

Water Quality Restoration Plan

**Jumpoff Joe Creek Watershed
HUC 1710031001**

Prepared by:

Medford District Bureau of Land Management, Grants Pass Resource Area

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Water Quality Restoration Plan
 Rogue Basin
 Lower Rogue River Sub-basin
 Jumpoff Joe Creek

Bureau of Land Management Managed Lands

Jumpoff Joe Creek at a Glance	
Hydrologic Unit Code	17/10/03/10/01
Watershed area/ownership	Total: 69,382 acres BLM Ownership: 21,456 acres State, County, Private: 47,926 acres
303(d) listed parameters	Temperature
Beneficial Uses	Fish (salmonids) and aquatic life, irrigation, domestic water supply
Known Impacts(human)	Water diversions, bank erosion, riparian harvest, woody debris removal, mining
Natural factors	Serpentine and Granitic soils
Water Quality limited streams	<i>Jumpoff Joe Creek</i> mouth to river mile 21.3, <i>Louse Creek</i> to river mile 12.3, and <i>Quartz Creek</i> to river mile 7.3

Statement of Purpose

Water quality standards are established to protect beneficial uses of the State's waters. Beneficial uses are assigned by basin in the Oregon Administrative Rules (OAR-340-041-0271, Table 271A, November 2003) for water quality. Beneficial uses are:

Public domestic water supply	fishing
industrial water supply	boating
irrigation	water contact recreation
livestock watering	aesthetic quality
fish and aquatic life	hydropower
wildlife and hunting	private domestic

The Water Quality Restoration Plan (WQRP) for the Jumpoff Joe Creek watershed was prepared to fulfill a requirement of Section 303(d) of the Clean Water Act. It is organized as per part 4(Water Quality Restoration Plan Template) of the Northwest Forest Plan Temperature TMDL Implementation Strategies (USFS, BLM 2004). This plan covers all the Bureau of Land Management lands within the Jumpoff Joe Creek watershed (Figure 1), Hydrologic Unit Code 1710031001. This WQRP complies with the Water Quality Management Plan within the Rogue River Basin TMDL, 2008.

The DEQ 2004/2006 303(d) list is the current standard. This WQRP addresses all listings on the 303(d) list for the plan area. Within the plan area, Jumpoff Joe Creek, Louse Creek, and Quartz Creek were placed on the State of Oregon's 303(d) list for failure to meet the water temperature criteria outlined below.

Temperature Standard:

The Oregon water quality temperature standard has been re-written. The standard that now applies to the Jumpoff Joe Creek watershed was approved by EPA on March 2, 2004 and is found in OAR 340-041-0028 (4) (a-c) (ODEQ 2005). Excerpts of the 2004 standard read as follows:

(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 OAR 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 OAR 340-041-340: Figures 130A, 151A, 160A, 170A, 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 OAR 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);

Element 1: Condition Assessment and Problem Description

The Oregon Department of Environmental Quality (ODEQ) gathers and assesses water quality data for streams in Oregon and maintains a list of streams (the 303(d) list) that do not meet water quality standards. These streams are considered water quality limited, meaning that beneficial uses of the stream are adversely affected by water quality conditions. Jumpoff Joe Creek watershed has three stream segments listed on the 2004/2006 303(d) list. Table 1 displays the stream, miles and water quality parameter not meeting standards.

Table 1. Jumpoff Joe Creek, 2004/2006, 303(d) listed stream

Stream Segment	Miles of Listed Stream	Est. Miles on BLM	Parameter	Beneficial Use	Standard
Jumpoff Joe Creek	21.3	1.2	Temperature (Summer)	Salmon and trout rearing and migration	7-day average max. ≤ 18° C
Louse Creek	12.3	1.3	Temperature (Summer)	Salmon and trout rearing and migration	7-day average max. ≤ 18° C
Quartz Creek	7.3	0.8	Temperature (Summer)	Salmon and trout rearing and migration	7-day average max. ≤ 18° C

Jumpoff Joe Creek is a 69,382 acre watershed which flows into Rogue River. Jumpoff Joe Creek is not a key watershed. Key watersheds are designated in the Northwest Forest Plan (USDA, USDI 1994a) as “crucial to at-risk fish species and stocks (Tier 1) and provide high quality water (Tier 2). Upper Sucker Creek watershed is a Tier 1 key watershed.

DEQ found 7-day average maximum stream temperatures above 18° C in Jumpoff Joe Creek, leading to 303(d) listing. The listed stream segment is River Mile (RM) 0 to RM 21.3, measured at 2 sites on Jumpoff Joe Creek. This is not reflected by water temperatures measured by BLM in the upper part of Jumpoff Joe Creek in section 3, T35S, R5W, estimated RM 15.

