

Issue Paper

Designation of the North Fork Smith River as an Outstanding Resource Water

Discussion Draft

Submitted by:

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Water Quality Standards and Assessment

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Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.

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1. Background

Objectives of the Rulemaking

The Oregon Department of Environmental Quality is conducting a rulemaking process for rules proposed by a petition to amend the state's water quality standards. Specifically, the proposed rules would designate the Oregon portion of the North Fork Smith River, its tributaries and associated wetlands¹ as Outstanding Resource Waters under the Clean Water Act. The proposed rules also contain provisions to ensure that the current high water quality and ecological values and existing beneficial uses of these waters are maintained.

Petition to Designate the North Fork Smith River an Outstanding Resource Water

On January 4, 2016, Gordon Lyford submitted a petition to the Environmental Quality Commission and DEQ on behalf of a group of conservation and fishing organizations to designate the North Fork Smith River as an Outstanding Resource Water. Mr. Lyford withdrew the petition a few weeks later and resubmitted it with changes on February 23, 2016. State regulations require that the Environmental Quality Commission consider the petition within 90 days and either deny the petition, direct DEQ to initiate rulemaking proceedings, or deny the petition and direct DEQ to take other action.

The petition proposed amendments to DEQ's antidegradation rule at OAR 340-041-0004 designating the North Fork Smith River and its tributaries Outstanding Resource Waters. In addition, the petition proposes amending the basin-specific criteria for the South Coast Basin at OAR 340-041-0305 as follows:

- 1) The North Fork Smith River and all of its tributaries and wetlands are ORWs.
- 2) The high water quality, ecological values, and existing and designated uses of these waters shall be maintained;
- 3) DEQ shall not allow new or expanded NPDES permitted discharges to these waters, upstream waters, or tributaries to these waters;
- 4) No activities shall be allowed that would degrade the water quality, ecological characteristics or values of these waters;
- 5) Exceptions may be made to respond to public emergencies or for restoration or enhancement of water quality or ecological values.

DEQ provided an opportunity for the public to submit comments on the petition² and received comments from more than 1000 people supporting the petition. These comments noted the qualities and values of the North Fork Smith River including its exceptional water quality and clarity; pristine nature; lack of dams; valuable fisheries including the Coho salmon, a threatened

¹ Unless otherwise noted, references in this paper to the "NF Smith River" refers to the portion of the North Fork Smith River within Oregon and its tributaries.

² OAR 137-001-0070(3)

species in the Southern Oregon and Northern California coastal region; unique geology; rare wetland plants; recreational opportunities; and natural beauty. Some commenters also noted the importance of the North Fork Smith River to downstream users including tribes and as a source of drinking water to several communities. Commenters also stated that the ORW designation was needed to protect the river from potential mining and logging impacts and to protect it for future generations.

DEQ also received comments from more than ten parties opposing the petition. In summary, the comments stated that:

- ORW designation is unnecessary to protect water quality of the North Fork Smith River;
- The petition bypasses the ORW screening process outlined in DEQ's antidegradation regulations;
- The ORW designation is inconsistent with the management plan for the Rogue River National Forest;
- The designation may restrict timber harvest and grazing and thus prevent economic opportunity;
- The designation creates impediments to mining, eliminates the ability to obtain new water rights, eliminates activities with minor impacts that would not violate water quality standards; and
- The activities of dredge miners, which might be restricted, do more environmental good than harm.

DEQ staff presented information to the EQC on April 20, 2016, about the petition and the public comment received. At the meeting, the EQC directed DEQ to conduct rulemaking on the proposed rule language in the petition. In addition, the EQC directed DEQ to use the technical analyses from DEQ's June 1995 ORW Implementation Plan (DEQ 1995) in evaluating the proposed ORW designation for the North Fork Smith River. Section 3 of this issue paper contains DEQ's evaluation of this proposal relative to the 1995 ORW Implementation Plan.

What is an Outstanding Resource Water?

Oregon's water quality standards define three classifications of state waters: water quality limited waters, high quality waters and ORWs. ORWs are defined as, "high quality waters that have extraordinary or unique character or ecological value, or are critical habitat areas, such that they constitute an outstanding state or national resource."³ DEQ's antidegradation policy requires that the special water quality and ecological values of ORWs must be protected.⁴ The petition proposes to designate the North Fork Smith River as an ORW and to add rules to ensure that these waters are protected.

DEQ has never proposed to designate any water as an ORW. In the 1990s, DEQ received a petition from several entities proposing to designate several water bodies as ORWs. Although

³ OAR 340-041-0002(44)

⁴ OAR 340-041-0004(8)

DEQ prepared an analysis to determine whether these water bodies qualified as ORWs, the agency did not move forward with rulemaking .

The U.S. Environmental Protection Agency has acknowledged that certain waters may have unique water quality characteristics that go above and beyond what is considered a “high quality” (or Tier 2) water under federal antidegradation requirements. For these unique waters, federal antidegradation regulations requires that water quality be maintained. Examples of such waters mentioned in federal regulations include “waters of national and state parks and wildlife refuges and waters of exceptional recreational or ecological significance.”⁵ ONRW policies vary from state to state, but they are consistent with EPA requirements for ORW in that a state’s designation results in limiting or prohibiting new permitted wastewater discharges and disallowing other activities that would degrade the existing high quality and special characteristics or values of the ORWs. Oregon’s antidegradation policy notes that priorities for ORW designation could include National and Scenic River, State Scenic Waterways and those in federally designated wilderness areas, in addition to those mentioned in federal policy.

