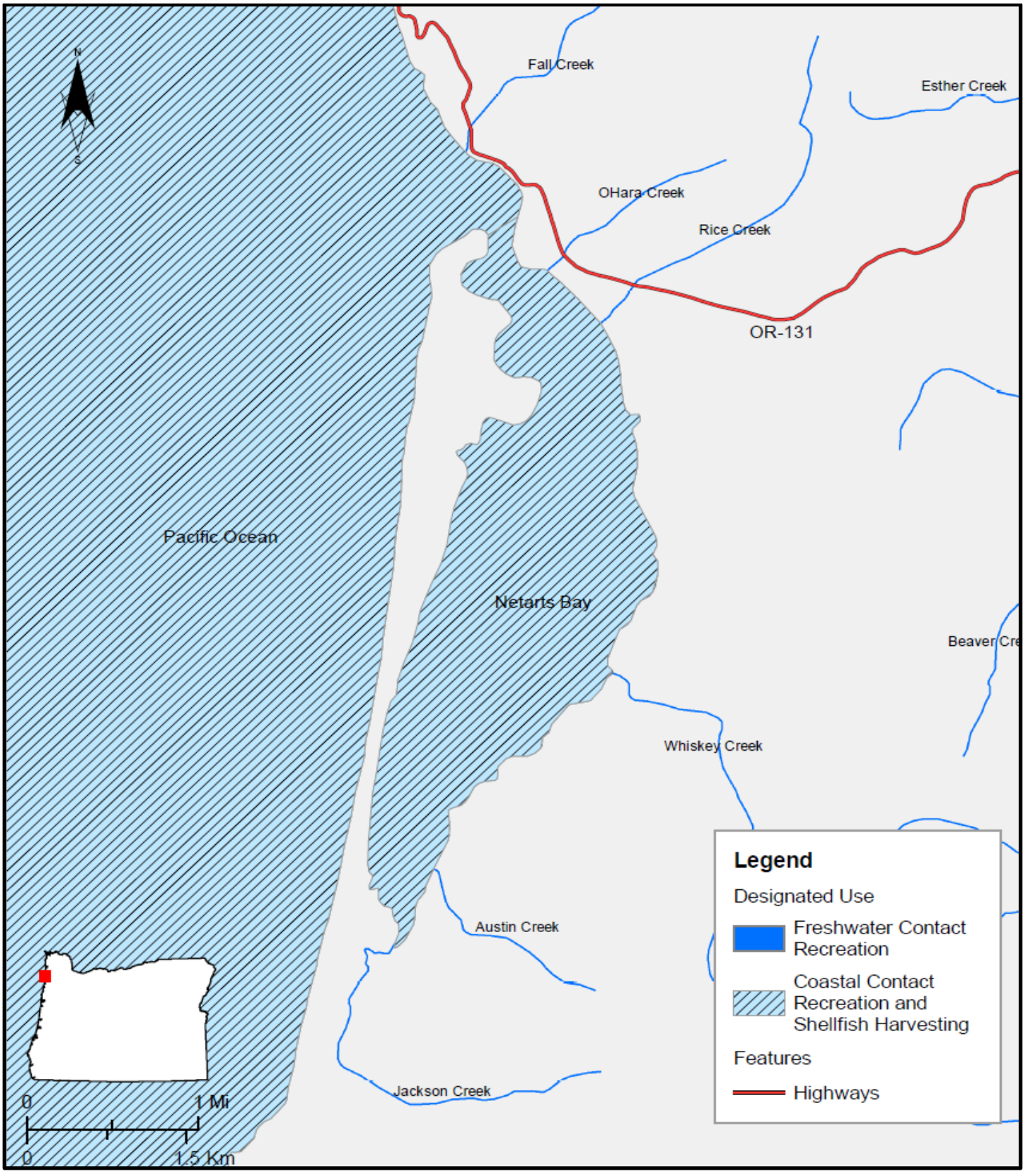
Water Contact Recreation and Shellfish Harvesting Designated Uses
Tillamook Bay, North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230F

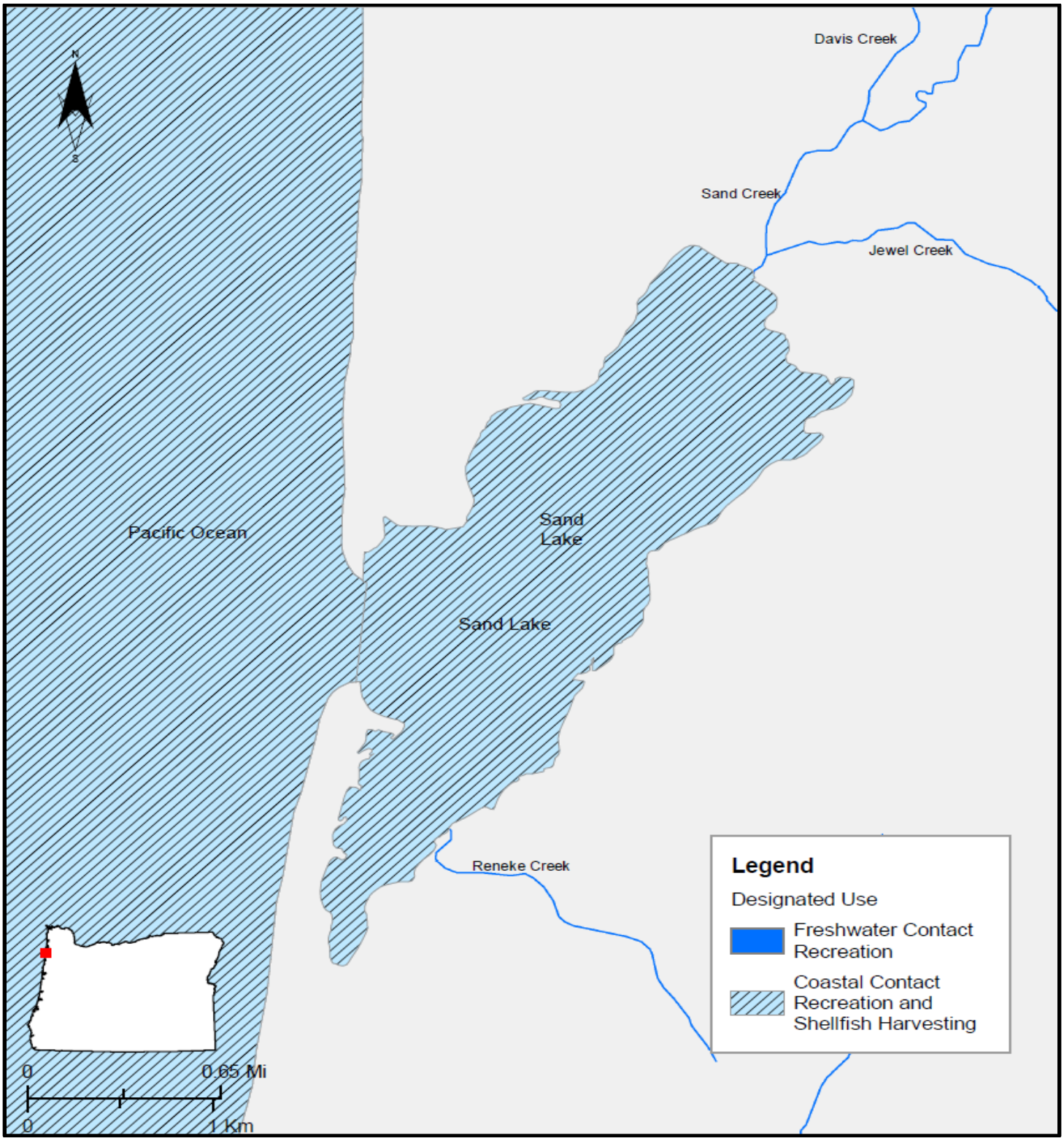
Water Contact Recreation and Shellfish Harvesting Designated Uses
Netarts Bay, North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230G

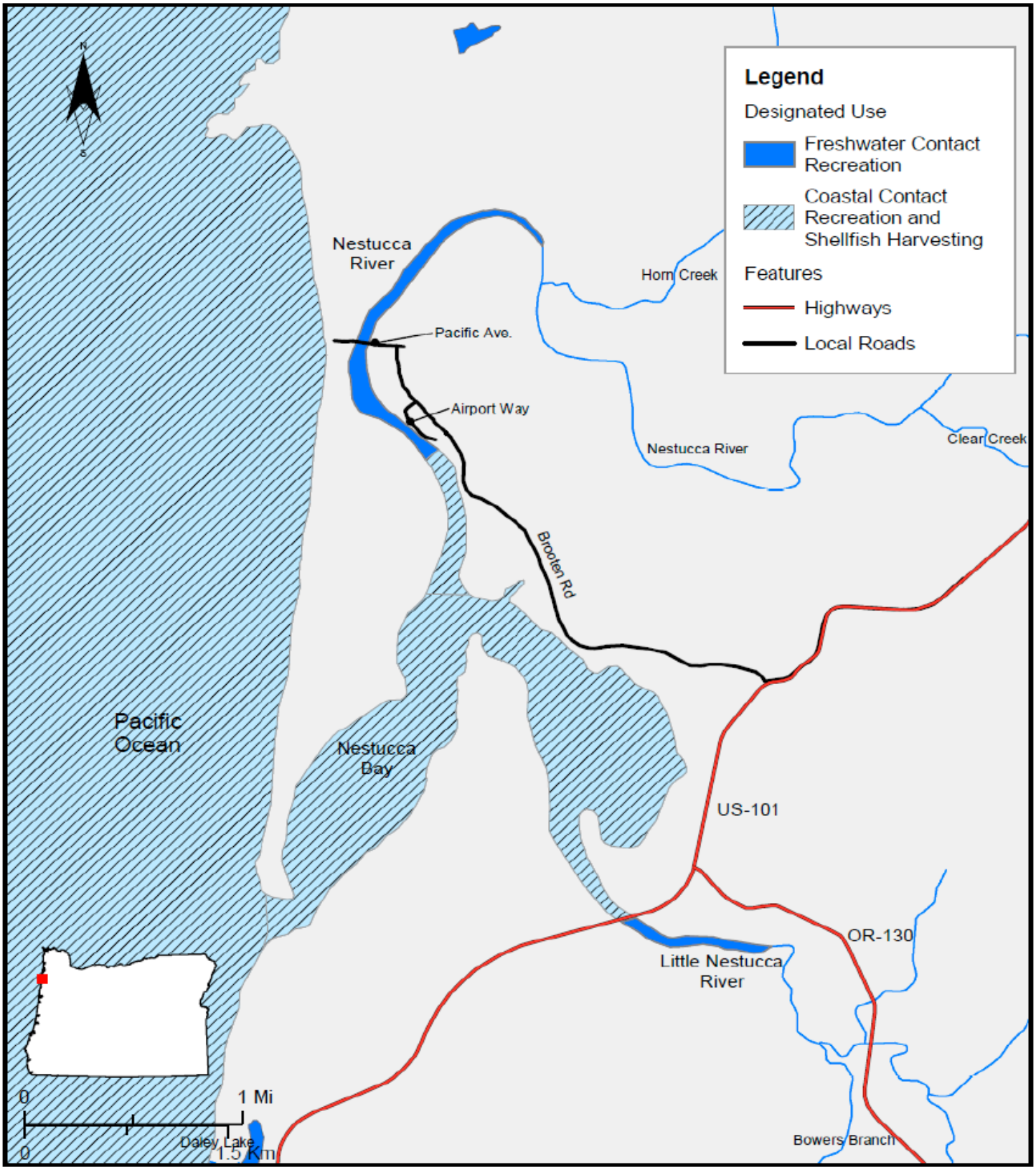
Water Contact Recreation and Shellfish Harvesting Designated Uses
Sand Lake, North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0230 – Figure 230H

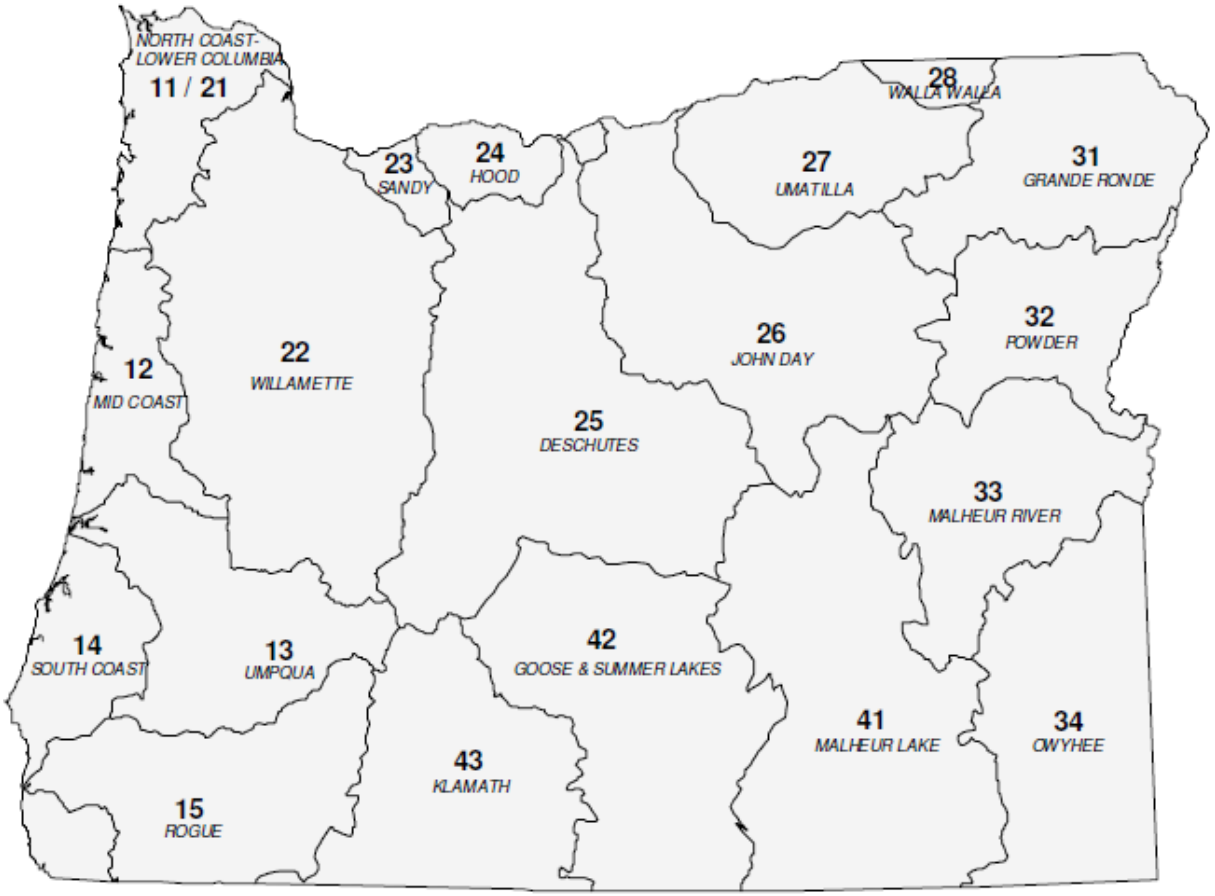
Water Contact Recreation and Shellfish Harvesting Designated Uses
Nestucca Bay, North Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0250
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0250
Table 250A
Designated Beneficial Uses
Owyhee Basin

Beneficial Uses	Owyhee River (RM 0-18)	Owyhee River (RM 18-Dam)	Reservoirs Antelope Cow Creek Owyhee	Owyhee River & Tributaries Upstream from Owyhee Reservoir	Designated Scenic Waterway[3]
Public Domestic Water Supply[1]	X	X	X	X	X
Private Domestic Water Supply[1]	X	X	X	X	X
Industrial Water Supply	X	X	X	X	
Irrigation	X	X	X	X	
Livestock Watering	X	X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X	X
Wildlife & Hunting	X	X	X	X	X
Fishing	X	X	X	X	X
Boating	X	X	X	X	X
Water Contact Recreation	X	X	X	X	X
Aesthetic Quality	X	X	X	X	X
Hydro Power					
Commercial Navigation & Transportation					

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Table 250B for fish use designations for this basin.
[3] The mainstem of the South Fork of the Owyhee River from the Oregon-Idaho River border to Three Forks (the confluence of the North, Middle and South Forks Owyhee River) and the mainstem Owyhee River form Crooked Creek (river mile 22) to the mouth of Birch Creek (river mile 76) is designated by statute as a Scenic Waterway.