DEQ found 7-day average maximum stream temperatures above 18° C in Louse Creek, leading to 303(d) listing. The listed stream segment is River Mile (RM) 0 to RM 12.3, measured at 2 sites.

DEQ found 7-day average maximum stream temperatures above 18° C in Quartz Creek, leading to 303(d) listing. The listed stream segment is River Mile (RM) 0 to RM 7.3, measured at 2 sites.

A reduction of both baseflow and riparian vegetation in the mid- and lower reaches of Jumpoff Joe, Louse, and Quartz Creeks are primarily responsible for increased water temperatures. Reduced volumes of water are more susceptible to warming and reduced vegetative cover increases solar radiation input.

In 2008 the DEQ approved the Rogue River Basin TMDL. The following is taken from Chapter 2:

2.7.2 Effective Shade Targets

The Rogue River Basin Temperature TMDL incorporates other measures in addition to “*daily loads*” to fulfill requirements of the Clean Water Act §303(d). Although a loading capacity for heat energy is derived (e.g. kilocalories), it is of limited value in guiding management activities needed to solve identified water quality problems. In addition to heat energy loads, this TMDL allocates “*other appropriate measures*” (or surrogate measures) as provided under EPA regulations (40 CFR 130.2(i)).

Effective shade is the surrogate measure that translates easily into solar heat load. It is simple to measure effective shade at the stream surface using a relatively inexpensive instrument called a Solar Pathfinder™.

The term ‘shade’ has been used in several contexts, including its components such as shade angle or shade density. **For purposes of this TMDL, effective shade is defined as the percent reduction of potential daily solar radiation load delivered to the water surface.** The role of effective shade in this TMDL is to prevent or reduce heating by solar radiation and serve as a linear translator to the loading capacities.

Unless otherwise stated within this chapter, the applicable nonpoint source load allocations for Rogue River Basin streams are based upon potential effective shade values presented in this section and the human use allowance (0.04°C cumulative increase at the point of maximum impact).

Most streams simulated have no assimilative capacity, which translates into a zero heat load allocation for nonpoint sources. When a stream has assimilative capacity, nonpoint and point sources may receive allocations greater than background.

Baseflow

Consumptive use for agriculture and domestic supplies has reduced summer surface water flows in Jumpoff Joe, Louse, and Quartz Creeks. According to the Oregon Department of Water Resources, there are 297 points of diversion in Jumpoff Joe Creek watershed. Currently, no water is available for future water rights claims in Jumpoff Joe Creek. In other words, surface waters in the Jumpoff Joe Creek Watershed have been fully appropriated. Exacerbating the effects of surface water diversions on baseflows may be groundwater withdrawals for domestic and irrigation use. Water withdrawn from wells can be hydrologically connected to the surface water. In these instances, ground water is removed that would have flowed subsurface, discharging into streams, however there is no known study that shows this phenomenon is occurring in the Jumpoff Joe Creek watershed.

Riparian Condition

Floodplains in the lower gradient valley bottoms of Jumpoff Joe Creek, Louse Creek, and Quartz Creek have been cleared for agricultural production, resulting in narrow strips (30-75 feet) of hardwood dominated vegetation along the stream channel. In the moderate to high gradient reaches, rotational harvest on private lands and past BLM forest practices has reduced distribution of mature riparian forest stands.

Roads along sections of Jumpoff Joe Creek, Louse Creek, Quartz Creek, Jack Creek, and Ewe Creek as well as reaches of several unnamed tributaries, prevent portions of future riparian vegetation development. In many riparian zones, fire suppression and/or past harvest activities have led to high density, slow growing riparian stand conditions.

On BLM managed lands over the past 12 years management activities in the riparian zone focused on the protection of riparian functions of instream wood recruitment, stream shade and wildlife corridors. The recovery of past riparian harvest units with a management emphasis to maintain or improve riparian zones has led to an improving trend in riparian and aquatic conditions.