The rules proposed in the petition are similar to those of other states. The rules would require that the existing water quality and ecological values of the North Fork Smith River, its tributaries and associated wetlands, be maintained and protected. The proposed rules also prohibit any new or expanded permitted discharge under the National Pollutant Discharge Elimination System. As DEQ currently has not assigned any NPDES coverage in the North Fork Smith River or its tributaries, this requirement would restrict any NPDES discharges if the rule is adopted. In addition, the rule restricts any activities “that would degrade the existing water quality and ecological characteristics” of the waters of the North Fork Smith River watershed. This restriction would cover activities not otherwise covered by an NPDES permit, including grazing. These activities may be allowed under the ORW designation as long as best management practices are used to prevent the activity from degrading the existing water quality or ecological values. The U.S. Forest Service is the primary landowner in this area. Under its existing Memorandum of Understanding with DEQ, the U.S. Forest Service would be responsible for ensuring that such activities do not lower water quality. Finally, the rule would allow some temporary exceptions to prohibiting lowering water quality for emergency purposes or activities that would enhance water quality, such as restoration activities.

2. Existing Protections and Related Processes

The North Fork Smith River watershed already is subject to a number of existing protections that limit activities there. Moreover, in addition to designating the Oregon portion of the North Fork Smith River as an ORW, other processes are underway that may also provide protections to the Smith River in the future.

⁵ 40 CFR 131.12(3)

Existing Protections

Wild and Scenic River

Congress added the North Fork Smith River in Oregon to the Wild and Scenic River System in 1988. That designation was based on the river's nationally outstanding water quality, fisheries, and scenic values. According to the U.S. Forest Service's Wild and Scenic River Management Plan for Oregon's North Fork Smith River, the outstanding water quality of the river in Oregon is, "an integral part of the Smith River system overall."⁶ The plan also found that the North Fork Smith River in Oregon is outstandingly remarkable "due to its substantial contribution to the world-class fishery of the greater Smith River." (U.S. Forest Service 2003). The purpose of the Wild and Scenic River Act is to preserve rivers, "in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."⁷

Kalmiopsis Wilderness Area

In 1964, U.S. Congress designated the Kalmiopsis Wilderness Area in southern Oregon. The area includes the headwaters of the North Fork Smith River. About 1/3 of the North Fork Smith River watershed in Oregon lies within the Wilderness area. Within the area of the watershed classified as Wilderness, use or caching of motorized equipment and equipment used for mechanical transport is prohibited, including motor vehicles and motorboats. In addition, possessing or storing hay in the area is prohibited and overnight use of the area by more than 12 persons in a group is prohibited.

Late Successional Reserves under the 1994 Forest Plan

Under the 1994 Northwest Forest Plan, all of the North Fork Smith River watershed outside of the Kalmiopsis Wilderness Area and the area designated as a Wild and Scenic River was designated as a late-successional reserve. The purpose of LSRs is to protect and enhance conditions of late-successional and old-growth forest ecosystems that serve as a habitat for late-successional and old-growth forest related species⁸. Stand management and silviculture in LSRs are geared toward encouraging development of old growth characteristics through thinning and managing of understory to encourage growth of large trees, underplanting and understory vegetation removal to encourage multi-story stands, killing trees to make stands and large woody debris, reforestation, and prescribed fire (U.S. Forest Service and Bureau of Land Management 2001). Programmed timber harvest is not allowed in these areas.

Roadless Area

About 55 percent of the area of the North Fork Smith River watershed in Oregon, about 81% of the area outside of the Kalmiopsis Wilderness, is classified as a Roadless Area by the Siskiyou National Forest.⁹ In these areas, the 2001 Roadless Rule prohibits road construction and

⁶ <https://www.rivers.gov/rivers/smith-nf.php>

⁷ Public Law 90-542; 16 U.S.C. 1271 et seq.

⁸ http://www.reo.gov/general/definitions_i-m.htm#L. Accessed October 25, 2016.

⁹ http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsmrs_072581.pdf

reconstruction.¹⁰ In addition, timber harvest is prohibited from these areas with limited exceptions.¹¹

Suction Dredge Mining Moratorium

In 2013, the Oregon Legislature passed Senate Bill 838, finding that motorized mining in and directly adjacent to the beds and banks of Oregon's rivers and streams can pose significant risks to Oregon's natural resources and cultural resources. Based on these concerns, SB 838 imposed a moratorium on motorized mining for gold, silver and other precious metals that went into effect on January 2, 2016, and lasts until January 2, 2021. The moratorium covers the North Fork Smith River, a portion of Chrome Creek near its mouth, Baldface Creek and Cedar Creek.¹²

Rogue River-Siskiyou National Forest Management Goals

Consistent with the Wilderness Area, Wild and Scenic and Roadless Area designations in the North Fork Smith River watershed, the Rogue River-Siskiyou National Forest has established management goals in the area. (U.S. Forest Service 2003.) These management goals prohibit mineral extraction, tree harvest, other than for trail maintenance and public safety, The goals also limit road development to that needed for maintenance. Boating use also is limited to two trips per day with no more than six people per trip.

Proposed Restrictions or Restrictions in Process

Federal Legislation and Proposed Mineral Withdrawal

The Southwestern Oregon Watershed and Salmon Protection Act of 2015, S. 346 and H.R. 682, was introduced to Congress on February 3, 2015. It proposes to withdraw certain lands from all forms of mineral entry, appropriation, or disposal, including all areas of the North Fork Smith River watershed in Oregon not already designated as a wilderness area. As a result of the legislative proposal, the Assistant Secretary of the Interior for Land and Minerals Management published a Notice of Proposed Withdrawal and Notification of Public Meetings in the Federal Register on June 29, 2015.¹³ The proposed withdrawal is for five years while Congress deliberates on the proposed legislation. In September 2016, the Assistant Secretary of the Interior proposed amending the withdrawal to a period of 20 years (81 Fed. Reg. Vol. 190, page 67377). The BLM is taking comments on the the public notice until December 29, 2016.