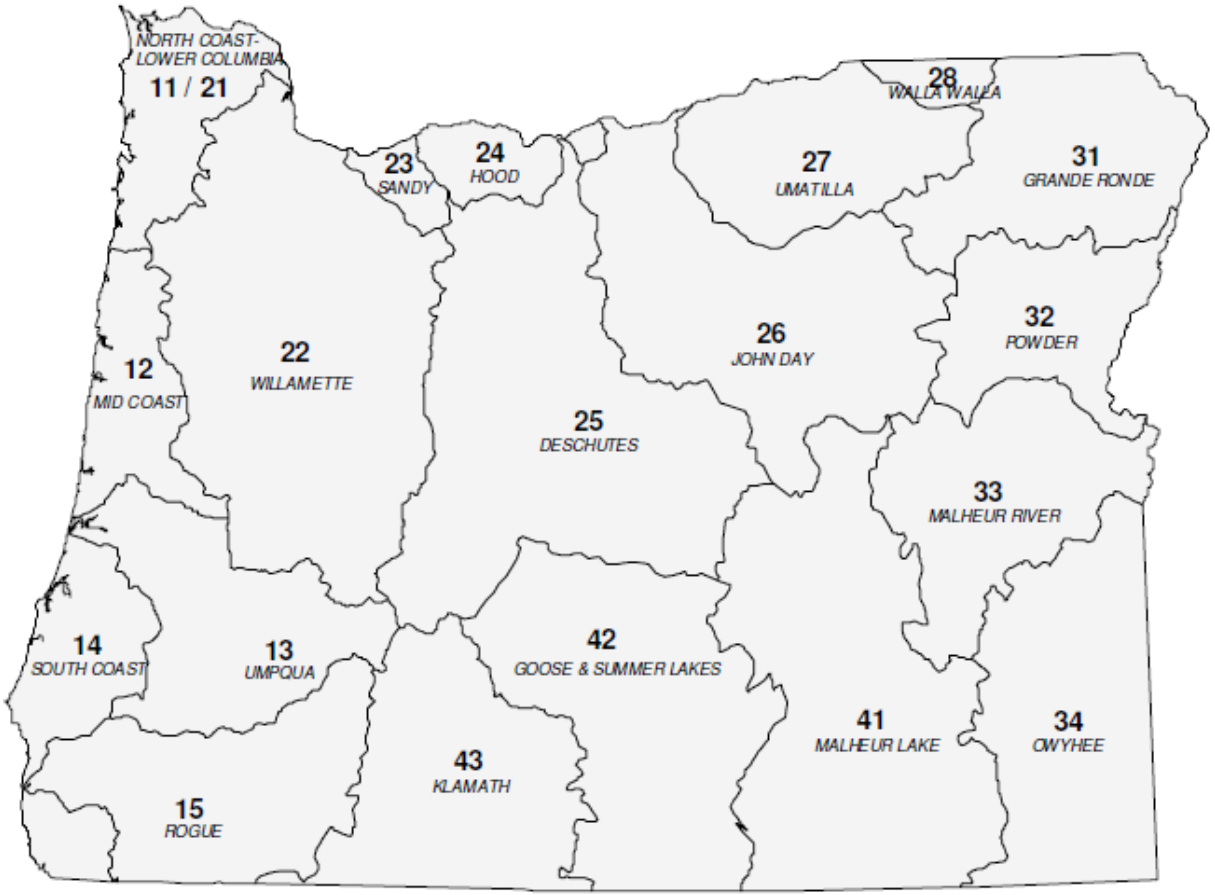
OAR 340-041-0250
Table 250B
Beneficial Use Designations – Fish Uses
Owyhee Basin, Oregon

Geographic Extent of Use	Redband or Lahontan Cutthroat Trout (20°C)	Cool Water Species (No Salmonid Use)
Lower Owyhee River Subbasin		
Mainstem Owyhee River from the mouth to the confluence with Snively Gulch (RM 18).		X
All other Lower Owyhee subbasin waters.	X	
All other Owyhee Basin waters within Oregon		
	X	

State of Oregon Department of Environmental Quality

OAR 340-041-0260
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0260
Table 260A
Designated Beneficial Uses
Powder/Burnt Basin

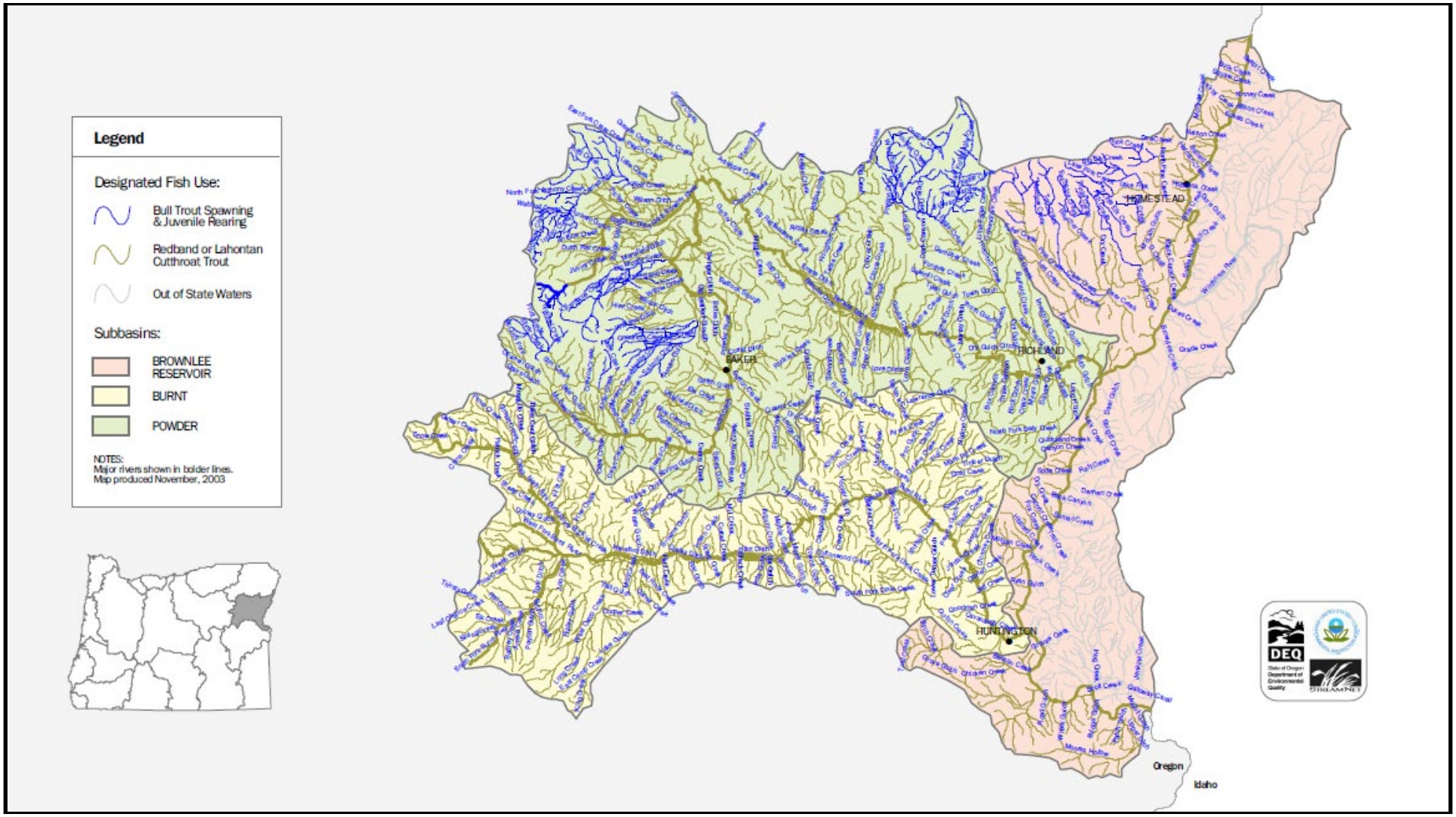
Beneficial Uses	All Basin Waters
Public Domestic Water Supply[1]	X
Private Domestic Water Supply[1]	X
Industrial Water Supply	X
Irrigation	X
Livestock Watering	X
Fish & Aquatic Life[2]	X
Wildlife & Hunting	X
Fishing	X
Boating	X
Water Contact Recreation	X
Aesthetic Quality	X
Hydro Power	
Commercial Navigation & Transportation	

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Figure 260A for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0260 – Figure 260A

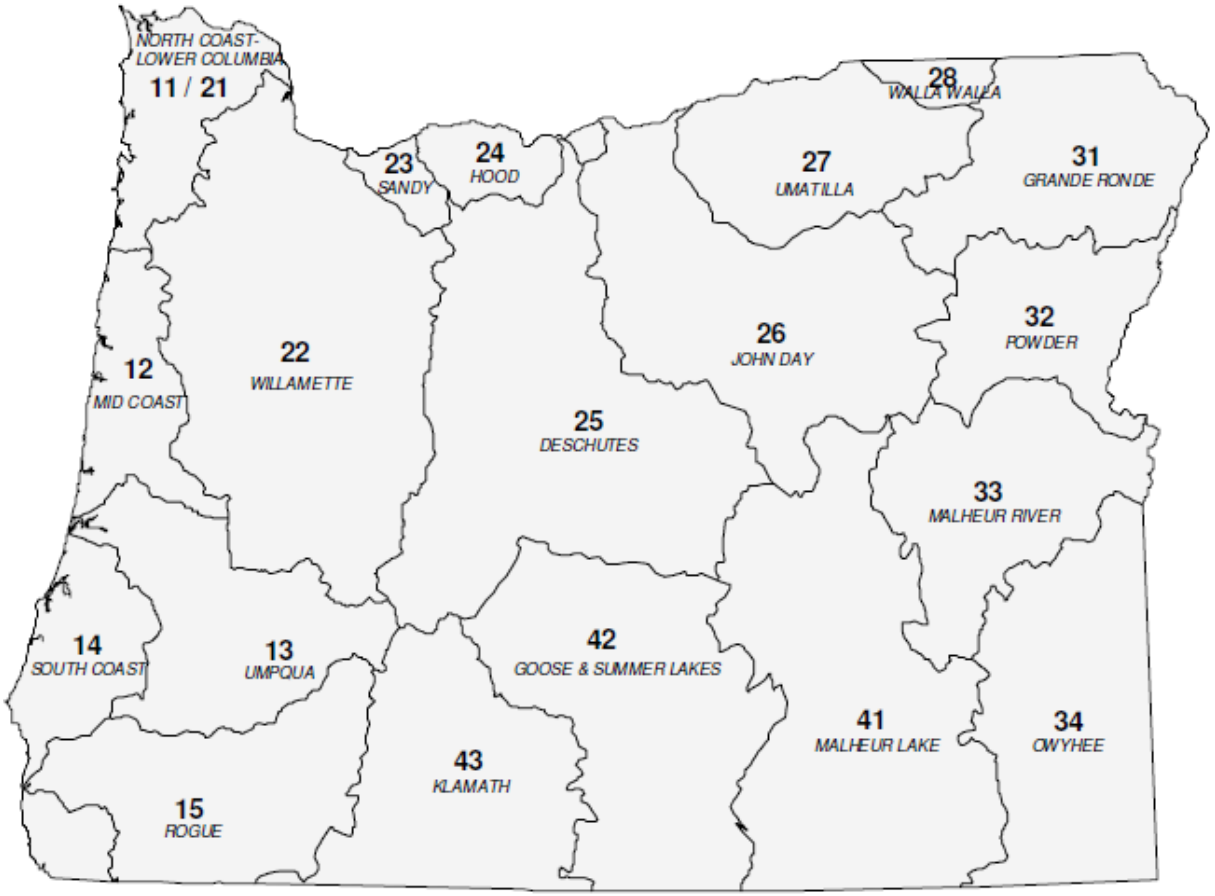
Fish Use Designations – Powder Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0271
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