Based on the ownership distribution and aerial scanning (ArcGIS Explorer), approximately 75% of the riparian zones in the Jumpoff Joe Creek watershed lack mature tree structure necessary to provide large instream wood. On private lands, in the lower gradient floodplain reaches of Jumpoff Joe, Louse, Granite, and Ewe Creeks, reductions in riparian vegetation have decreased stream shade, thereby increasing solar radiation input into surface waters. While harvest activities fragmented riparian habitats, typical stream shade on BLM managed land in Jumpoff Joe Creek watershed is high. This is reflected in the the following table:

Table 2: Effective Shade Targets for BLM-Managed Lands in the Jumpoff Joe Creek Analysis Area (ODEQ 2004: Appendix A)

Streams	Tributary to	Stream Miles on BLM	Current Shade 1/	Target Shade 1/	Additional Shade Needed 2/	Time to Recovery 3/ (years)
Louse Creek	Jumpoff Joe Creek	2.2	90	90	0	0
Quartz Creek	Jumpoff Joe Creek	0.7	95	95	0	0
Jumpoff Joe Creek	Rogue River	4.3	80	82	2	0

1/ Current shade and target shade refer to percent-effective shade defined as the percent reduction of solar radiation load delivered to the water surface.

2/ Additional shade needed is the increase in percent-effective shade required to meet the target shade.

3/ If current shade is $\geq 80\%$, the time to recovery is listed as 0 years. If current shade is $< 80\%$, the time to recovery is listed as the number of years needed to reach full system potential percent-effective shade. Any increase over 80% effective shade is considered a margin of safety. At a value of $\geq 80\%$ effective shade, a stream is considered recovered and the stream should not be a candidate for active restoration. Additional shade should come from passive management of the riparian area. Years to recovery are a weighted average of recovery time for individual stream reaches.

Many riparian stands are overstocked due to past activities and fire suppression. These stands exhibit lower growth rates, reduced stand resiliency, and higher fire risk. The Grants Pass Resources Area actively investigates riparian conditions to identify riparian stands which would benefit from thinning or underburning. Benefits include increased growth rates, stand complexity, as well as reduced fire danger, leading to improved stream shade and wood recruitment.

Channel Condition

Aerial photographs following the 1964, 1974, and 1997 flood events display widespread bank erosion in the low gradients parts of Jumpoff Joe Creek and Louse Creek downstream from BLM land. Miles of creek were scoured, fully exposing the channel. In addition, bedload was increased due to channel scour upstream. Currently, channel conditions are generally poor as indicated by high levels of bank erosion, high riffle to pool ratios, high extent of exposed bars in the lower valley. Prevalent bank erosion in the downstream valley areas of non-BLM land indicate that energy moving through the system has increased or the ability to dissipate energy has decreased.

Riparian surveys, completed in the summer of 2006, on BLM land in Upper Jumpoff Joe subwatershed and the upper part of Louse Creek subwatershed showed a prevalence of improved functioning condition, see Table 2 below (USDI, Bureau of Land Management, Grants Pass Resource Area. 2006).

Table 2. Number of BLM Stream Reaches and Properly Functioning Condition Ratings

Subwatershed	PFC	FARU	FARD	NF
Up.J.Joe	20	18	0	0
Louse	24	27	3	1

FARU – Function at Risk, Upward Trend
 FARD – Functioning at Risk, Downward Trend
 NF – Not Functioning Properly

Peak flow increases have been linked to channel instability, as greater flow volume yields greater energy. Peak flow increases in Jumpoff Joe watershed main streams (particularly Jumpoff Joe Creek and Louse Creek) are unlikely given the vegetative condition, and lack of scale and disturbance, in the transient snow zone. Some roads intercept surface and groundwater and thus have increased flow routing to the stream network. But, given the low level of roaded area (2.4% of the upper watershed area), though there may be isolated effects to runoff and sedimentation at local sites, landscape scale flow changes resulting in increased peak flow magnitude are highly unlikely (USDI, Bureau of Land Management, Medford District, Grants Pass Resource Area. 2008).

Rather, stream flow velocity increases are due to channel modifications. Stream kinetic energy increases exponentially with flow velocity. Stream velocity increases with depth and with gradient, and decreases in complexity. There is a lack of large wood in moderate gradient reaches. Ongoing stream degradation is occurring in the lower watershed along with decreased complexity. All three variable adjustments lead to increased streamflow velocities. Additive to the effects of increased energy is decreased resistance to bank scour by removal of riparian vegetation. Riparian zones in the mid and lower reaches of Jumpoff Joe and Louse Creeks were cleared prior to the 1964 flood event. The combination of increased stream velocity, riparian vegetation removal, and bedload increases have led to high levels of bank erosion.

Presently, channel banks are the primary energy dissipater, resulting in continued bank erosion. The continued altered channel processes are the mechanism responsible for high levels of bank erosion and low habitat complexity.

While bank erosion is high through the lower gradient floodplain reaches downstream of BLM land, field surveys and aerial photographs show that the channel has changed locations at some sites and widened in the floodplain. Widened and generally shallower channels lead to higher stream temperatures.