Oregon Water Resources Department Rulemaking

The Oregon Water Resources Commission received a petition from the same group that petitioned the EQC. The petition asked for a rulemaking to withdraw all of the unappropriated waters of the North Fork Smith River watershed, including groundwater and surface water, from further appropriations including exempt uses, except for instream uses. The Water Resources

¹⁰ 66(9) Fed. Reg. 3244

¹¹ 36 CFR §294.13

¹² <http://geo.maps.arcgis.com/apps/webappviewer/index.html?id=dc4dc06dbaa4435aaf62ff948cc226a4>

¹³ [80 Fed. Reg. 37015](#) (June 29, 2015).

Commission directed the Water Resources Department to move forward to propose rules that classify the surface waters in the North Fork Smith River Watershed for human consumption, livestock, and instream public uses including pollution abatement, fish life, wildlife, and recreation. The proposed classification has the effect of restricting new water rights to those uses that are specified by the classification. No other uses are allowed, except water uses that do not require a water right, alternative reservoirs, and other uses as allowed by law or the Water Resources Commission approves.

The Water Resources Department published a Draft Notice of Proposed Rulemaking on September 2, 2016, with comments due by September 30, 2016. WRD plans to present final rules to the WRC in January 2017.

3. Analysis of Proposed ORW Designation

Summary of Overall Findings

The following section describes DEQ's analysis of the petitioners' proposed designation of the North Fork Smith River as an ORW. The state antidegradation policy outlines requirements for such designations and DEQ's 1995 ORW Implementation Plan provides an example for evaluating proposed designations. As described below, DEQ has concluded that the North Fork Smith River, its tributaries and associated wetlands constitute an outstanding state and regional resource that should be classified as Outstanding Resource Waters and that the proposed rule language in the petition to DEQ and EQC would protect these waters.

DEQ's antidegradation policy specifically highlights that priorities for ORW nomination include National Wild and Scenic Rivers and waters in federally designated wilderness areas.¹⁴ The entirety of the North Fork Smith River in Oregon is designated as either Wild or Scenic and much of the upper watershed lies within the Kalmiopsis Wilderness Area.

In summary, DEQ finds that the analysis supports the proposed designation of the North Fork Smith River, and its tributaries and associated wetlands as ORWs for the following reasons:

- Outstanding values of the North Fork Smith River include its outstanding clarity and habitat for Coho salmon, listed as threatened under the Endangered Species Act, and other salmon species. Moreover, its Darlingtonia wetlands support five rare species of plants protected by a U.S. Fish and Wildlife Service Conservation Agreement.
- The waters of the North Fork Smith River in Oregon are critical to supporting unique botanical ecosystems, fisheries, drinking water supplies in California, and recreational and tourism activities. In particular, DEQ finds that the North Fork Smith River is a river of exceptional recreational significance.

¹⁴ OAR 340-041-0004(8)(a)(B) and (E)

- The remote location and lack of access to the North Fork Smith River watershed, as well as management plans by the U.S. Forest Service, makes protection of the outstanding water quality and habitat value of the area technically feasible.
- ORW designation, in addition to other processes underway by Oregon, California and the U.S. Forest Service, will ensure protection of the watershed into the future.
- There would be no near-term impacts of ORW designation for grazing, mining and forestry, as these activities do not currently occur in the watershed, and the designation would likely benefit recreational businesses and users. There is a potential to prevent or limit future activity if grazing or mining would otherwise be allowed in the watershed, but this appears to be improbable at this time.
- The current management plan by the U.S. Forest Service provides mechanisms in addition to the existing water quality requirements and protections that will ensure that water quality will be protected into the future.

1995 ORW Issue Paper

In 1995, DEQ developed an Issue Paper with an Implementation Plan for designating several Oregon waterbodies as ORWs. The issue paper included an evaluation of each of the nine waterbodies considered. The technical analyses included the following elements:

- Setting. A general description of the water body.
- Outstanding values. Values, such as water quality and the presence of threatened, endangered, or unique species.
- Significant water quality parameters. Special water quality information, such as clarity, temperature, etc.
- Adequacy of limnological data. The extent of available water quality data.
- Technical feasibility. Is it technically feasible to maintain and protect the significant water quality parameters given current standards and protections?

In addition, the Issue Paper included a policy analysis with the following information for each waterbody:

- Need. Description of any risks to the waterbody.
- Ramifications. General impacts of the ORW designation.
- Managerial feasibility. Description of the feasibility of protecting the area given the management and ownership of the land

Per EQC's direction, in the following sections, DEQ has included the same types of analyses for the North Fork Smith River as were used in the 1995 Issue Paper.

Technical Analysis

Setting

The headwaters of the North Fork Smith River emerge from the west side of Chetco Peak (elevation 4,672). From the headwaters, the North Fork Smith flows south, joining the Middle Fork Smith River at Gasquet, CA., about 10 miles south of the state line, then joins the mainstem

Smith River at Hiouchi. The mainstem Smith River winds through Del Norte County, CA., and flows into the Pacific Ocean near the community of Smith River, approximately 13 miles north of Crescent City and 3.5 miles south of the Oregon border. The North Fork Smith River is utilized as a drinking water source by Gasquet, California. The mainstem river is utilized for municipal drinking water for Hiouchi and Crescent City, California, as well as Redwood State and National Parks.

The North Fork Smith River watershed in Oregon includes 57 percent (comprised of 57,990 acres/91 square miles) of the entire North Fork Smith River watershed. With the exception of 555 acres of Oregon Common School Trust lands, this entire portion of the watershed lies within the Rogue River-Siskiyou National Forest. Only one percent of the watershed lies in the snow pack zone, with 46 percent of the watershed in the transient snow zone, 2,500 to 4,000 ft. The North Fork Smith River watershed receives high rainfall with 100 to 150 inches of annual precipitation. In addition to the mainstem North Fork Smith River, the watershed includes approximately 42 miles of tributaries. Main tributaries include Baldface Creek, which drains much of the eastern portion of the North Fork Smith River watershed, and Chrome Creek, which drains much of the northern portion of the watershed.¹⁵

The remoteness, difficult access, and the absence of arable farm or grazing land in the North Fork Smith River watershed has precluded extensive development. There are no residences. Much of the watershed lies within the Kalmiopsis Wilderness and another large portion is roadless area. The remainder of the watershed on U.S. Forest Service land has been designated as Late-Successional Reserve under the 1994 Northwest Forest Plan (USFS and BLM 1994, as cited in Maiyo and Morneau 2015). Road development and timber harvest is very scattered and minimal throughout the lower portion of the watershed and outside of the wilderness.