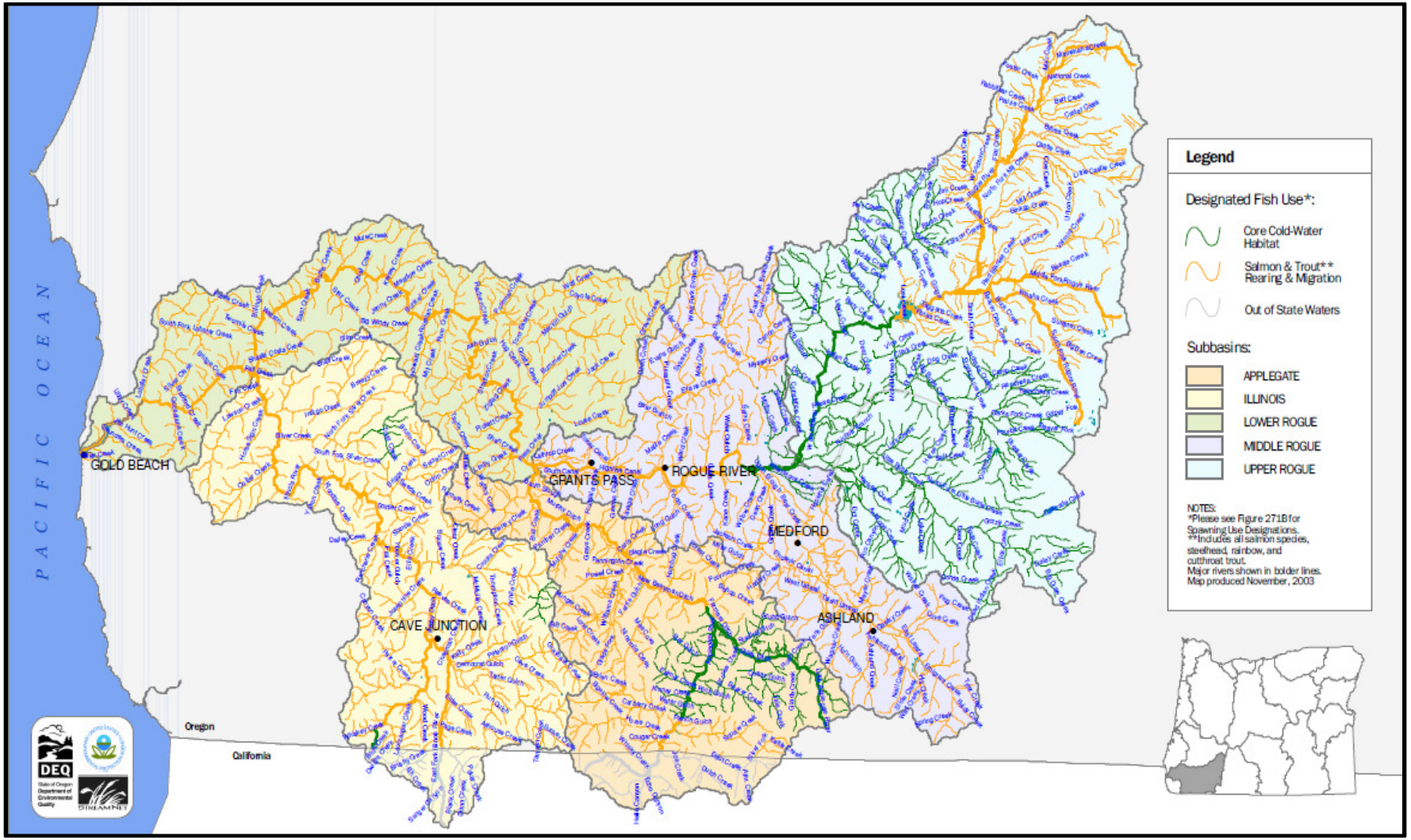
OAR 340-041-0271
Table 271A
Designated Beneficial Uses
Rogue Basin

Beneficial Uses	Rogue River Estuary & Adjacent Marine Waters	Rogue River Main Stem from Estuary to Lost Creek Dam	Rogue River Main Stem above Lost Dam & Tributaries	Bear Creek Main Stem	All Other Tributaries to Rogue River & Bear Creek
Public Domestic Water Supply[1]		X	X	*	X
Private Domestic Water Supply[1]		X	X		X
Industrial Water Supply	X	X	X	X	X
Irrigation		X	X	X	X
Livestock Watering		X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X	X
Wildlife & Hunting	X	X	X	X	X
Fishing	X	X	X	X	X
Boating	X	X	X	X	X
Water Contact Recreation	X	X	X	X	X
Aesthetic Quality	X	X	X	X	X
Hydro Power			X		X
Commercial Navigation & Transportation	X	X			

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards
[2] See also Figures 271A and 271B for fish use designations for this basin.
* Designation for this use is presently under study

State of Oregon Department of Environmental Quality

OAR 340-041-0271 – Figure 271A
Fish Use Designations* - Rogue Basin, Oregon

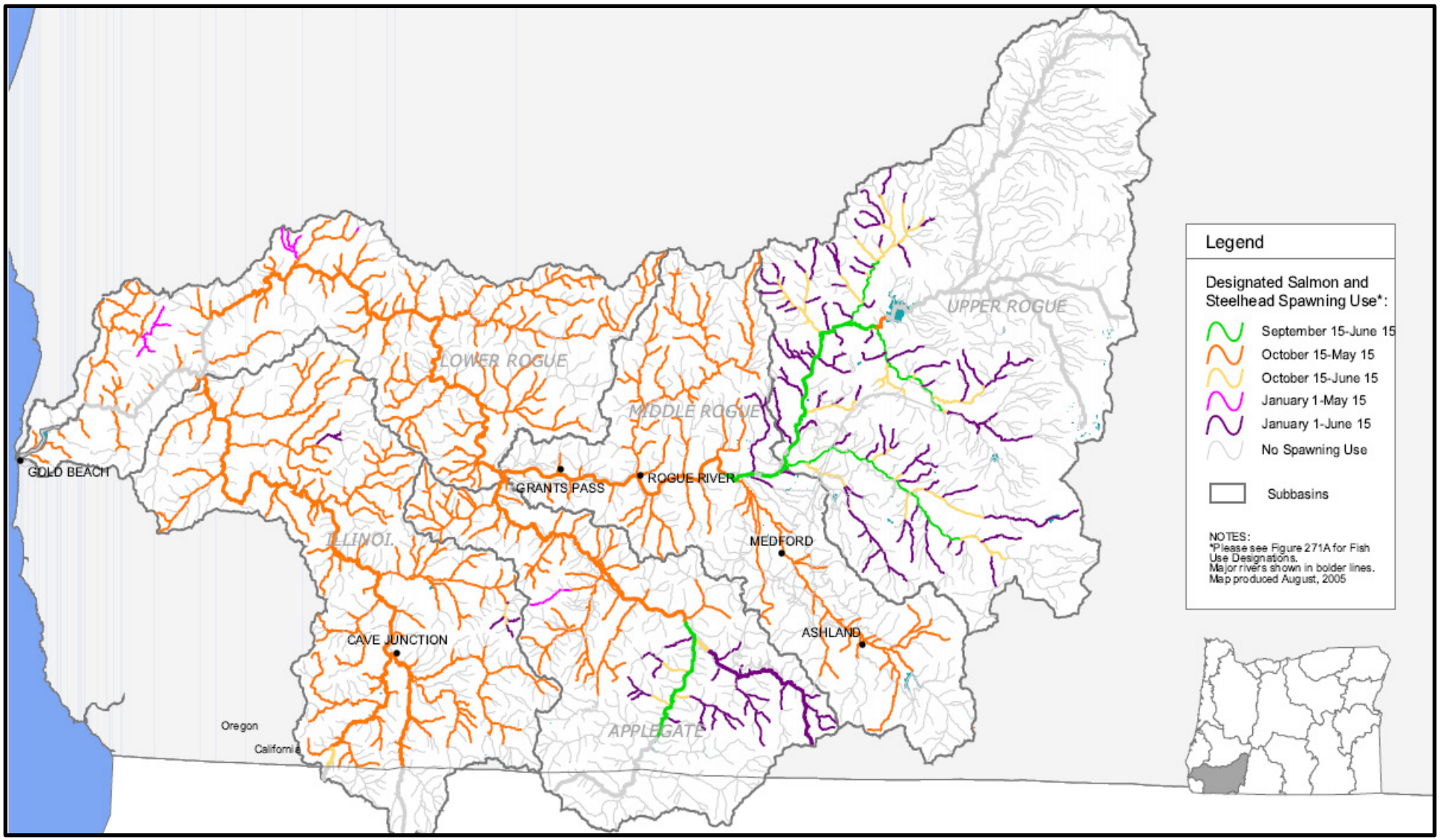


State of Oregon Department of Environmental Quality

OAR 340-041-0271 – Figure 271B

Salmon and Steelhead Spawning Use Designations*

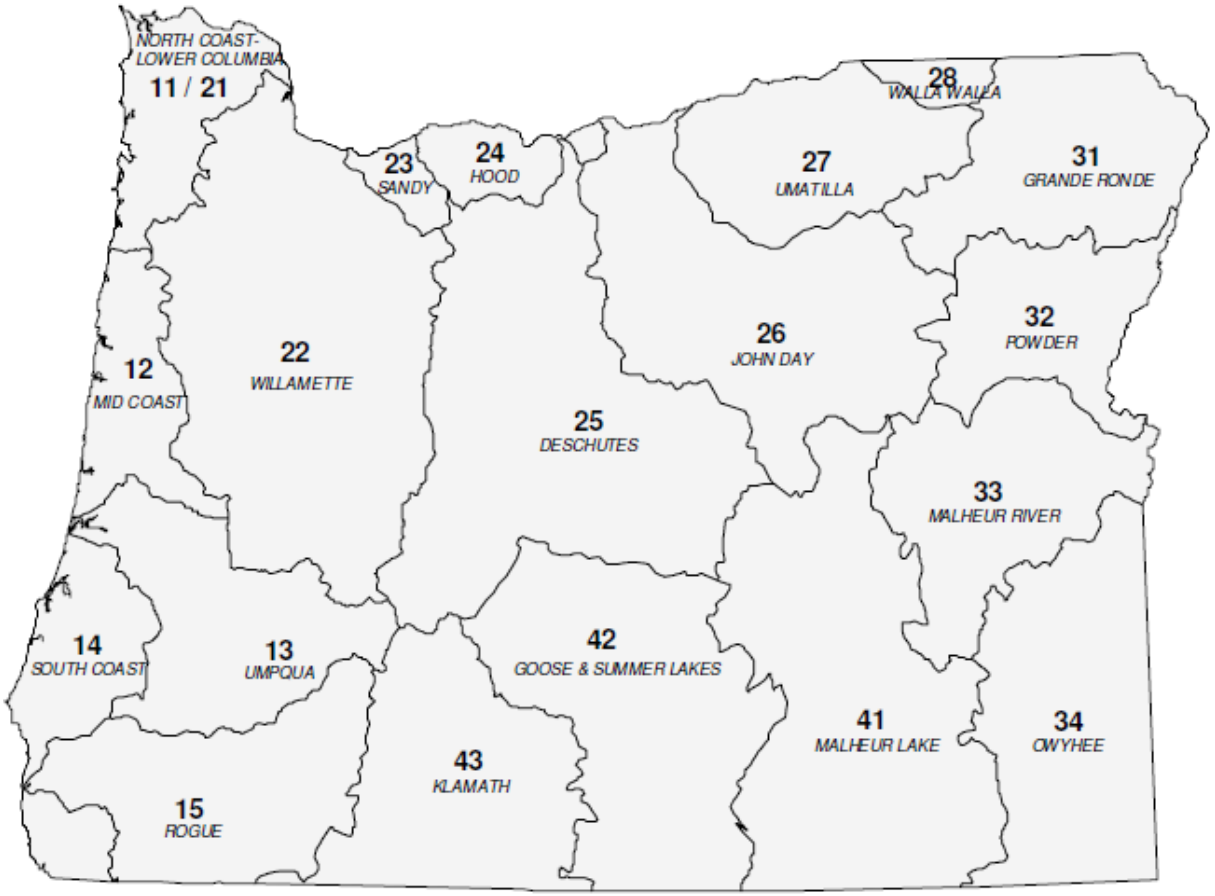
Rogue Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0286
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

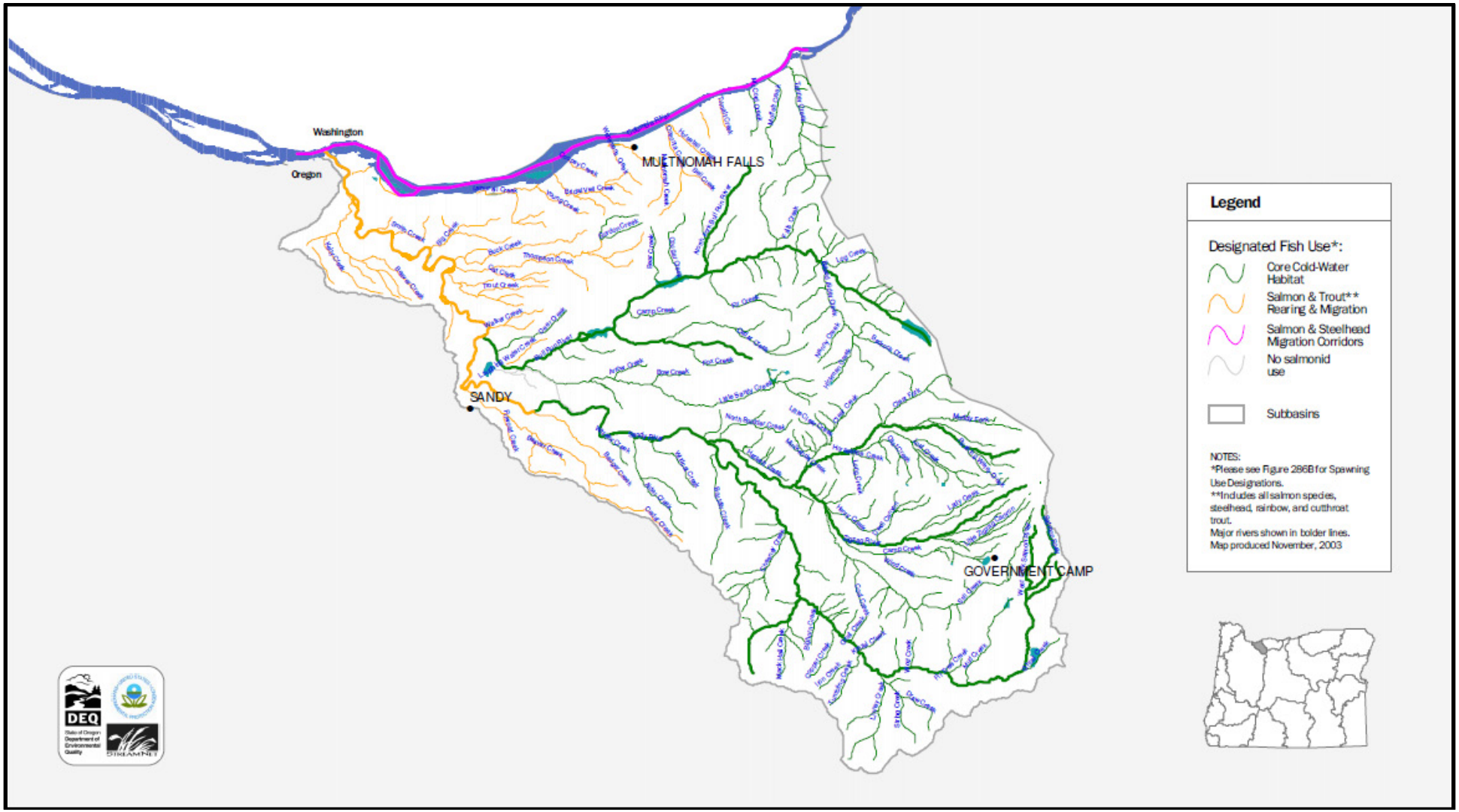
OAR 340-041-0286
Table 286A
Designated Beneficial Uses
Sandy Basin

Beneficial Uses	Streams Forming Waterfalls Near Columbia River Highway	Sandy River	Bull Run River and all Tributaries	All Other Tributaries to Sandy River
Public Domestic Water Supply[1]		X	X	X
Private Domestic Water Supply[1]		X		X
Industrial Water Supply		X		X
Irrigation		X		X
Livestock Watering		X		X
Fish & Aquatic Life[2]	X	X	X	X
Wildlife & Hunting	X	X		X
Fishing	X	X		X
Boating		X		X
Water Contact Recreation	X	X		X
Aesthetic Quality	X	X	X	X
Hydro Power		X	X	X
Commercial Navigation & Transportation				