Table 3. Summary of Watershed Conditions BLM Administered Lands in the Jumpoff Joe Creek Watershed

Riparian Vegetation	
Historic Condition	<ul style="list-style-type: none"> • Late seral conifers dominant. • Diverse mix of species and age classes (fire driven ecosystem).
Present Condition	<ul style="list-style-type: none"> • Mature hardwoods, small and large diameter conifers, dense understory. • Common non-natives, blackberries & scotch broom in lower stream corridors.
Forest Health and Productivity	
Historic Condition	<ul style="list-style-type: none"> • Frequent (<25 years), low intensity fires maintained low fuel levels and open understory. • Forest stands had less dense with larger trees than current • Forest stands were diverse in age • Forests composed mainly of Doug.-fir/P.pine, but Jeffrey pine on serpentine soils (Walker Mt.) and White fir/Western hemlock in high elevation upper Jumpoff Joe Creek drainage area. • In lower elevations White oak with shrubs and/or grasses are common
Present Condition	<ul style="list-style-type: none"> • Fire suppression has resulted in high fuel loads and • High plant densities commonly with low vigor (60% pole stands). • No W.hemlock after 1947 harvest. • Common forest mortality at lower and middle elevation due to drought.
Instream Large Wood	
Historic Condition	<ul style="list-style-type: none"> • Adequate supply based on stands in Upper Louse, Upper J.Joe, and Upper Quartz Creek drainage areas.
Present Condition	<ul style="list-style-type: none"> • Common lack of large wood due to “stream cleaning”. • Stream road crossings disrupt dynamic transport of wood.
Roads	
Historic Condition	<ul style="list-style-type: none"> • Very few roads or stream crossings until mining and logging started.
Present Condition	<ul style="list-style-type: none"> • Roads occupy moderate levels of Upper Louse and Quartz Creek drainage areas and low levels of Upper J.Joe Creek drainage areas, not enough to increase measurable peak flows over historic condition. • Roads located in riparian areas commonly with stream crossings. • OHV use is prevalent in the Upper Louse Creek and Quartz Creek drainage areas.
Flow Regime	
Historic Condition	<ul style="list-style-type: none"> • Stable channel morphology developed in response to climate with natural ranges of streamflows (winter peaks and summer lows).
Present Condition	<ul style="list-style-type: none"> • Winter peak flows may be increased slightly but not measurable. • Summer los flows reduced by water withdrawals.

(Ref.: USDI, Bureau of Land Management, Medford District, Grants Pass Resource Area. 1998 and USDI, Bureau of Land Management, Medford District, Grants Pass Resource Area. 2008)

Element 2: Goals and Objectives

For BLM, in the Jumpoff Joe Creek Watershed, the primary goal within the riparian reserves is the maintenance and long-term restoration of riparian

ecosystems as identified in the Northwest Forest Plan Aquatic Conservation Strategy (ACS) objectives (USDA, USDI. 1994). Specific project goals include:

- 1) Manage riparian areas within one to two tree-heights of all streams to benefit riparian health and aquatic habitat. Management includes preserving current conditions (protective) and silvicultural treatments to increase stand vigor and resiliency (proactive).
- 2) Manage BLM administered riparian lands to reach their shade potential.
- 3) Maintain/improve riparian reserve health on BLM managed lands to maximize large wood recruitment into the channel and riparian environments. The instream wood will benefit downstream channel stability and improve aquatic habitat conditions. Maintenance of late-seral conditions where they currently exist. In early, mid-seral, and mature stands that lack structural complexity, treatments would accelerate stand development into late-successional/mature structure (i.e. large trees, snags, down wood, species diversity and hardwood retention).
- 4) Return stand density and fuel loads to range of natural variability to reduce potential for stand replacement events.

To accomplish this, the Northwest Forest Plan (NWFP)(USDA, USDI 1994) and the Medford District Resource Management Plan (RMP)(USDI 1995) provides management guidance to maintain or improve riparian health. The most relevant direction in the NWFP is included in the Aquatic Conservation Strategy (ACS) objectives; the ACS was developed to restore and maintain the ecological health of watersheds and to protect salmon and steelhead habitat on lands within the range of Pacific Ocean anadromy. The ACS contains specific water quality objectives that protect the beneficial uses identified in the state's water quality standards. Riparian reserves, key watersheds, watershed analysis, and watershed restoration components of the ACS are designed to operate together to maintain and restore the productivity and resiliency of riparian and aquatic ecosystems. In addition to the ACS, the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl, April 1994, describe land allocations and specific standards and guidelines (S & Gs) for managing these land allocations. These S & Gs effectively serve as Best Management Practices (BMP's) to prevent or reduce water pollution further contributing to goals of Clean Water Act compliance.

