United States
Department of
Agriculture

Forest
Service

February 2015

Environmental Assessment

Designation of the Headwaters of the Cultus River Research Natural Area

Deschutes National Forest Service
Bend/Ft. Rock Ranger District
Deschutes County, Oregon

Township 20 South, Range 8 East, Sections 17, 20

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Table of Contents

CHAPTER 1: PURPOSE OF AND NEED FOR ACTION **4**

INTRODUCTION AND PLANNING AREA DESCRIPTION 4
PURPOSE OF AND NEED FOR ACTION 5
PROPOSED ACTION 5
DECISION FRAMEWORK 5
PUBLIC INVOLVEMENT 6

CHAPTER 2: ALTERNATIVES **8**

NO ACTION 8
PROPOSED ACTION 8
COMPARISON OF THE ALTERNATIVES 11

CHAPTER 3: ENVIRONMENTAL CONSEQUENCES **12**

MANAGEMENT ALLOCATIONS 12
THREATENED, ENDANGERED, AND SENSITIVE FISH SPECIES 12
THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES 14
THREATENED, ENDANGERED, AND SENSITIVE WILDLIFE 15
WILDLIFE OTHER THAN FEDERALLY LISTED AND SENSITIVE 31
CULTURAL RESOURCES 38
RECREATION 38
TRANSPORTATION 38
INVASIVE PLANTS 38
OTHER REQUIRED DISCLOSURES 39

CHAPTER 4: AGENCIES AND PERSONS CONSULTED **40**

U.S. FISH AND WILDLIFE SERVICE 40
STATE HISTORIC PRESERVATION OFFICER 40
INDIVIDUALS, AGENCIES, AND ORGANIZATIONS 40

REFERENCES **42**

APPENDIX A – CONSIDERATION OF PUBLIC COMMENTS **51**

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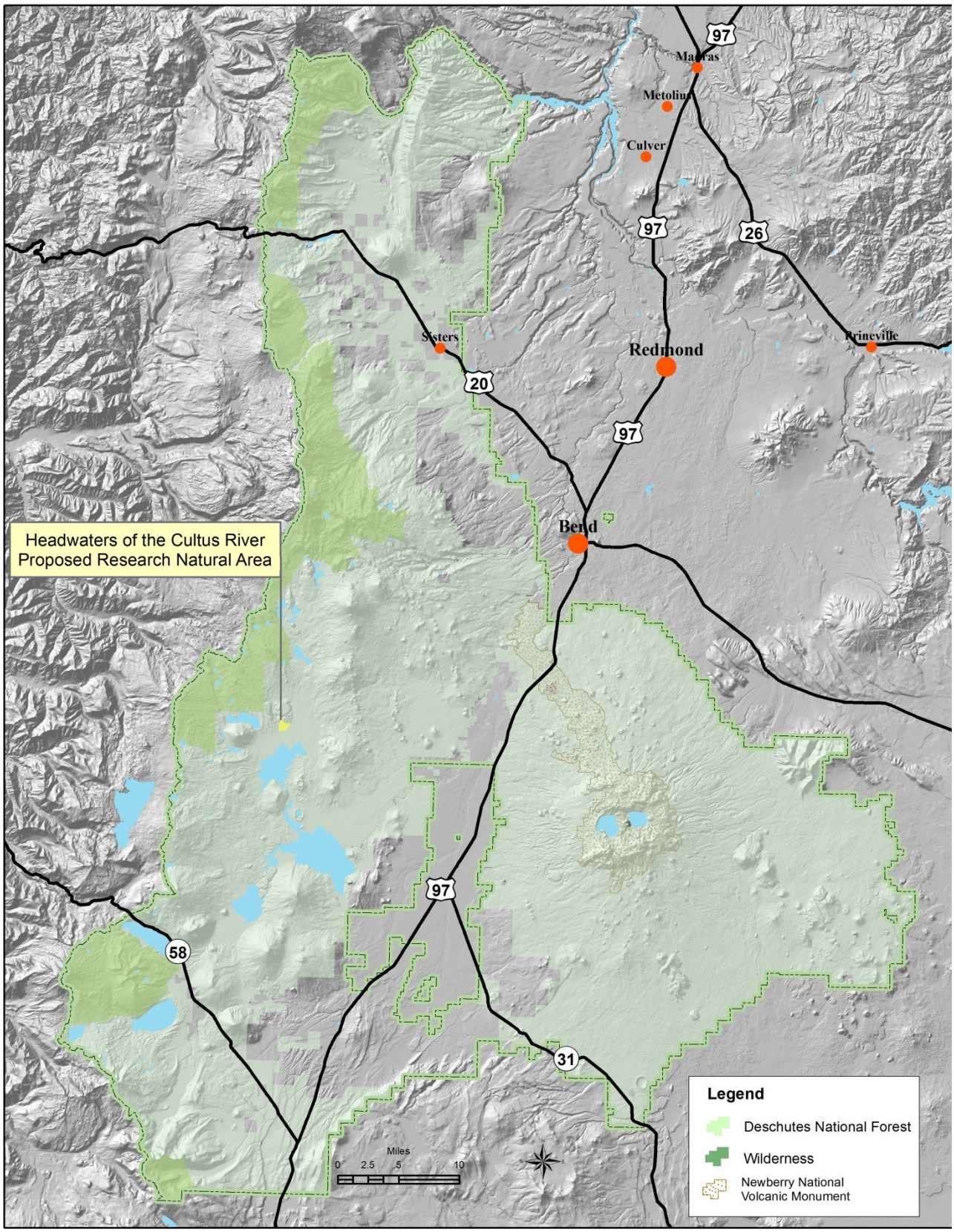