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Figures 286A and 286B for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0286 - Figure 286A
Fish Use Designations* - Sandy Basin, Oregon

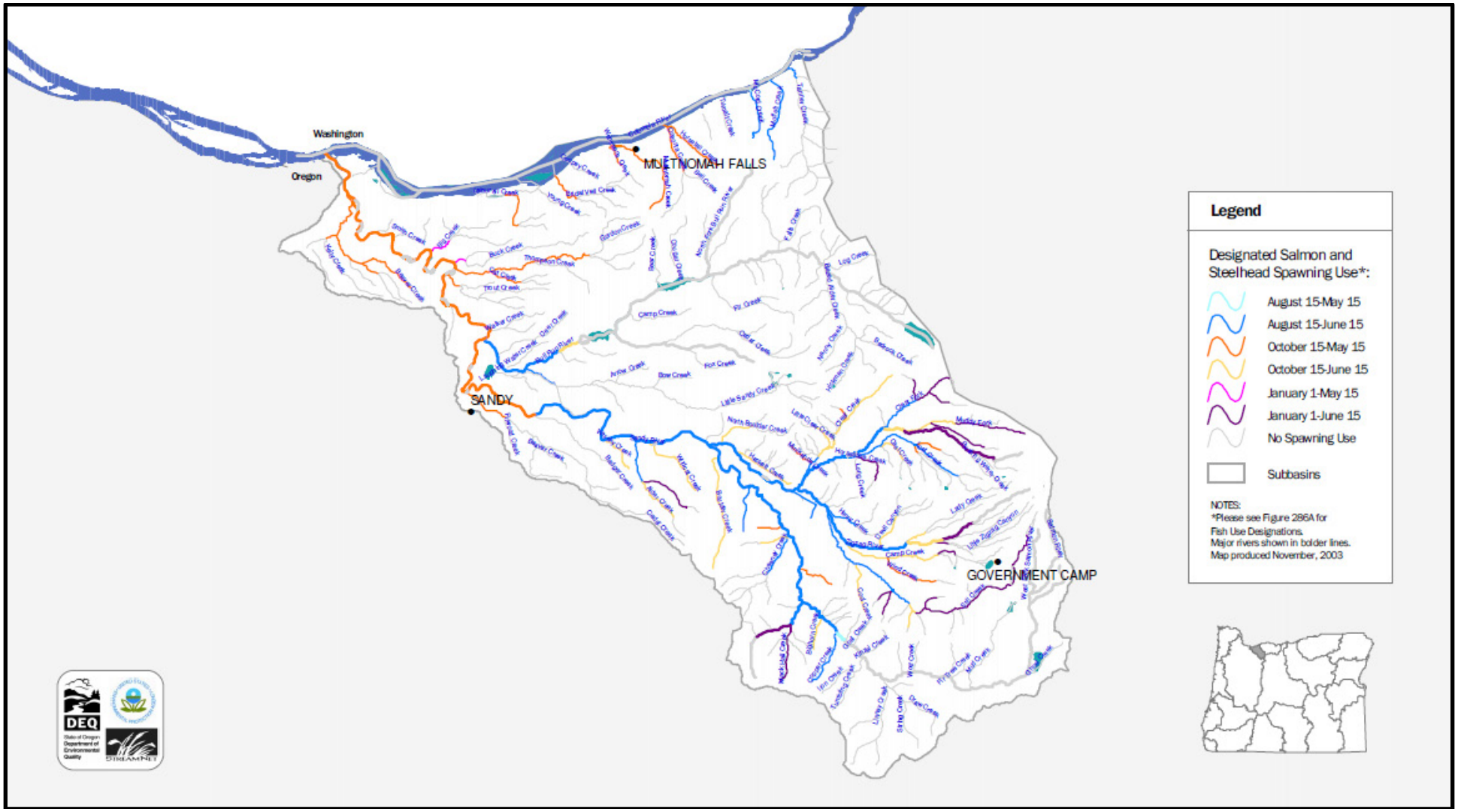


State of Oregon Department of Environmental Quality

OAR 340-041-0286 - Figure 286B

Salmon and Steelhead Spawning Use Designations*

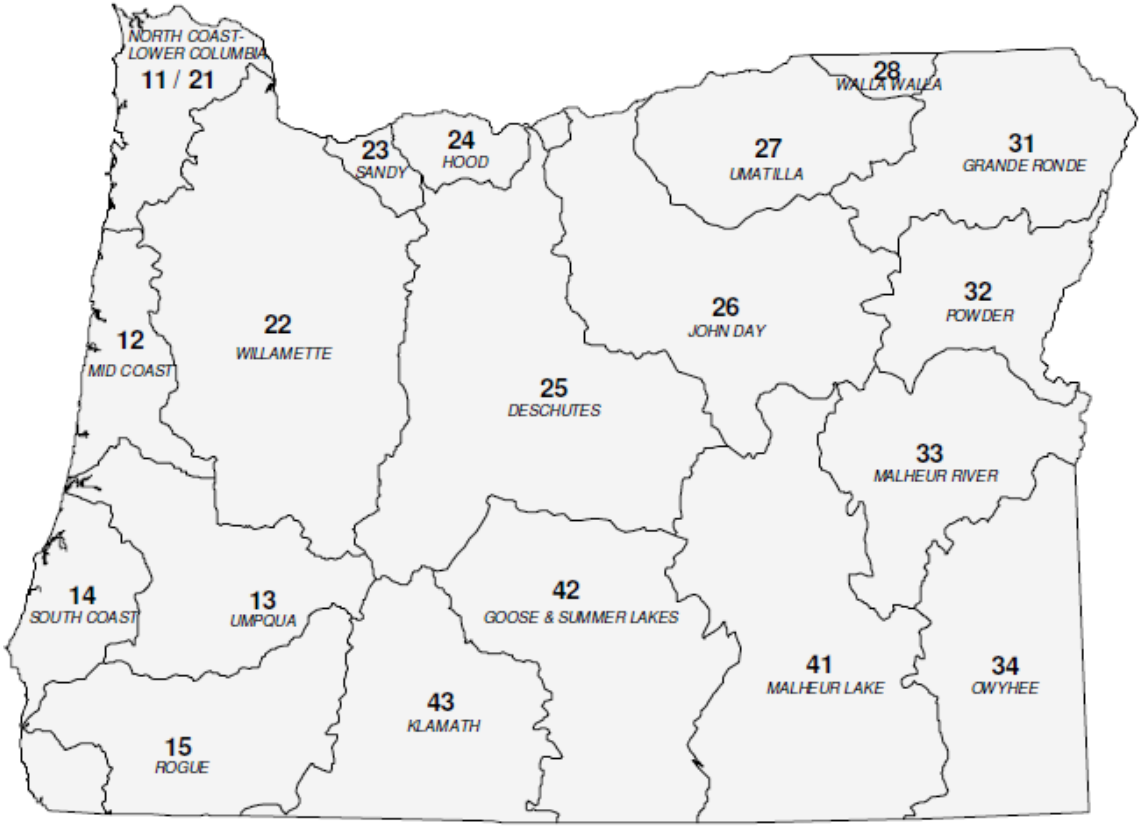
Sandy Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0300 – Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

340-041-0300
Table 300A
Designated Beneficial Uses
South Coast Basin
(November 2003)

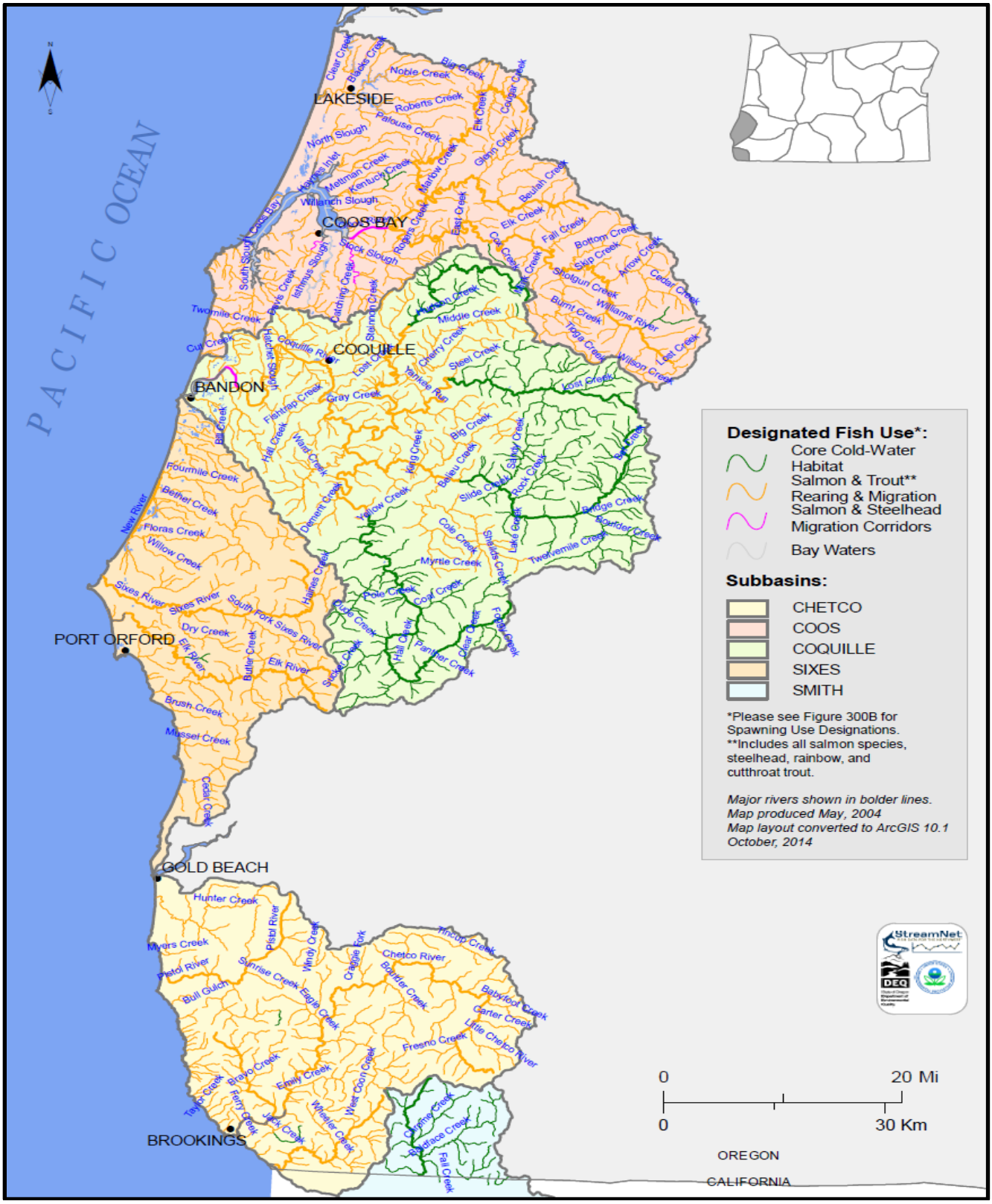
Beneficial Uses	Estuaries & Adjacent Marine Waters	All Streams & Tributaries Thereto
Public Domestic Water Supply[1]		X
Private Domestic Water Supply[1]		X
Industrial Water Supply	X	X
Irrigation		X
Livestock Watering		X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing[3]	X	X
Boating	X	X
Water Contact Recreation[3]	X	X
Aesthetic Quality	X	X
Hydro Power		X
Commercial Navigation & Transportation	X	

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Figures 300A and 300B for fish use designations for this basin.
[3] For coastal water contact recreation and shellfish harvesting uses, see also Figures 300C (Coos Bay) and 300D (Coquille River Estuary).

State of Oregon Department of Environmental Quality

OAR 340-041-0300 – Figure 300A

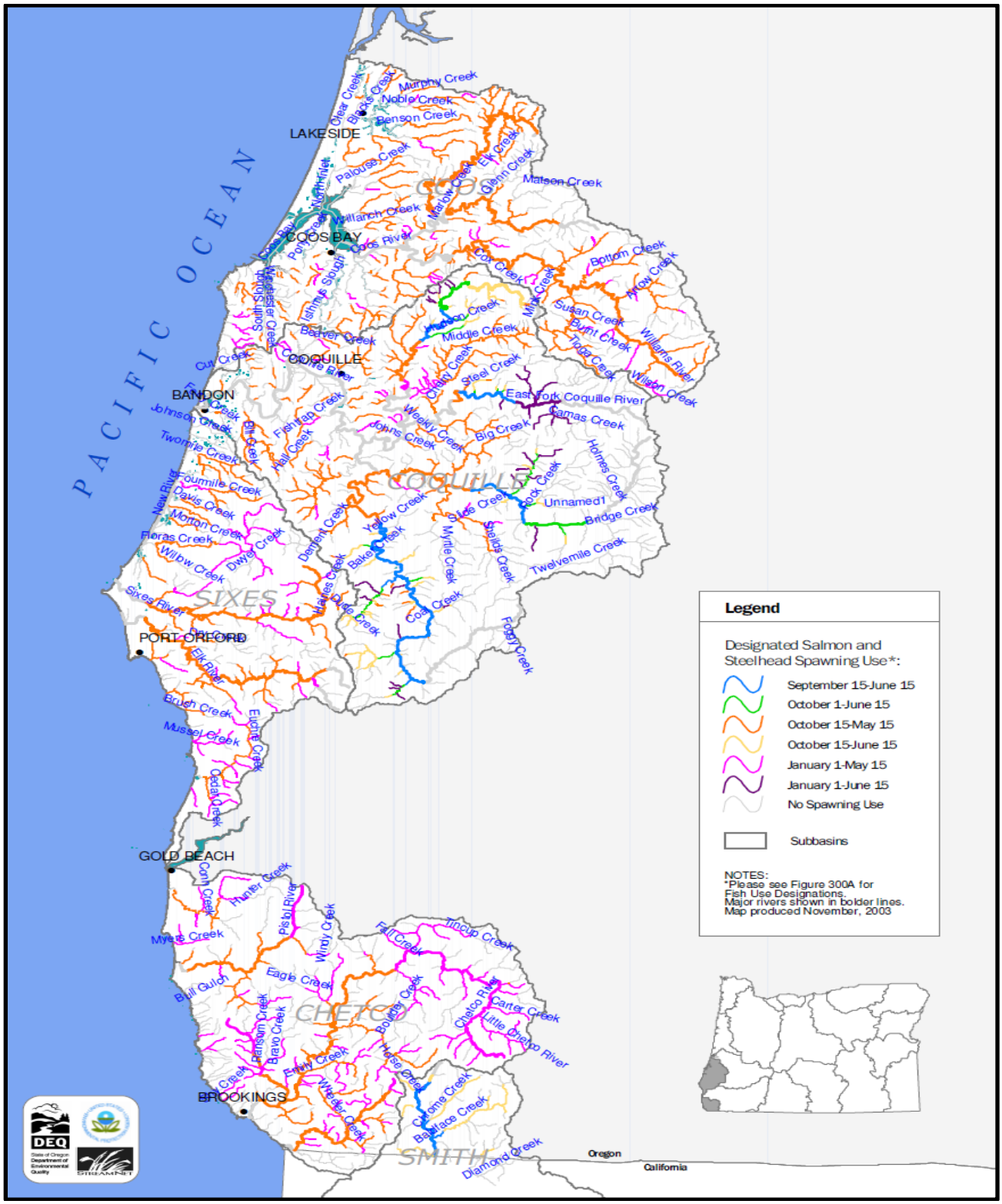
Fish Use Designations* - South Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0300 – Figure 300B