The BLM adopted a new plan in December, 2008, (RMP2008). However, USDI Secretary Salazar withdrew the plan in July, 2009. As a result, western Oregon BLM currently operates under the Northwest Forest Plan and the Medford District

under the associated Medford RMP (USDA, USDI. 1994 and USDI, Bureau of Land Management, Medford District. 1995).

Element 3: Proposed Management Measures

Management and protection of riparian zones will occur at two levels — programmatic and project. The Medford RMP include BMPs that are important for preventing and controlling to the “maximum extent practicable” non-point source pollution and achieving Oregon water quality standards.

Programmatic: The Northwest Forest Plan standards and guidelines will be used to meet the goals of Jumpoff Joe Creek Water Quality Restoration Plan including:

- Stream Temperature – Shade Component
Aquatic Conservation Strategy: B9 – B11, C30
Riparian Vegetation: B31
Riparian Reserves: B12 to B17
Watershed Restoration: B30
- Stream Temperature – Channel Form
Aquatic Conservation Strategy: B9 – B11, C30
Riparian Vegetation: B31
Riparian Reserves: B12 to B17,
Watershed Restoration: B30
Roads: B19, B31 to B33

The current riparian reserve width for the fish-bearing streams in the Jumpoff Joe Creek Watershed is 300 feet on each side of the stream. For non-fish bearing streams the riparian reserves is 150 feet on each side.

Projects: The second level of management and protection occurs at the project planning level. The project planning area is usually at the fifth field watershed scale. A team of specialists including fish biologists, hydrologists, botanists and silviculturalists examine watershed analysis conclusions and conduct field surveys to determine the most appropriate actions necessary to improve and/or maintain riparian health and protection. These actions typically include developing silvicultural prescriptions to improve stand vigor, decommissioning roads, planting, and designing site specific BMPs.

The Northwest Forest Plan (NWFP) Temperature TMDL Implementation Strategies (USDA Forest Service, USDI Bureau of Land Management. 2005) provides specific guidance for silvicultural practices within riparian reserves. Shade curves were computed based on stream width, orientation, and topography factors and show the required minimum no-cut buffers necessary to maintain and restore site-potential riparian shade. The shade curves and field surveys will ensure maintenance of riparian stands providing primary shade (those stands which provide shade between the hours of 10am and 2pm).

The Granite Joe landscape team of BLM specialists, incorporated recommendations in the Jumpoff Joe Watershed Analysis (USDI 1998) and guidelines included in TMDL Implementation Strategies (USDA Forest Service, USDI Bureau of Land Management. 2005) in developing the Granite Joe Landscape Project. The Granite Joe project area is in the far east part of the Jumpoff Joe Watershed. The team identified as much as; 1171 acres of various levels of commercial thinning some with small group selections, 243 acres of commercial thinning with structural retention, 377 acres of structural retention (regeneration cut), 467 acres of density management/ understory reduction (understory management), and 319 acres of restoration thinning. All treatments in the riparian reserve would be outside the 50 foot no-treatment buffers and designed to meet the objectives of the Aquatic Conservation Strategy (ACS), Northwest Forest Plan.

Under the Granite Joe proposal up to 2.2 miles of new road would be constructed to current BLM standards. Approximately 98 miles of existing road would be improved to current BLM standards. This would improve hydrologic function and provide long term sediment reduction. Also, there would be 2.02 miles of existing road decommissioning. (USDI 2008).

Instream large wood is planned under Granite Joe Project. Wood placement would be designed to increase habitat complexity and channel function. Structural elements would be stable via large pieces of wood jammed between existing mature riparian trees; use of boulders would provide additional stability where needed. 6.6 miles of streams were identified for wood placement.

Specific design features, or BMPs, applied to the proposed treatments within the Granite Joe project area include:

- Vegetation providing primary shade would be retained; no management activities would occur within 50 feet of all perennial streams and intermittent streams.
- Silvicultural treatments in the riparian reserve can be described as thinning from below treatments, with the intention of leaving the larger/healthier trees in the overstory. Silvicultural treatments in riparian reserves would not reduce the canopy coverage below 50% with the expectation that in ten years canopy cover would increase to 60%-70%. Vegetation responsible for providing shade to the active channel would be retained. The stocking level would provide adequate future recruitment of Large Woody Debris (LWD) to exceed the desired >25 key pieces per mile. 102 acres of understory stand management.

- Prescribed fuel treatments including, thinning, burning, and brushing would not occur within 50 ft for both intermittent and perennial channels. All trees greater than 8" DBH would be retained. 40 acres were identified for treatment.