Erosion and landslide activity in the watershed is primarily natural. Cedar Creek, Chrome Creek and Baldface Creek all have numerous natural failures and highly unstable inner gorges. There are also several large, ancient landslide forms in all these drainages (Siskiyou National Forest 1995). The U.S. Forest Service predicted higher rates of erosion for 5 to 15 years following the Biscuit Fire (Rogue River-Siskiyou National Forest 2004), followed by increased stability.

Outstanding Values

Water quality

The North Fork Smith River and its tributaries are reported to have exceptionally high water quality by users and by the U.S. Forest Service, which has identified it as a Key Watershed under the Aquatic Conservation Strategy. The entire stretch of the North Fork Smith River was designated as wild and scenic in 1988. The two wild sections extend from the headwaters to Horse Creek and from Baldface Creek to the Oregon/California state line. The portion between Horse Creek and Baldface Creek is classified as scenic. The waters are often reported as having outstanding clarity and color.

¹⁵ The Baldface Creek watershed includes Biscuit Creek, namesake of the 2002 Biscuit Fire, which burned 500,000 acres of the surrounding area, including much of the NF Smith River watershed.

Water quality data for the North Fork Smith River is scarce. A few samples taken by DEQ show clear water and a healthy biological community. Monitoring in Chrome Creek, a major tributary, and downstream in the Middle Fork Smith River, both show very low levels of turbidity, dissolved solids and nutrients. There are no pollutant sources, as the area is undeveloped and largely inaccessible. As a result, DEQ finds that it is reasonable to conclude that the water quality is outstanding and essential to protecting the ecology and recreational values of the watershed.

The waters of the North Fork Smith River in Oregon are critical to supporting unique botanical ecosystems, fisheries, drinking water, and recreational and tourism activities.

Fisheries and wildlife

The North Fork Smith River and its tributaries support salmon and steelhead fisheries. The river provides habitat for Chinook salmon, Coho salmon, steelhead, sea-run cutthroat trout and resident rainbow and cutthroat trout. It is recognized as a highly productive salmon habitat, particularly for anadromous cutthroat trout (Siskiyou National Forest 1995). Because of the high fisheries value, the North Fork Smith River watershed, including Baldface Creek, is designated a Tier-One Key Watershed under the Northwest Forest Plan. It is also identified as an important watershed for the recovery of Coho salmon listed as threatened under the Endangered Species Act in the Southern Oregon and Northern California unit. The North American Salmon Stronghold Partnership, a coalition of federal, state, and tribal governments and private groups, identified the Smith River as a salmon stronghold for Coho, steelhead, and Chinook salmon.¹⁶

The North Fork Smith River watershed also supports rare and unique plant species that grow in wetland areas such as wet meadows, riparian areas, fens, springs and seeps, and are dependent on the hydrologic regimes of these wetlands. One example is the rare serpentine *Darlingtonia*. The U.S. Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife Service have entered into a Conservation Agreement to identify, inventory and protect the unique wetland habitats that support five rare plant species of concern that live in the *Darlingtonia* wetlands in the North Fork Smith River (Hoover, et al. 2006).

Protected, threatened, or endangered terrestrial species in the area include spotted owls, wolverines and common and California mountain king snakes (Siskiyou National Forest 1995). Other species listed on Oregon's sensitive species list that are likely present in the North Fork Smith Watershed include fisher, American marten, ringtail, Townsend's big-eared bat, California myotis, fringed myotis, long-legged myotis, hoary bat, silver-haired bat, pallid bat, coastal tailed frog, western toad, northern red-legged frog, foothill yellow-legged frog, southern torrent salamander, Del Norte salamander, clouded salamander, and black salamander (ODFW 2008).

Recreation

The North Fork Smith River is part of a river system that provides water related recreation and tourism activities, including fishing, whitewater kayaking and rafting, hiking, swimming and

¹⁶ <https://www.wildsalmoncenter.org/content/uploads/2016/02/CA-Stronghold-map-June-2010-Approved.pdf>. Accessed October 5, 2016.

camping. The North Fork Smith River is viewed as a challenging and remote kayak run (U.S. Forest Service 2003). Although lack of access makes use low, one recreational business has noted that their kayak tours are expanding from 15 user-days in 2015 to 34 in 2016 and plans to expand to 100 user-days within five years. The river also attracts naturalists and researchers due to the unique geology and rare plants. The Smith River is known regionally and nationally for these recreational and research opportunities.

Significant Water Quality Parameters and Adequacy of Limnological Data

Water quality data

As noted above, the North Fork Smith River is particularly noted for its outstanding clarity and light blue color. The U.S. Forest Service has noted that the amount of fine sediment and organic matter is low and that turbidity clears quickly following storms and landslides (Siskiyou National Forest, 1995).

DEQ has collected few water samples from the North Fork Smith River. One turbidity reading taken in 2007 was reported as less than 1 NTU. Two samples taken in 1999 and 2007 from Chrome Creek, a tributary within the area being proposed for ORW designation, also were reported as less than 1 NTU. In addition, turbidity on two dates collected from the Middle Fork Smith River 1.9 miles south of the mouth of the North Fork Smith River were less than 0.2 NTU (Table 1). As this area is several miles downstream the area for the proposed designation, it provides some insight into the clarity of waters upstream.