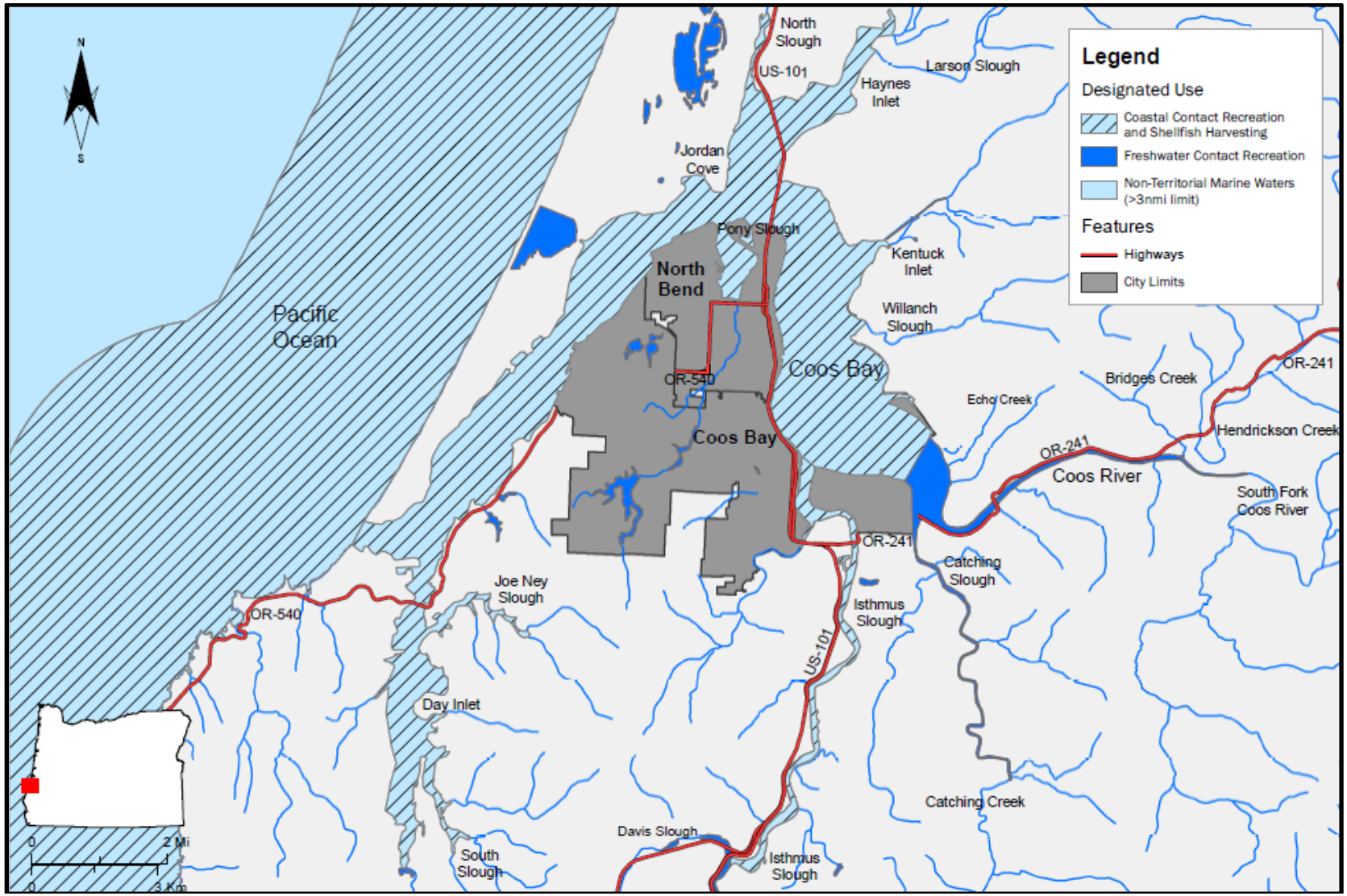
Salmon and Steelhead Spawning Use Designations*
South Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0300 – Figure 300C

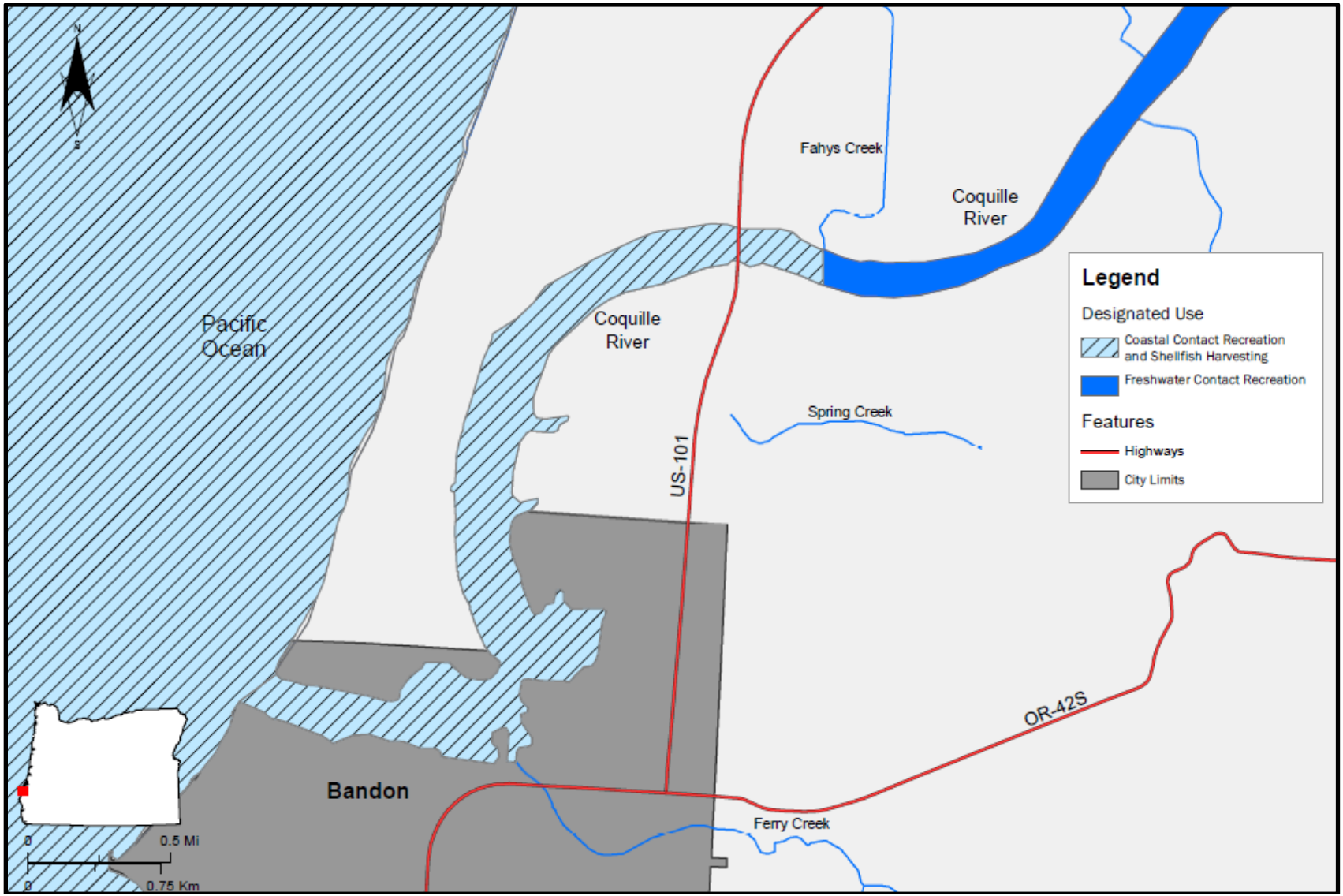
Water Contact Recreation and Shellfish Harvesting Designated Uses
Coos Bay, South Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0300 – Figure 300D

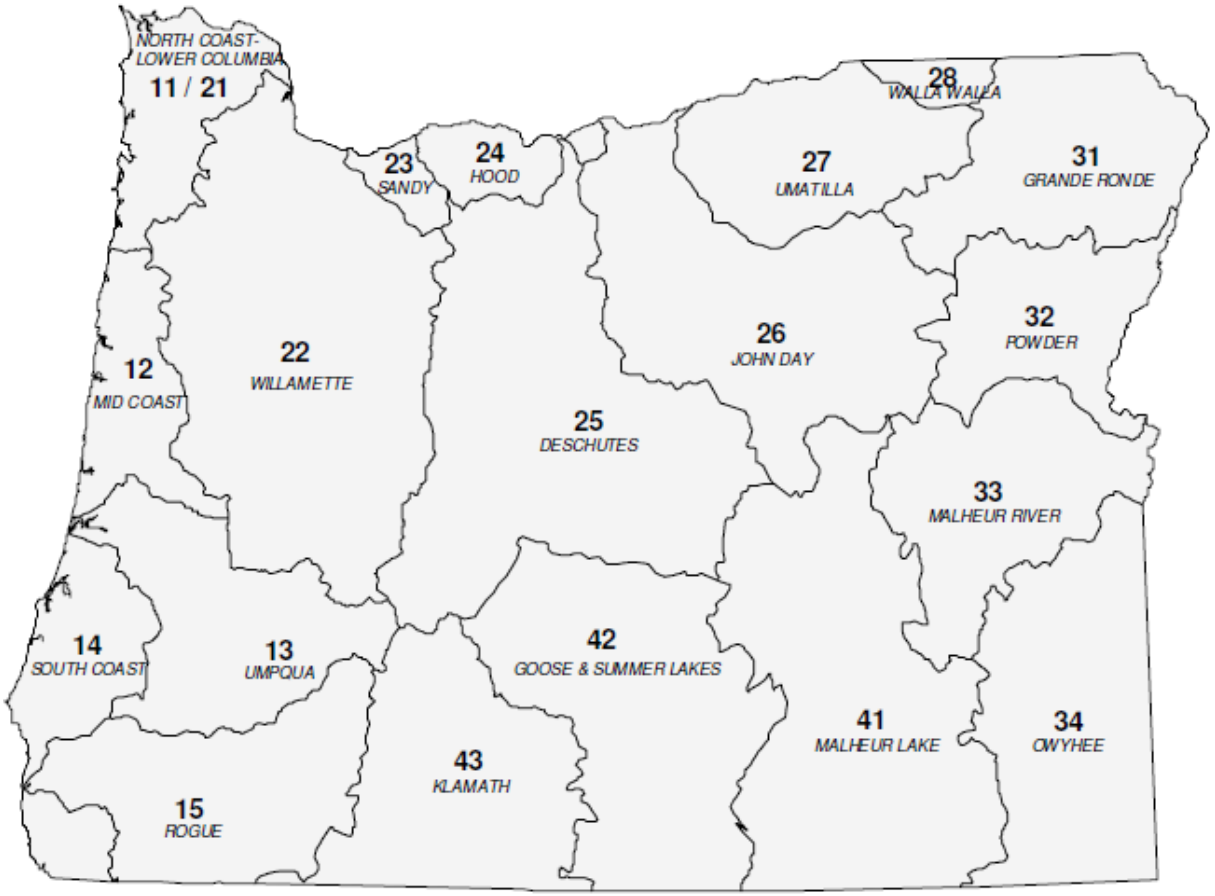
Water Contact Recreation and Shellfish Harvesting Designated Uses
Coquille River, South Coast Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0310
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0310
Table 310A
Designated Beneficial Uses
Umatilla Basin

Beneficial Uses	Umatilla Subbasin	Willow Creek Subbasin	West Division Main Canal – constructed channel[3]	West Division Main Canal – overflow channels[3]
Public Domestic Water Supply[1]	X	X		
Private Domestic Water Supply[1]	X	X		
Industrial Water Supply	X	X	X	X
Irrigation	X	X	X	X
Livestock Watering	X	X	X	X
Fish & Aquatic Life[2]	X	X		X
Wildlife & Hunting	X	X	X	X
Fishing	X	X		X
Boating	X	X (at mouth)		
Water Contact Recreation	X	X	X	X
Aesthetic Quality	X	X	X	X
Hydro Power	X	X	X	X
Commercial Navigation and Transportation				

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.

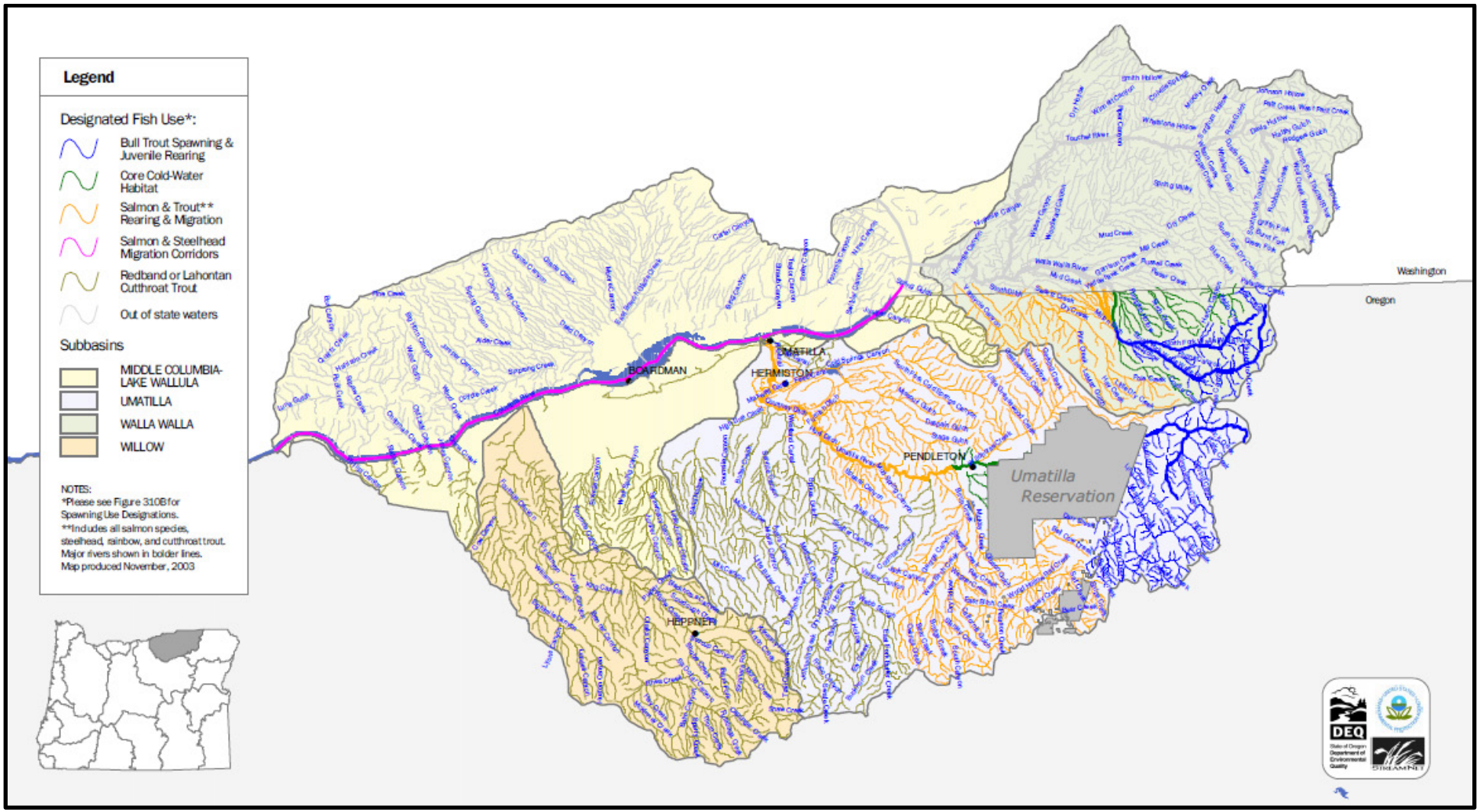
[2] See also Figures 310A and 310B for fish use designations for this basin. Note: The fish & aquatic life use designations for the "constructed channel" segment of the West Division Main Canal in this table supersede Figure 310A, which incorrectly identifies Redband trout use in that portion of the canal.