Figure 1: Vicinity of the Planning Area

Chapter 1: Purpose of and Need for Action

Introduction and Planning Area Description

This environmental assessment evaluates the proposal to formally establish the Headwaters of the Cultus River Research Natural Area (RNA). The proposed Headwaters of the Cultus River RNA is identified in the 1990 Deschutes National Forest Land and Resource Management Plan (LRMP) (USDA Forest Service 1990a) and is described in Appendix E of the 1990 Final Environmental Impact Statement (FEIS) for the LRMP (USDA Forest Service 1990b). The proposed RNA is within and completely surrounded by National Forest System lands. Establishment and designation involves: 1) completion of an environmental assessment to approve the candidate RNA with final boundaries and 2) amendment or adoption of existing LRMP Standards and Guidelines to guide management.

A national system of RNAs was established with the goal of preserving natural features and plant communities for research and educational purposes. The objectives of RNAs are:

- to provide baseline areas against which the effects of human activities in similar environments can be measured;
- to provide sites for study of natural processes in undisturbed ecosystems;
- to provide gene pool preserves for plant and animal species. (Franklin et al. 1972).

Research Natural Areas are part of a national network of ecological areas designated for research, monitoring, education, and to maintain biological diversity (USDA Forest Service manual 4063). For more information on the research arm of the Forest Service, visit www.fs.fed.us/research.

Headwaters of the Cultus River RNA is located in the Deschutes National Forest on the Bend-Fort Rock Ranger District approximately 30 miles southwest of Bend and two miles east of Cultus Lake (Figure 1 and Figure 2). It is located in the East Cascades Ecoregion of Oregon (Oregon Natural Heritage Program 2003). The central feature of the RNA is a large, cold spring that emerges from the base of Bench Mark Butte and forms the headwaters of the Cultus River, which then flows south through the southern half of the RNA. Additional tributary springs emerge from the base of the butte, forming small streams that join with the river within the RNA boundaries. The RNA includes the southern slopes of Bench Mark Butte which are forested with old growth ponderosa pine. Engelmann spruce bottomland forest dominates the riparian zone along the river south of the butte, and lodgepole pine forest dominates the remainder of the RNA. The RNA provides representation of the cold springs and two plant communities that, when protected, can serve as benchmarks for comparison with similar resources in areas that are intensively used. A full description of the Headwaters of the Cultus River RNA is found in the Establishment Record for the RNA (USDA Forest Service 2010).