Another project that is being proposed partially in the Jumpoff Joe Creek watershed, on the west part, is the Quartz Creek Off Highway Vehicle (OHV, includes motorcycles, 4WD's, and ATV's) Management Plan. The project area is currently being heavily used by OHV's. When the plan is implemented, the existing OHV activity would be actively managed. This would include decommissioning of eroding trails and trails near streams, decommissioning of oversteep trails, and relocating replacement trails away from streams and on stable/less steep areas, monitoring, and enforcement.

Both Granite Joe Landscape and Quartz Creek OHV projects are currently in the NEPA planning stages. The decision for restoration parts of Granite Joe will likely be made, as part of Stream Restoration Programmatic EA, in the Spring of 2010. The decision for the timber sale portion of Granite Joe is postponed indefinitely. The Quartz Creek OHV project decision is scheduled for Spring of 2010.

Element 4: Timeline for Implementation

The NWFP was implemented with the signing of the Record of Decision (ROD), April 13, 1994. Inherent in the implementation is the passive restoration of riparian areas that ensued as a result of the riparian reserve buffers/allocation. Implementation of active restoration activities beyond the inherent passive riparian restoration occurs with watershed analyses and site-specific projects.

Implementing specific activities designed to improve riparian conditions requires analysis under the National Environmental Policy Act (NEPA). In this case planning, development of alternatives, and environmental effects analysis have taken place for the Granite Joe landscape planning project. In 2008, the Grants Pass Resource Area developed the plan. The plan identified road improvements, riparian silvicultural prescriptions outside the primary shade zone, stream restoration, and fuel reduction activities, leading to improved stand resiliency and productivity. The timing for active restoration implementation of these activities is dependent on funding levels and the NEPA process, see Element 10 below.

Stream temperature recovery is largely dependent on vegetation recovery. Actions implemented now will not begin to show returns in terms of reduced stream temperatures or improved aquatic habitat for a number of years. Due to the mixed ownership in the Jumpoff Joe Creek watershed, water temperature decreases will be dependent on non-BLM land management actions.

Stream shade levels are increasing in the Jumpoff Joe Creek watershed on BLM lands. With passive restoration (riparian buffers) leading to improvement of past riparian harvest units combined with active riparian management to improve health, resiliency, and growth rates, streamside shade levels are expected to continue to increase.

Element 5: Identification of Responsible Participants

The BLM signed a Memoranda of Agreement (MOA) with ODEQ (USDI, USDA, ODEQ. 2003) that provides a framework for effective cooperation on programs and projects to pursue the shared goal of attainment of state water quality standards. To that end, the MOA includes provisions for implementation that satisfy State and Federal point and non-point source pollution control requirements, develops a common understanding of water quality protection and restoration, and constitutes the basis for continuing formal designation of the BLM and USFS as Designated Management Agencies (DMA).

Element 6: Reasonable Assurance of Implementation

The ROD and associated Medford District Resource Management Plan (RMP) were approved by the Oregon/Washington State Director on April 14, 1995. The ROD approves the BLM's decisions for managing 870,000 acres in portions of Josephine, Jackson, Douglas, Curry, and Coos counties.

Implementation and monitoring of the ACS and use of the Sufficiency Analysis logic and tools provide reasonable assurance that watersheds under the direction of the NWFP will move towards attainment of water quality standards and beneficial use support. Implementation and adoption of the MOAs also provide assurances that water quality protection and restoration on lands administered by the FS and BLM will progress. Additionally, adherence to BMP's developed through the NEPA process and project design guidelines instituted for Threatened and Endangered (T&E) species protection, under the Endangered Species Act, further provides reasonable assurance of progress toward water quality improvement. However, BLM acknowledges that periodic review of the Sufficiency Analysis and TMDLs is necessary to provide the assurance that goals and objectives are being met.

Element 7: Monitoring and Evaluation

Monitoring will be used to ensure that decisions and priorities conveyed by BLM plans are being implemented, to document progress toward attainment of state water quality standards, to identify whether resource management objectives are being attained, and to document effectiveness of management actions. If monitoring indicates that sufficient progress toward the goals contained in this plan are not being made, the goals and activities will be revisited and changes made as necessary to the action plan to assure attainment of water quality standards.

The primary objective of this WQRP is to increase stream shade, reduce sedimentation, and improve aquatic habitat. Due to the mixed ownership in the Jumpoff Joe Creek watershed, attainment of the water temperature standard requires multi-ownership participation and commitment to improve riparian function.