[3] The West Division Main Canal extends from the point of diversion from the Umatilla River to the confluence with the Columbia River. The canal consists of two segments. The constructed channel segment extends from the Umatilla River 27 miles down gradient to the flow control gate at the end of the concrete structure as it was originally built (concrete-lining was later added to parts of the overflow channels). The overflow channels segment extends from the lower end of the constructed channel to the outflow to the Columbia River.

State of Oregon Department of Environmental Quality

OAR 340-041-0310 – Figure 310A

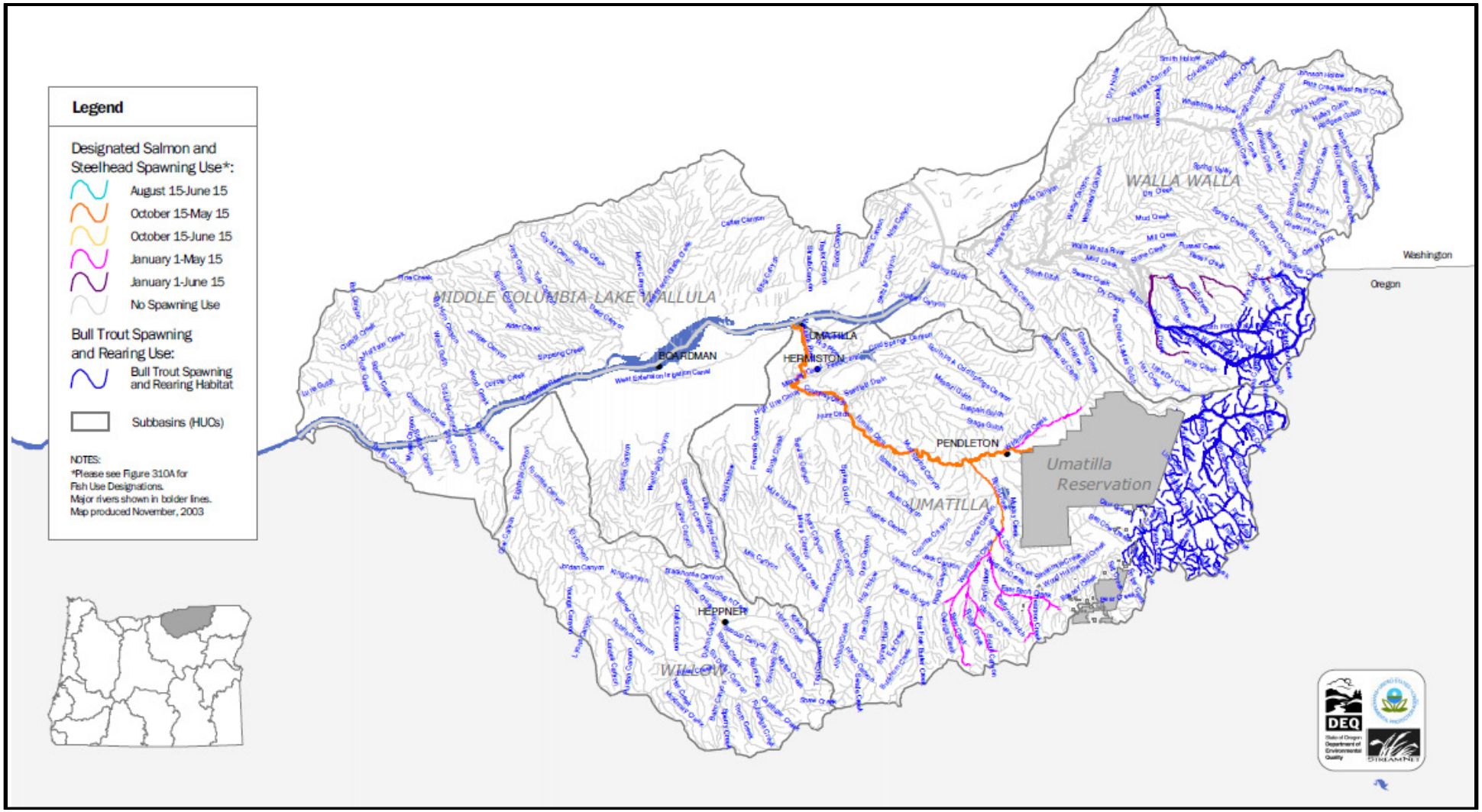
Fish Use Designations* – Umatilla Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0310 – Figure 310B

Salmon and Steelhead Spawning Use Designations*
Umatilla Basin, Oregon



OAR 340-041-0315
Table 315
Water Quality Criteria
Constructed Channel Segment
West Division Main Canal, Umatilla Basin

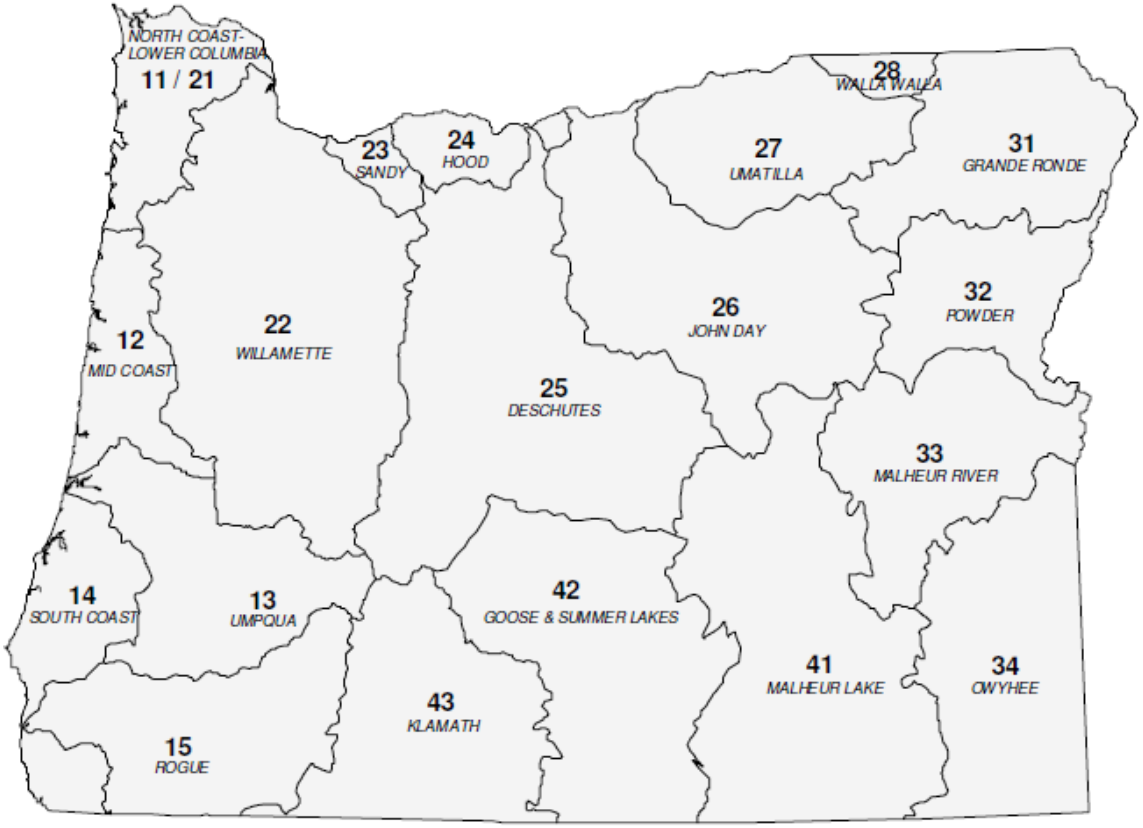
Parameter	For Irrigation (mg/l, metals as dissolved)	For Livestock Watering (mg/l, metals as dissolved)
Total dissolved solids	450	
Arsenic (inorganic)	0.1	0.2
Beryllium	0.1	
Cadmium	0.01	0.05
Chromium	0.1	1
Copper	0.2	0.5
Lead	5	0.1
Mercury		0.01
Nickel	0.2	
Selenium	0.02	0.05
Zinc	2	25

Table Revised January 2015

State of Oregon Department of Environmental Quality

OAR 340-041-0320
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0320
Table 320A
Designated Beneficial Uses
Umpqua Basin
(November 2003)

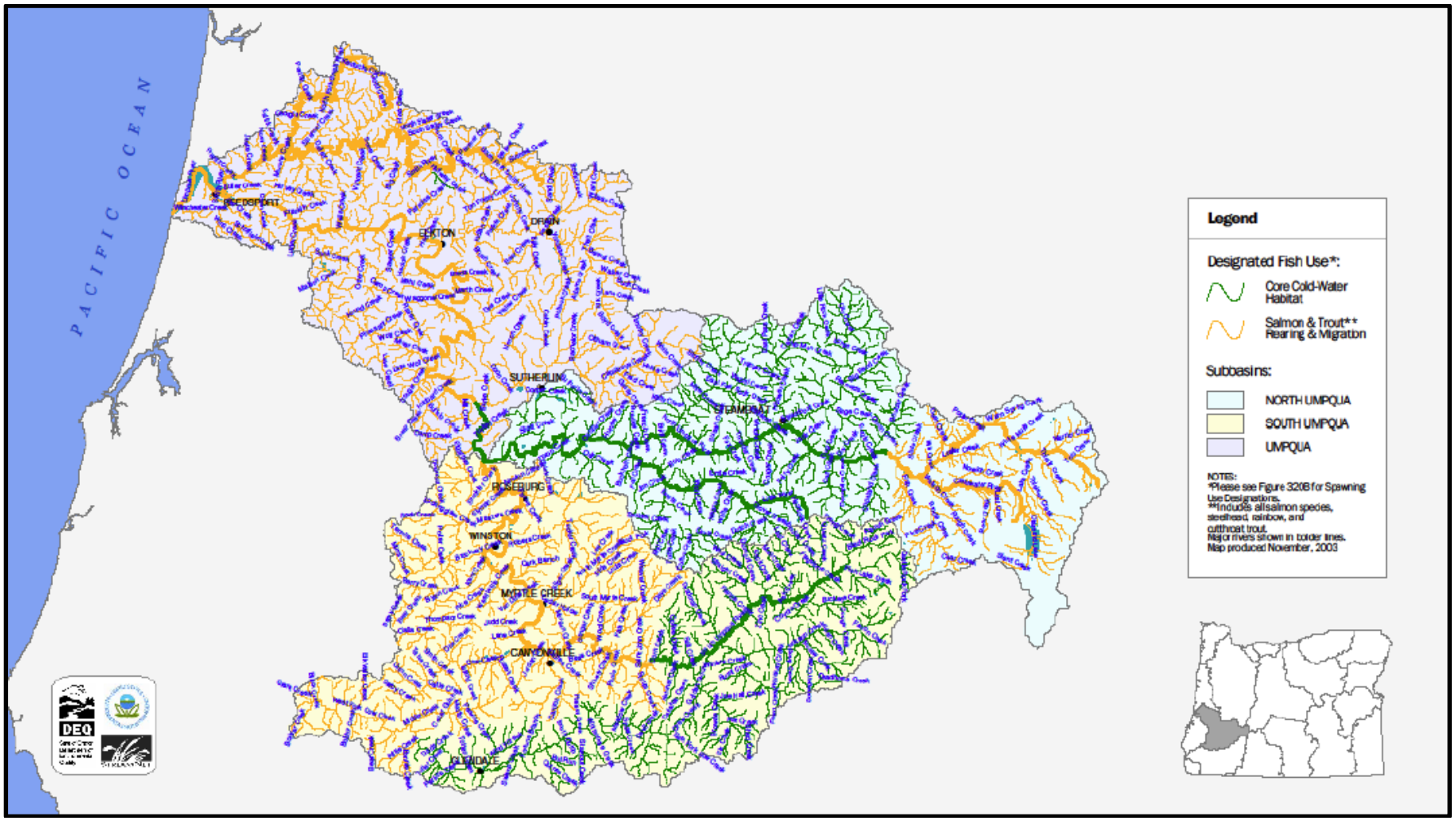
Beneficial Uses	Umpqua R. Estuary to Head of Tidewater and Adjacent Marine Waters	Umpqua R. Main from Head of Tidewater to Confluence of N. and S. Umpqua Rivers	North Umpqua River Main Stem	South Umpqua River Main Stem	All Other Tributaries to Umpqua, North and South Umpqua Rivers
Public Domestic Water Supply[1]		X	X	X	X
Private Domestic Water Supply[1]		X	X	X	X
Industrial Water Supply	X	X	X	X	X
Irrigation		X	X	X	X
Livestock Watering		X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X	X
Wildlife & Hunting	X	X	X	X	X
Fishing	X[3]	X	X	X	X
Boating	X	X	X	X	X
Water Contact Recreation	X[3]	X	X	X	X
Aesthetic Quality	X	X	X	X	X
Hydro Power			X	X	X
Commercial Navigation & Transportation	X				

[1] With adequate pretreatment (filtration and disinfection) and natural quality to meet drinking water standards.
[2] See also Figures 320A and 320B for fish use designations for this basin.
[3] For coastal water contact recreation and shellfish harvesting uses in the Umpqua River Estuary and Adjacent Marine Waters, see also Figure 320C.