Besides these turbidity samples, DEQ has collected few water quality samples from the North Fork Smith River watershed. Stream surveys including water quality and biota samples were taken from the river upstream of Chrome Creek in July 1993 and September 2007. DEQ used a data logger to measure temperature near the mouth of Chrome Creek throughout summer and early fall, 1999. That data showed temperatures at the higher range of that being supportive of salmonids. However, during times of higher temperatures, juvenile coho salmon and steelhead, and cutthroat trout would primarily rear in tributaries with cooler water and juvenile Chinook salmon have mostly migrated downstream to the North Fork Smith River estuary (*pers. comm.*, Todd Confer, ODFW, 10/21/2016).

The Rogue River-Siskiyou National Forest, as the primary land manager in the watershed, published a watershed analysis in 1997, which was updated in 2004 after the Biscuit Fire. Data on turbidity or water clarity is generally summary in nature. The U.S. Forest Service has reported temperature data from the North Fork Smith River, noting that the 7-day Average Daily Maximum temperature in 1994 was 78°F at the mouth of Baldface Creek and 72°F in the North Fork Smith River upstream of Baldface Creek. This temperature is near the thermal tolerance of salmonids, however the water quality was deemed unaffected by human activities. Despite the temperatures at the upper range of optimal for salmonids, the watershed still supports a robust salmonid population.

**Table 1. Water Quality Data, Middle Fork Smith River, 1.9 miles below mouth of North Fork Smith River.
(Source: California Data Exchange Network)**

Analyte	Units	5/24/02 Results	7/23/03 Results	Notes
pH	pH	8.3	8.52	
Specific Conductivity	uS/cm	117.8	132.8	
Total Dissolved Solids @ k=0.64	mg/l	75.4	85	<300 = Excellent
Turbidity, total	NTU	0.16	0.17	<1 = Pristine
Suspended Solids, total	mg/l	0.12	0.4	
Organic + Inorganic Carbon	mg/l	13.44	16.38	
Silica as SiO ₂	mg/l	14.11	15.72	
Calcium	mg/l	4.26	4.58	
Magnesium	mg/l	11.56	13.31	
Sodium	mg/l	1.99	2.78	
Potassium	mg/l	0.18	0.27	
Phosphorus	mg/l	0.003	<0.002	ND
Chloride	mg/l	2.38	N/A	
Sulfate	mg/l	2.05	2.17	
Nitrogen, total	mg/l	0.017	0.053	

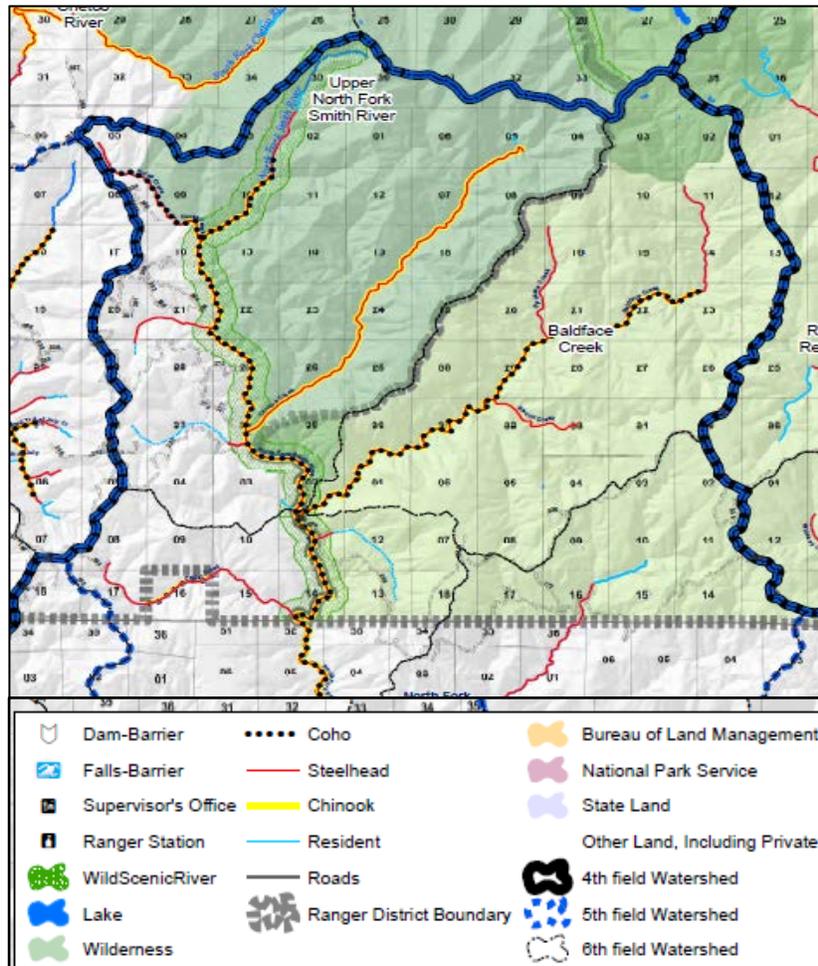


Figure 1. Fish Distribution in North Fork Smith River Watershed (source: Siskiyou-Rogue River National Forest 2016)

Fish data

Data on the presence of salmonid species is more robust than water quality data. The Rogue River- Siskiyou National Forest has documented Chinook and Coho Salmon habitat in most of the North Fork Smith River in Oregon, as well as most of Baldface Creek, a major tributary. In a survey of a 1300 meter stretch of Baldface Creek, Coho salmon were found in 14 of 21 pools surveyed, cutthroat trout in 10 of 21 pools and steelhead in every pool (California Department of Fish and Wildlife 2013). In areas where migration passage is blocked, resident trout have been found (Figure 1). Distribution maps prepared by ODFW differ slightly from those in Figure 1 and include slightly more coho habitat in Cedar and Baldface creeks, and less Chinook habitat in Chrome and Baldface creeks (*pers. comm.*, Todd Confer, ODFW, 10/21/2016).