Researchers at the Forest Service Pacific Northwest Experiment station are assessing the effectiveness of the management actions directed by the NWFP to improve water quality. This effort is monitoring the passive restoration measures implemented in this WQRP.

Grants Pass Resource Area (GPRA) will continue monitoring water temperatures in Jumpoff Joe Creek. Likewise DEQ will continue to monitor stream temperatures of Jumpoff Joe and Louse Creeks on an intermittent basis.

Element 8. Public Involvement

Many of the elements contained in this WQRP derived from existing land use planning documents such as the Medford RMP and the NWFP. These documents received broad based public comment during scoping prior to development of alternatives and during public appeal of both documents. Both documents also received numerous responses to the Draft Environmental Impact Statement that were published for review, prior to development of the Final Environmental Impact Statements and Record of Decisions.

The Oregon Department of Environmental Quality has lead responsibility for creating (TMDLs) and (WQMP) to address water quality impaired streams in Oregon. This Water Quality Restoration Plan will be provided to DEQ for incorporation into an overall WQMP for the Rogue River Basin. DEQ has a comprehensive public involvement strategy, which includes informational sessions, mailings, and public hearings. The Rogue River Basin TMDL was completed in December, 2008.

Additionally, the NEPA process requires public involvement prior to land management actions, providing another opportunity for public involvement. During this process, BLM sends scoping letters and schedules meetings with the public. The public comment period ensures that public participation is incorporated into the decision making process.

Element 9. Maintenance of Effort over Time

The conditions leading to water quality limitations and 303(d) listing have accumulated over many decades. Management measures to address these factors will be carried out over an extended period of time. Furthermore, once restorative actions and protection practices achieve desired results, continued vigilance will be required to maintain water quality standards.

Northwest Forest Plan and Federal Land Management Plans

The NWFP and the Medford Resource Management Plan are ongoing federal land management plans. The NWFP became effective in 1994. The RMP was implemented in 1995 and covers a period of approximately 10 years or until the next RMP revision. Federal law requires RMP and Forest Plan implementation.

Water Quality Restoration Plan

The Medford District BLM, working in partnership with the DEQ, is responsible for ensuring the WQRP is implemented, reviewed, and amended as needed. This includes the following:

1. Review of the responsible agency's land treatments, verifying consistency with plans.
2. Promotion of ongoing communication, financial support, and partnerships for implementing priority projects.
3. Continue efforts to explore revised or additional management measures based on results of monitoring activities and other sources of information.
4. As additional information becomes available and techniques are improved, continue to improve and revise cost/benefit estimates.

Element 10. Costs and Funding

Active restoration can be quite costly, depending on the level of restoration. The following are estimated average costs of typical restoration activities (implementation only, does not include planning costs):

Riparian thinning	\$4,000 per acre
Instream LWD Placement	\$20,000 -30,000 per mile

There are several sources of funding for restoration activities. This includes congressionally appropriated budget line items for restoration, and grants.

Funding for Stream Restoration

At this time there has been funding approved for Jumpoff Joe stream restoration for FY'09,'10. NEPA cannot be completed (through the Decision Record) for the entire Granite Joe landscape level EA until the USF&W releases the Biological Opinion (BO) for the Northern Spotted Owl (NSO). It is unknown when the BO will be released. However, a separate Decision Record can be issued for the stream restoration part of the Jumpoff Joe EA, as stream restoration would have no effect on the NSO or its habitat.

Grants

Federal and state programs such as the Oregon DEQ 319 Non Point Source (NPS) Water Quality program and the Oregon Watershed Enhancement Board (OWEB) provide funds for watershed restoration activities. The BLM will be working with the local Middle Rogue River

Watershed Council to forge partnerships to complete restoration projects on a cooperative basis.

Every attempt will be made to secure funding for restoration activities but it must be recognized that the federal agencies have political and economic realities. Federal activities are subject to public and legal review prior to implementation; legal clearance is necessary prior to implementation. Historically, budget line items for restoration are a fraction of the total requirement. Grants may prove to be an increasingly important mechanism for funding restoration but funds are subject to availability, eligibility and approval of external parties.

Literature Cited

USDA, USDI. 1994. Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl. Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl. Portland, Oregon.

USDA Forest Service, USDI Bureau of Land Management. 2005. Northwest Forest Plan (NWFP) Temperature TMDL Implementation Strategies. September 2005.

USDI, Bureau of Land Management, Medford District. 1995. Record of Decision and Resource Management Plan.

USDI, Bureau of Land Management, Grants Pass Resource Area. 2006. Riparian Survey Data

USDI Bureau of Land Management, USDA Forest Service, ODEQ. 2003. Memorandum of Agreement to MEET STATE AND FEDERAL WATER QUALITY RULES AND REGULATIONS.