State of Oregon Department of Environmental Quality

OAR 340-041-0320 – Figure 320A

Fish Use Designations* - Umpqua Basin, Oregon

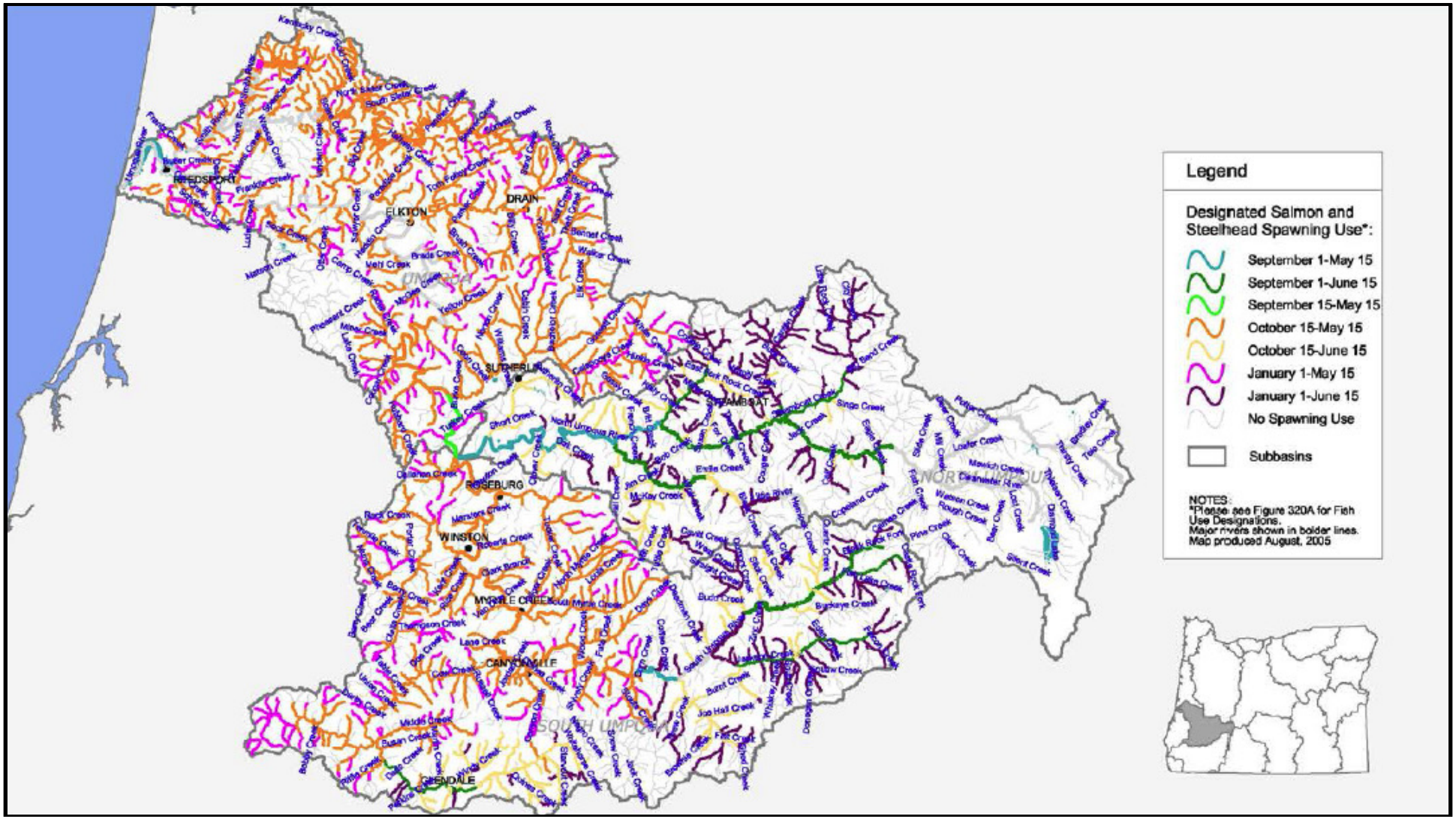


State of Oregon Department of Environmental Quality

OAR 340-041-0320 – Figure 320B

Salmon and Steelhead Spawning Use Designations*

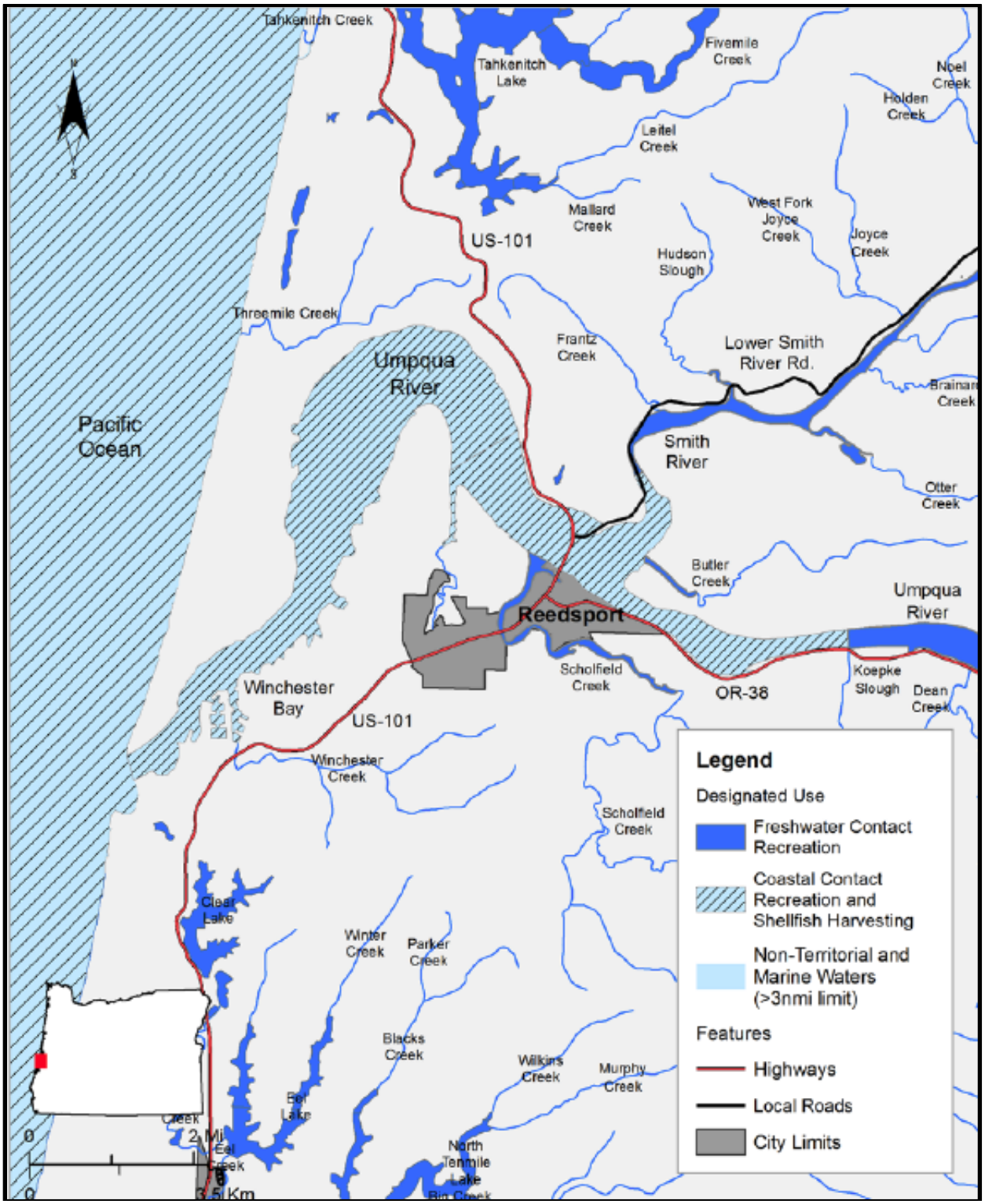
Umpqua Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0320 – Figure 320C

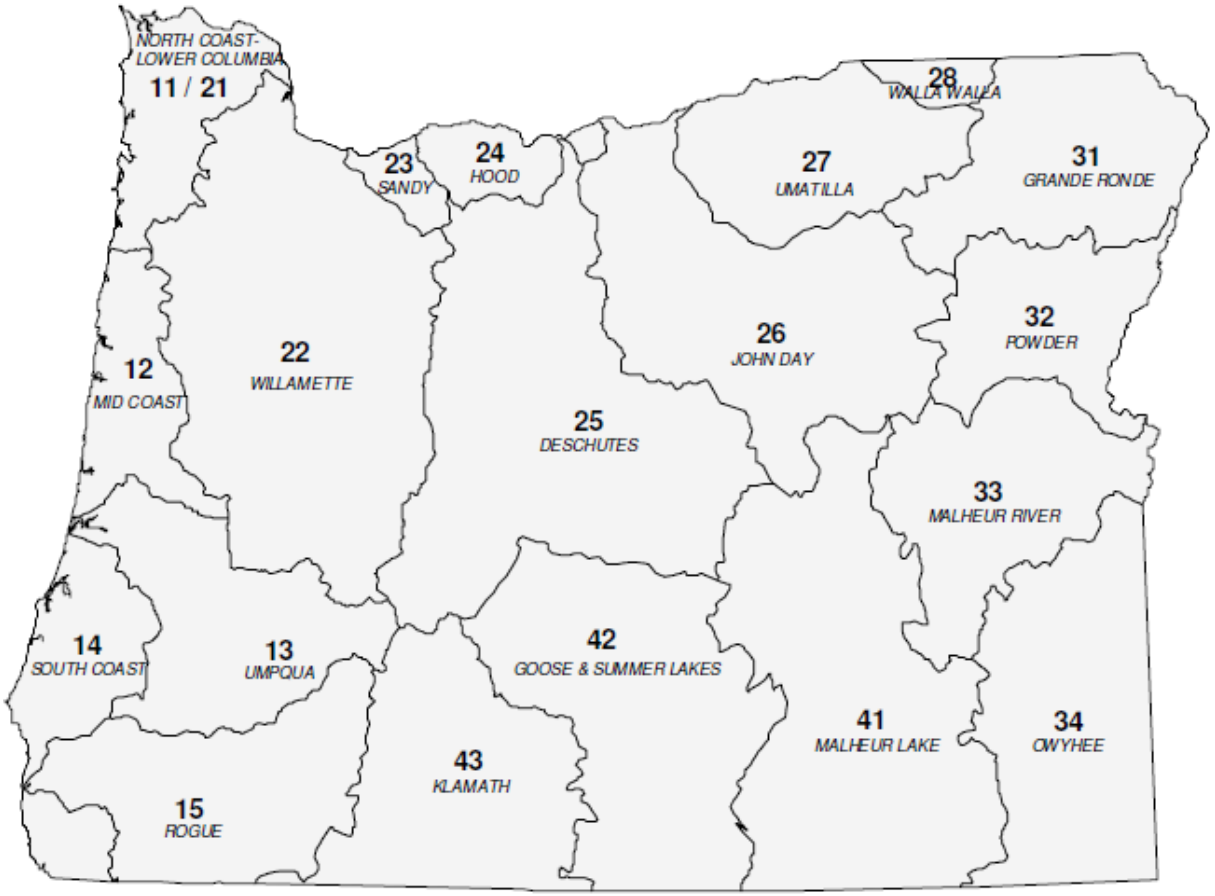
Water Contact Recreation and Shellfish Harvesting Designated Uses Umpqua Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0330
Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0330
Table 330A
Designated Beneficial Uses
Walla Walla Basin

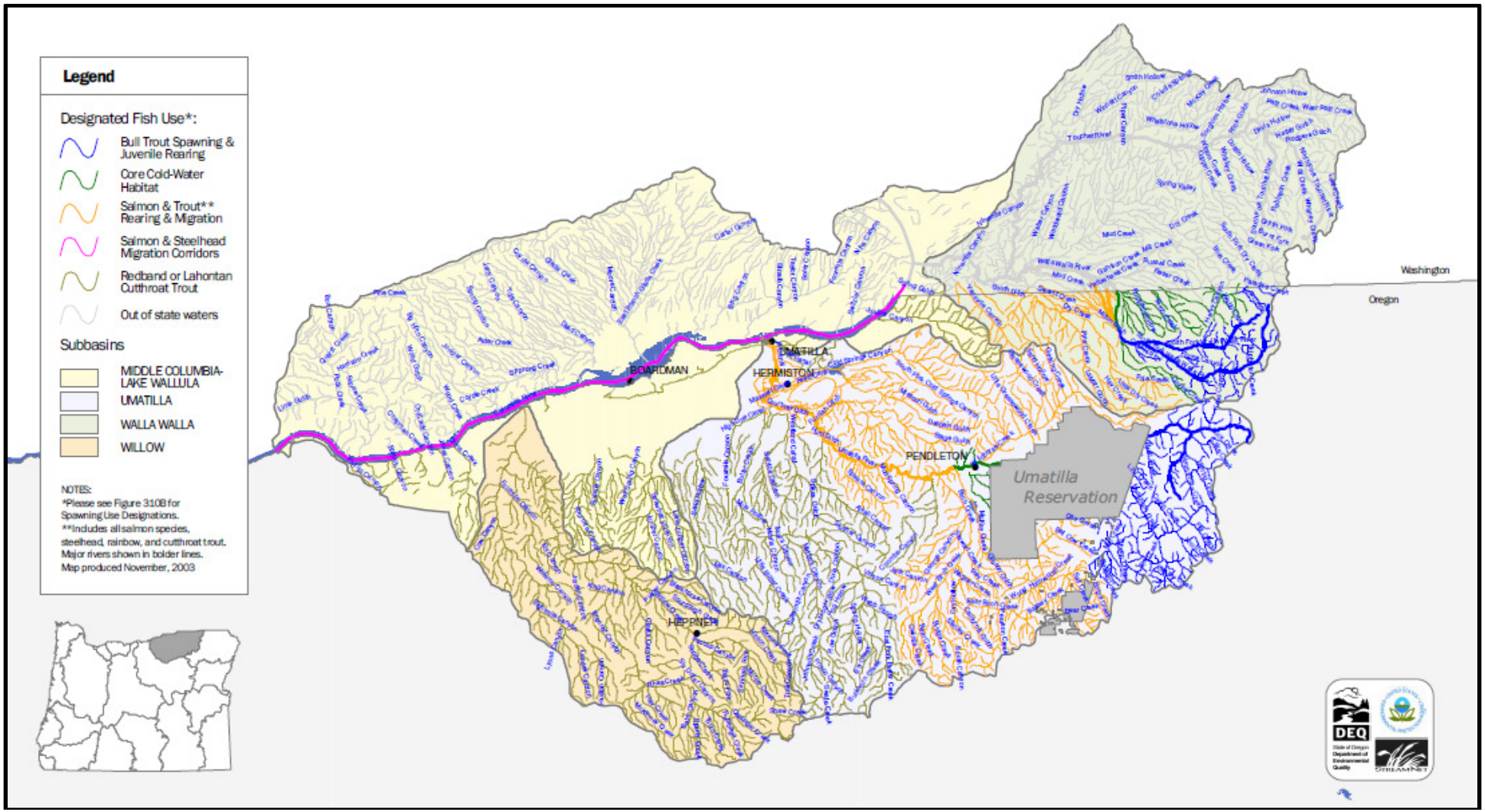
Beneficial Uses	Walla Walla River Main Stem from Confluence of North & South Forks to State Line	All Other Basin Streams
Public Domestic Water Supply[1]	X	X
Private Domestic Water Supply[1]	X	X
Industrial Water Supply	X	
Irrigation	X	X
Livestock Watering	X	X
Fish & Aquatic Life[2]	X	X
Wildlife & Hunting	X	X
Fishing	X	X
Boating	X	X
Water Contact Recreation	X	X
Aesthetic Quality	X	X
Hydro Power		X
Commercial Navigation & Transportation		

[1] With adequate pretreatment (filtration & disinfection) and natural quality to meet drinking water standards.
[2] See also Figures 310A and 310B for fish use designations for this basin.