Technical Feasibility

The lack of development and access to the North Fork Smith River watershed, as well as the management goals of the U.S. Forest Service of no logging and limited grazing promote protection of the outstanding clarity and habitat values of the North Fork Smith River. The U.S. Forest Service has noted that nearly all watershed habitat indicators of the North Fork Smith as properly functioning, with the exception of “riparian reserves” (forest cover), which is somewhat naturally limited by soil type, but which also should improve over time through natural regrowth and restoration (Maiyo and Morneau 2015).

Policy Analysis

Need for the designation

The rulemaking was initiated by a group of recreational and environmental groups who wish to protect the North Fork Smith River watershed from future activities that could degrade the outstanding quality of the watershed. The petitioners stated their immediate concern and desire for the ORW designation was due to proposed exploratory drilling by the Red Flat Mining Corporation, which currently holds 139 mining claims to mine for nickel within the North Fork Smith River watershed. These claims are primarily in the sub-watershed for Baldface Creek, a tributary to the North Fork Smith River. The claims cover approximately 2800 acres total and are within the South Kalmiopsis Roadless Area.

Ramifications of an ORW designation

This section sets out ramifications of the ORW designations. Activities in most of the watershed already are limited due to current designations and protections described in Section 2 of this document. As a result, the ORW designation would not impact current uses of the watershed. At the same time, the designation could preclude future use of areas within the watershed for some activities, as described below.

Surface Mining

The proposed ORW designation would prohibit any activities that would degrade water quality. Surface mining has the potential to degrade water quality and, as a result, would likely be restricted or prohibited in the area of designation. However, as noted in Section 2, the Assistant Secretary of Interior has withdrawn surface mining as a use within the watershed for five years and is proposing to extend the withdrawal to 20 years. Moreover, the U.S. Congress is discussing legislation that would place a permanent withdrawal on mining. As a result, it is possible that the designation would not have additional impact to surface mining given current limitations.

Suction Dredge Mining

The proposed ORW designation would prohibit DEQ from authorizing discharges under the National Pollutant Discharge Elimination System to the designated water bodies. As a result, DEQ would not assign coverage in the Smith River watershed under the NPDES 700PM permit for suction dredge mining. Currently, suction dredge mining is subject to a moratorium in Oregon until 2021, so the designation would not have an immediate impact. Were the moratorium lifted, the designation would impact those wishing to gain coverage under the permit in the watershed. In addition, suction dredge mining is not be permitted in the wilderness area portion of the watershed.

DEQ examined recent 700PM permit issuance in the region prior to the moratorium. Beginning in 2011, when DEQ started keeping records of primary mining locations, DEQ has issued permit coverage five times in the watershed: once each in 2011, 2012 and 2015 and twice in 2014. This information suggests that the designation would only result in minor limitations to suction dredge mining if the moratorium were lifted. This may be due to the lack of roads and, therefore, limited access to the area.

Pan Mining

The proposed ORW designation would prohibit activities that would degrade existing water quality or ecological values. DEQ has found no evidence that pan mining degrades water quality or ecological values. As a result, DEQ does not expect that pan mining would be prohibited due to the proposed ORW designation.

Grazing

The Forest Service examined grazing allotments in the area and has found that there are no active permitted grazing allotments. In addition, while there may be some vacant allotments in the area, the Forest Service would require that the applicant conduct documentation under the National Environmental Policy Act to accept the application. The Forest Service does not currently have capacity to complete NEPA documentation itself, so it would be up to the applicant to pay for such documentation. Moreover, because no one has shown any interest in grazing for over 15 years, the Forest Service expects to close any vacant allotments during the next Forest Plan revisions (*pers. comm.*, Mark Hocken, 10/20/2016). Given this information, DEQ concludes that the proposed ORW designation will not impact grazing in the watershed; no grazing currently occurs and the Forest Service does not expect grazing will occur in the future.

Forest Harvest – Lands managed by U.S. Forest Service

The vast majority of lands in the North Fork Smith River watershed are managed by the U.S. Forest Service. Forest harvest is already limited as a result of the various designations in place in the area, including the Kalmiopsis Wilderness designation, Roadless Area rules, Wild and Scenic River designation, and management under the 1994 Northwest Forest Plan. These limitations are described in Section 2 of this paper. Therefore, the proposed ORW designation is not expected to impact forest harvest activity.

Forest Harvest – Oregon Common School Fund Lands

Approximately 550 acres of the watershed covered by the proposed designation is Oregon Common School Fund land (Figure 2). The purpose of the Oregon Common School Fund land is to obtain “the greatest benefit for the people of this state, consistent with the conservation of this resource under sound techniques of land management.” Money from the Common School Fund is distributed to all Oregon public school districts. Forestlands in the Oregon Common School Fund, such as the parcel within the North Fork Smith River, are designated to be managed for timber harvest.¹⁷ DSL’s Asset Management Plan estimates that total parcel volume for harvest is 2,280 thousand board feet (Oregon Department of State Lands 2006). The estimated value (2016 dollars) ranges from approximately \$1.7 million to \$2.1 million.

¹⁷ Oregon Department of State Lands website. <https://www.oregon.gov/dsl/DO/Pages/aboutcsf.aspx>. Accessed October 26, 2016.