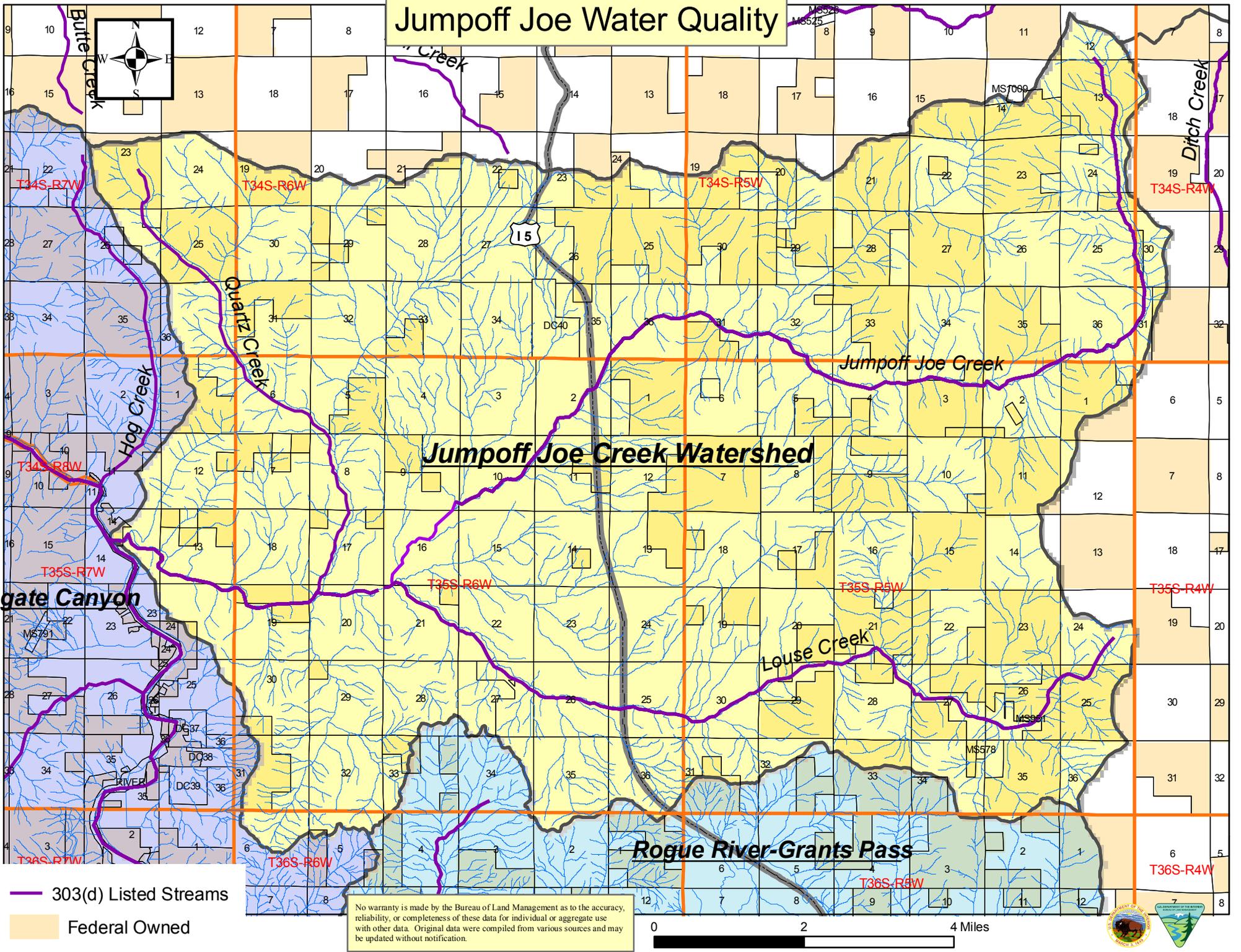
USDI, Bureau of Land Management, Medford District, Grants Pass Resource Area. 1998. Jumpoff Joe Creek Watershed Analysis.

USDI, Bureau of Land Management, Medford District, Grants Pass Resource Area. 2008. Environmental Assessment for the Granite Joe Landscape Management Project.

ODEQ. 2004. Rogue Basin Riparian Condition Assessment (DRAFT), BLM and Private Managed Lands.

ODFW. 1993. Aquatic Inventory Project, Jumpoff Joe Creek.

Jumpoff Joe Water Quality



- 303(d) Listed Streams
- Federal Owned

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