State of Oregon Department of Environmental Quality

OAR 340-041-0330 – Figure 310A

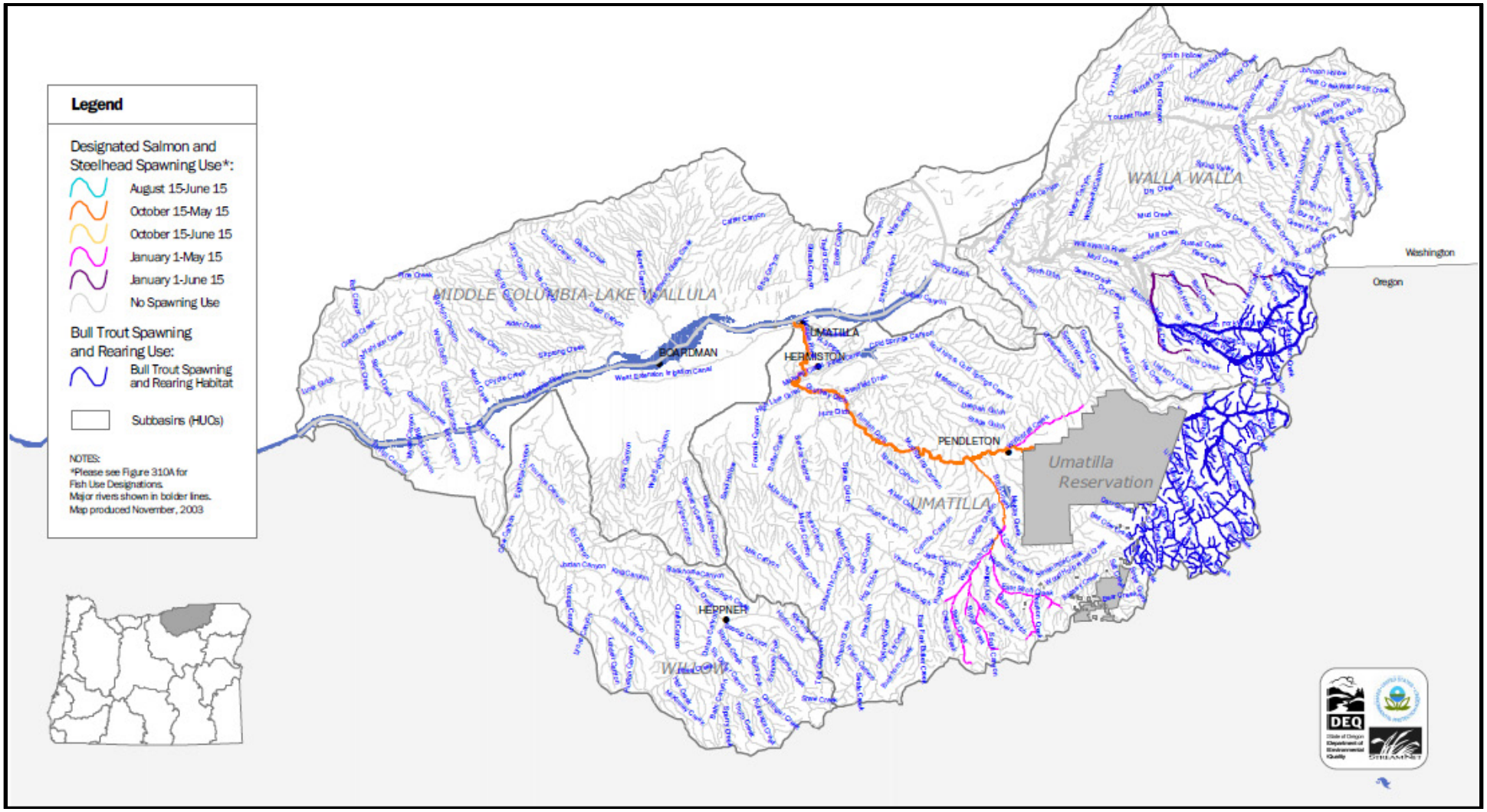
Fish Use Designations* - Umatilla Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0330 – Figure 310B

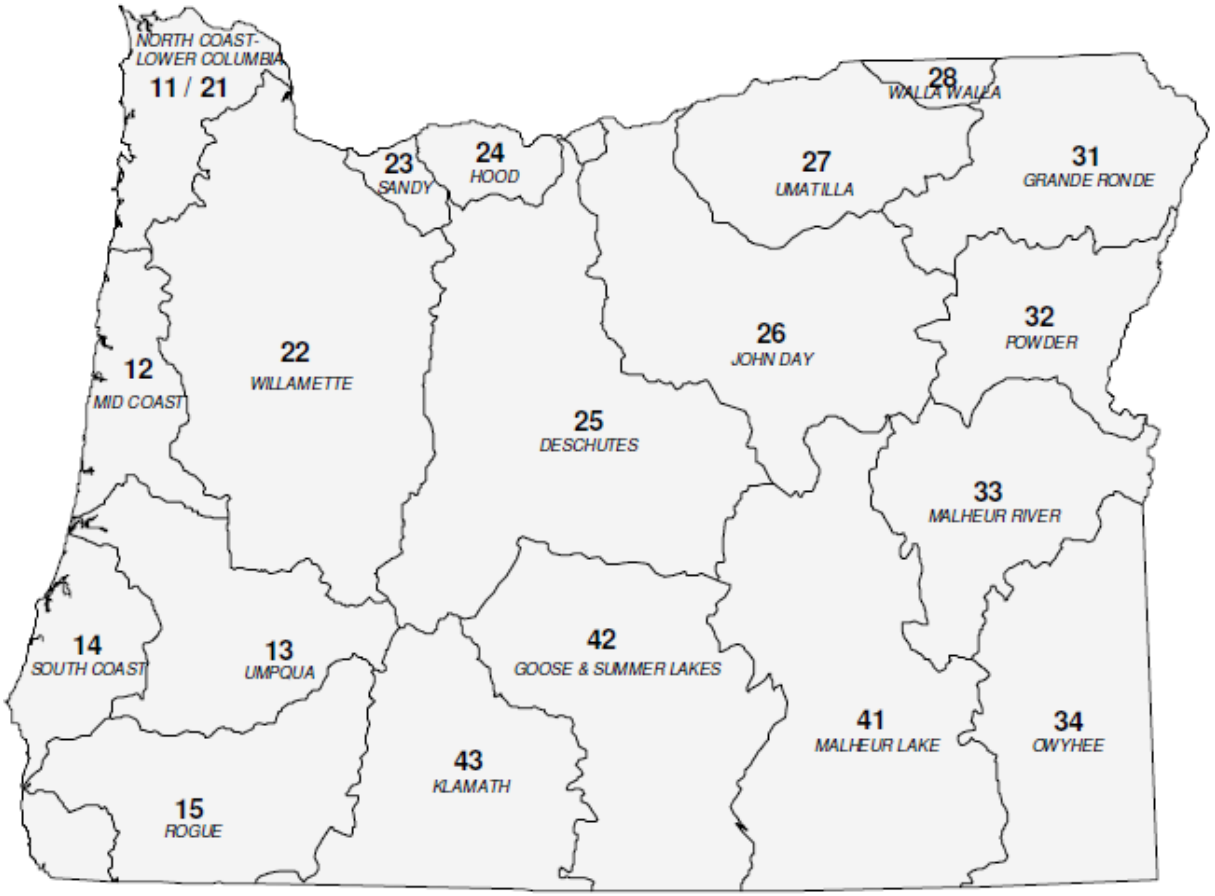
Salmon and Steelhead Spawning Use Designations*
Umatilla Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0340 – Tables and Figures

Figure 1: Oregon Basin Index Map



Basin Name	Basin #	OAR #
DESCHUTES	25	340-041-0130
GOOSE & SUMMER LKS	42	340-041-0140
GRANDE RONDE	31	340-041-0151
HOOD	24	340-041-0160
JOHN DAY	26	340-041-0170
KLAMATH	43	340-041-0180
MALHEUR LAKE	41	340-041-0190
MALHEUR RIVER	33	340-041-0201
MD COAST	12	340-041-0220
NORTH COAST-LWR COL	11-21	340-041-0230
OWYHEE	34	340-041-0250
POWDER	32	340-041-0260
ROGUE	15	340-041-0271
SANDY	23	340-041-0286
SOUTH COAST	14	340-041-0300
UMATILLA	27	340-041-0310
UMPQUA	13	340-041-0320
WALLA WALLA	28	340-041-0330
WILLAMETTE	22	340-041-0340

OAR 340-041-0340
Table 340A
Designated Beneficial Uses
Willamette Basin

Beneficial Uses	Willamette River Tributaries						Main Stem Willamette River			
	Clackamas River	Molalla River	Santiam River	McKenzie River	Tualatin River	All Other Streams & Tributaries	Mouth to Willamette Falls, Including Multnomah Channel	Willamette Falls to Newberg	Newberg to Salem	Salem to Coast Fork
Public Domestic Water Supply[1]	X	X	X	X	X	X	X	X	X	X
Private Domestic Water Supply[1]	X	X	X	X	X	X	X	X	X	X
Industrial Water Supply	X	X	X	X	X	X	X	X	X	X
Irrigation	X	X	X	X	X	X	X	X	X	X
Livestock Watering	X	X	X	X	X	X	X	X	X	X
Fish & Aquatic Life[2]	X	X	X	X	X	X	X	X	X	X
Wildlife & Hunting	X	X	X	X	X	X	X	X	X	X
Fishing	X	X	X	X	X	X	X	X	X	X
Boating	X	X	X	X	X	X	X	X	X	X
Water Contact Recreation	X	X	X	X	X	X	X[3]	X	X	X
Aesthetic Quality	X	X	X	X	X	X	X	X	X	X
Hydro Power	X	X	X	X	X	X	X	X		
Commercial Navigation & Transportation							X	X	X	

[1] With adequate pretreatment and natural quality that meets drinking water standards.
[2] See also Figures 340A and 340B for fish use designations for this basin.
[3] Not to conflict with commercial activities in Portland Harbor.

Table produced August, 2005

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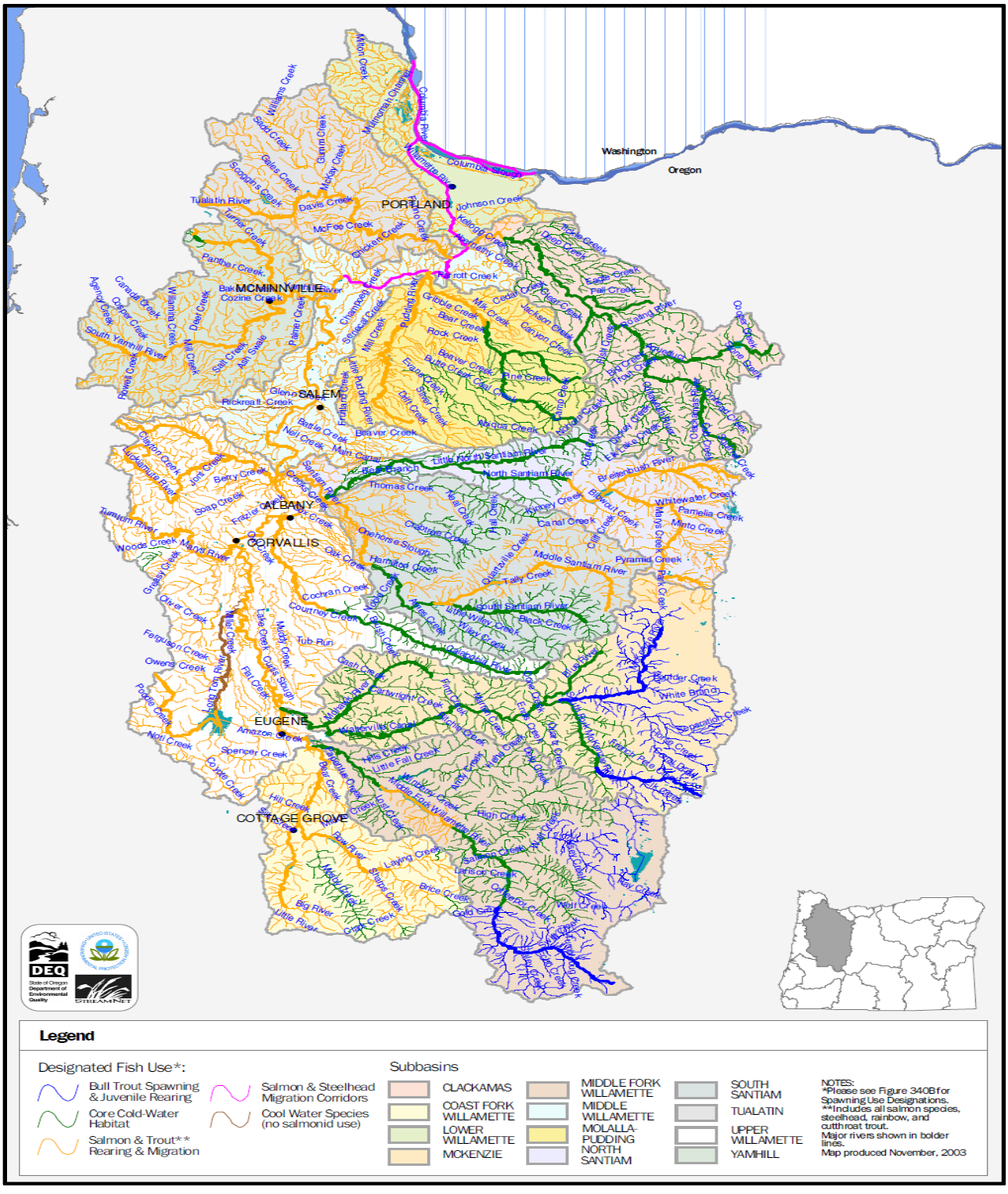
OAR 340-041-0340 – Figure 340A

Fish Use Designations* - Willamette Basin, Oregon



State of Oregon Department of Environmental Quality

OAR 340-041-0340 – Figure 340B

Salmon and Steelhead Spawning Use Designations*
Willamette Basin, Oregon