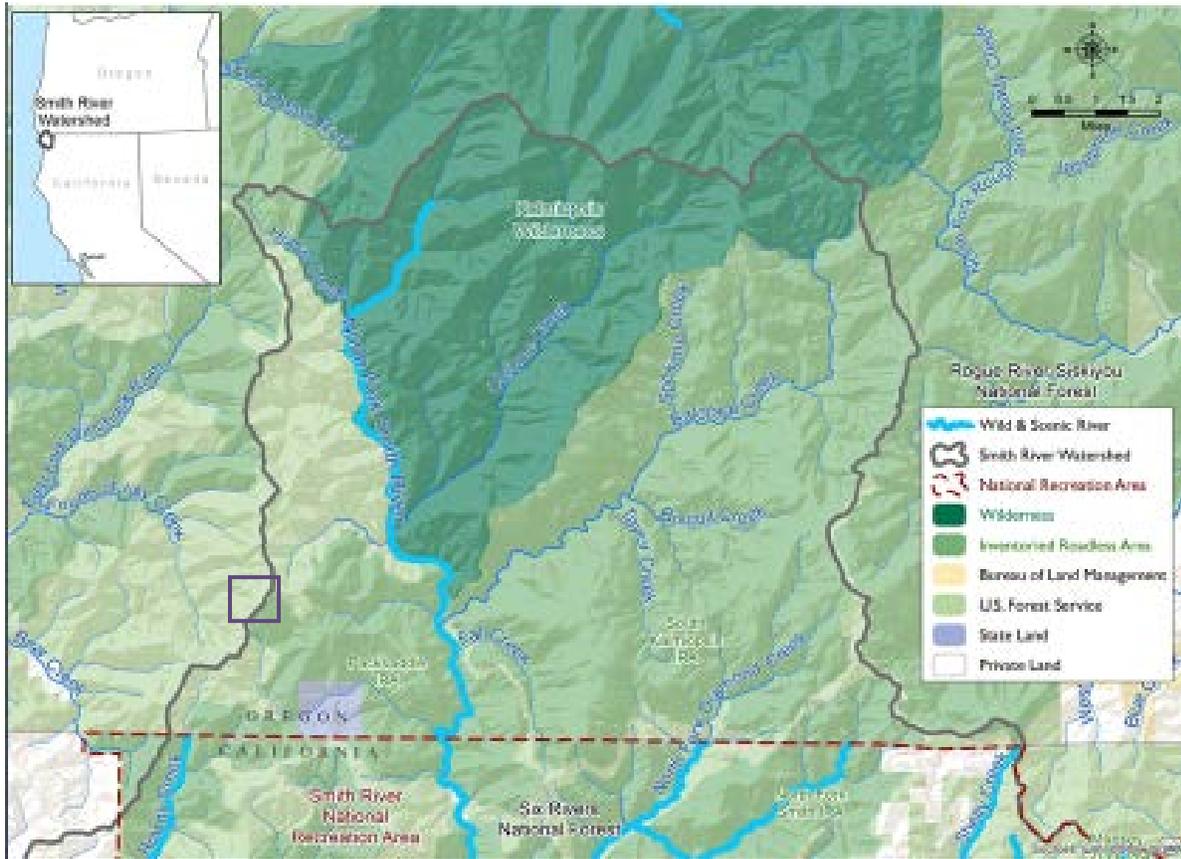


Figure 2. North Fork Smith River Watershed, Oregon with Oregon Common School Lands highlighted.

As proposed to the EQC, the ORW designation would include portions of Cedar Creek, and a few small tributaries to Cedar Creek, that run through this parcel (Figure 3). The proposed rule would preclude activities that degrade water quality other than temporary degradation for emergency or restoration purposes and, therefore, would likely limit or preclude forest harvest. As a result, if it became feasible and economically viable to log this parcel in the future, the ORW designation could result in fewer future revenues for the Oregon Common School Fund because of lower harvest value or lower land valuation.

DEQ has worked with staff at the Department of State Lands to determine if the designation would result in actual lost revenue. Guiding questions for these discussions include:

- 1) Does DSL have any current plans to harvest timber in the area?
- 2) Even if there were plans for timber harvest, would current restrictions in the surrounding areas, such as those that apply to Inventoried Roadless Areas, already preclude the possibility of harvest?