RNA needs in the Pacific Northwest were originally identified by Pacific Northwest Research Station scientists in the 1960s and early 1970s following national agency direction (Dyrness et al. 1975). Extensive surveys for RNAs were conducted in Central Oregon by Deschutes National Forest Ecologist Dr. Bill Hopkins and other staff in the 1970s and 1980s and recommendations were further evaluated by Sarah Greene of the PNW Research Station. Public

involvement in the selection of the candidate RNAs occurred during the preparation and approval of the Deschutes LRMP in the late 1980s (USDA Forest Service 1990a). The Headwaters of the Cultus River RNA was identified in the 1990 Deschutes LRMP as a "proposed" RNA based on the unique nature of the area, and recognition that designation of this area as a research natural area would make an important contribution to the Natural Heritage network. A draft Establishment Record (ER) has been prepared providing specific background, justification, objectives, and management prescriptions per USDA Forest Service manual 4063.41. (USDA Forest Service 2010). The ER will be finalized concurrent with the NEPA process. The conversion from candidate to established RNA is accomplished by amending the Deschutes National Forest LRMP through a Decision Notice and Designation Order.

Purpose of and Need for Action

The purpose of establishing the RNA at Headwaters Cultus River area is to contribute to a series of RNAs designated to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance." 36 CFR 251.23

The Headwaters Cultus River RNA would fill a need for representation of the following natural heritage elements identified in the 2003 Oregon Natural Heritage Plan (Oregon Natural Heritage Program 2003):

- Flowing and pooled cold springs
- Engelmann spruce bottomland forest with ponderosa and lodgepole pine

In addition, the RNA provides regional cell representation of a lodgepole pine/bitterbrush/long-rhizome sedge community. Field monitoring in 2008 showed that all of the important ecological features for which Headwaters of the Cultus River RNA was originally proposed were still present in 2008.

There is a need to modify the boundaries of the proposed RNA to provide a boundary that can be better described and recognized, and to provide for the ability to conduct roadside management activities such as hazard tree removal.

Proposed Action

The proposed action is to formally establish Headwaters of the Cultus River RNA, to revise the boundary of the RNA, and to manage it according to the direction provided in the Deschutes LRMP (LRMP 4-92 to 4-93). Formal designation of the RNA by the Regional Forester would amend the Deschutes LRMP pursuant to 36 CFR 219.4 (under the 1982 planning regulations).

The proposed RNA would be designated Management Area 2 (MA-2). The proposed RNA is presently being managed in accordance with this allocation's direction so designation would not impact other programs or activities. Specifics are given in Chapter 2.

Decision Framework

The Regional Forester for the Pacific Northwest Region of the USDA Forest Service is the responsible official for this project. The responsible official will review the environmental assessment and the entire project record and will decide whether or not to select the proposed action. In making the decision, the responsible official will take into consideration the specific objective of providing for research and educational opportunities, as well as preserving the

unique ecological characteristics that are representative of the area. A Decision Notice would be accompanied by a Designation Order.

The final decision will be to either:

- Amend the Deschutes LRMP to establish the RNA in the Headwaters Cultus River area (Proposed Action), or
- Decline to establish the area as an RNA, resulting in removal of Headwaters Cultus River as a proposed RNA from the Forest Plan during the next Forest Plan revision, or
- Conclude that significant impacts would result from the proposed action which would warrant the preparation of an environmental impact statement.

Public Involvement

Public participation in this project began when a scoping letter and map were mailed to members of the public and to Tribal governments on March 12, 2009. The project also appeared in the Deschutes National Forest Schedule of Projects starting in March 2009 and has appeared quarterly since this initiation. An article "Forest Service Proposes Four Areas of Study" was also published in *The Bulletin* (Bend, Oregon) newspaper on March 22, 2009. The project appears on the Deschutes National Forest's project web page as well: http://data.ecosystem-management.org/nepaweb/project_list.php?forest=110601.

Two telephone calls were received. Both commenters were supportive of the proposed action. The Proposed Action is not highly controversial as evidenced by the number and tone of the responses received from the public during the scoping phase of the process. There were no issues identified that would lead to additional action alternatives.

This environmental assessment was provided for a 30-day public comment period from October 17 to November 17, 2014. Comments were received from the following individuals and organizations: George Wuerthner, Doug Heiken (Oregon Wild), and Karen Coulter (Blue Mountains Biodiversity Project). The Forest's consideration of the comments is provided in Appendix A to this environmental assessment.