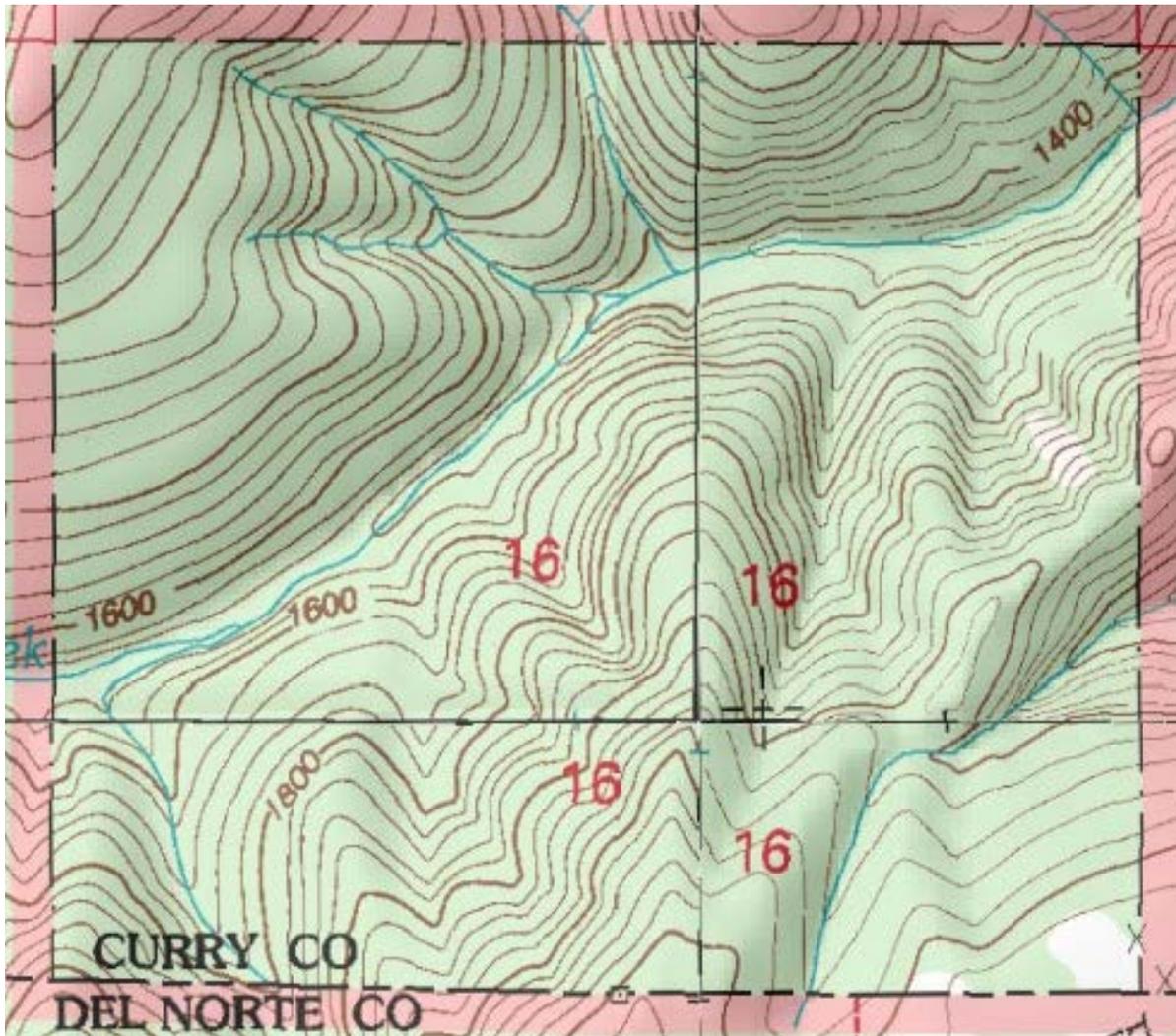


Figure 3. Closeup of Oregon Common School Lands. Cedar Creek runs from west to east through the parcel.

[Current Harvest Plans](#)

DSL has stated that it has no plans to conduct harvest in the parcel. In DSL’s 2006 Asset Management Plan, the parcel was placed in a list of scattered parcels that should be evaluated for disposal (DSL, 2006).

[Effect of Current Management](#)

The entire area surrounding the DSL parcel in the North Fork Smith River watershed on the north, east, and west is an inventoried roadless area. The area to the south is within the Smith River National Recreation Area in the Six Rivers National Forest in California. Del Norte County Road 305 stretches as far north as within approximately 150 meters of the parcel. Forest Service maps show that there may be some existing roads to the west of the DSL parcel, but it is uncertain if these roads are maintained (Rogue River-Siskiyou National Forest 2016a and 2016b). Within the inventoried roadless area in Oregon, road construction is prohibited with very limited exceptions. The management plan for the North Fork management area of the Smith River National Recreation Area emphasizes “back-country and whitewater recreation, while

recognizing the unique botanical communities, outstanding whitewater, and historic and scenic” values of the area (Six Rivers National Forest, 1992). The U.S. Forest Service only allows timber removal for limited purposes, such as safety, trail and road maintenance, recreational area development or fire protection.

If DSL had plans to harvest the area and had an ability to harvest given current management, the impact of the ORW designation would be the value of the timber. DSL also noted that the proposed petition in the area could result in lower land values for future purchase (*pers. comm.*, Shawn Zumwalt, Department of State Lands, 11/7/16). However, as noted, DSL has no current plans for harvest and it’s likely that the lack of transportation infrastructure in the area would preclude future harvest, making potential fiscal impacts of the proposed rule unlikely.

Managerial Feasibility

The U.S. Forest Service is the sole landowner of the entire North Fork Smith River watershed, with the exception of 555 acres of Oregon Common School Trust Lands managed by the Oregon Department of State Lands. ORW designation is consistent with U.S. Forest Service management plans in the North Fork Smith River, which calls for no forest harvest and limited grazing. Much of the watershed is in the Kalmiopsis Wilderness and all of the river is designated as a Wild and Scenic River, which already limits activities within the watershed. DEQ has a Memorandum of Agreement with the U.S. Forest Service to meet federal and state water quality standards in federal forest lands, which would include the proposed standards to protect the ORWs (USDA and DEQ 2013). Moreover, all surface mining activities in the watershed are subject to a temporary withdrawal by an action of the Assistant Secretary of the Interior for Land and Minerals Management.¹⁸ This withdrawal may become permanent if introduced federal legislation passes. Suction dredge mining also is subject to a moratorium in Oregon in certain parts of the watershed including the entire North Fork Smith River in Oregon, Baldface Creek, Cedar Creek and the lower portion of Chrome Creek. If the moratorium is lifted, DEQ would not assign permit coverage to suction dredge mining in the area, which already is very limited under the U.S. Forest Service management plan. Finally, if the Water Resource Commission adopts rules limiting use of the waters of the North Fork Smith River watershed for only instream uses, any uses of the water besides recreation, residential consumption and livestock watering would be disallowed. While this would provide similar limitations to ORW designation, it primarily applies to water use, rather than protection of water quality.

Conclusion

Based on the analysis, DEQ concludes that the proposed designation of the North Fork Smith River and its tributaries as ORWs is consistent with Oregon’s antidegradation policy, as a result of the watershed’s its pristine nature, outstanding clarity, high quality habitat for anadromous and resident salmonid species, and importance to recreationalists in the state and in the larger region. In addition, DEQ concludes that the proposed rule provides the necessary protections to maintain and protect the existing water quality and ecological values of the ORWs and that there would be very limited if any fiscal or economic impact caused by the designation.

¹⁸ [80 Fed. Reg. 37015](#) (June 29, 2015).

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