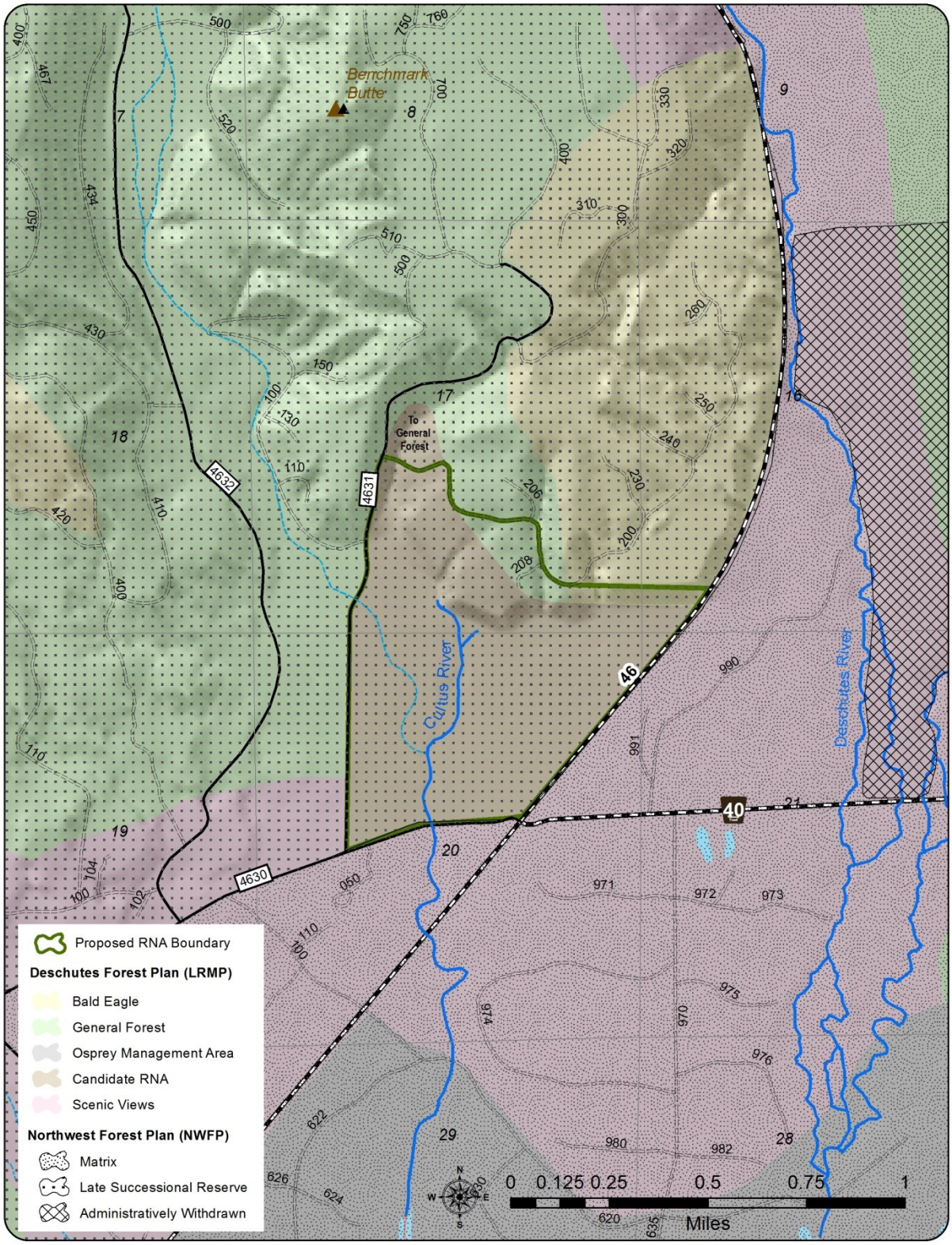

Figure 2: Map displays Deschutes LRMP allocations, including candidate RNA boundary and the proposed boundary for the Headwaters of the Cultus River Research Natural Area.

Chapter 2: Alternatives

No unresolved conflicts concerning alternative uses of available resources were identified during the scoping process. Therefore, no additional alternatives were developed beyond the No Action and Proposed Action.

No Action

Under the No Action alternative, the candidate area would continue to be managed as a proposed RNA as directed in the Deschutes National Forest LRMP. The boundary of the proposed RNA, which encompasses approximately 315 acres, would not be modified. All current management direction of the Deschutes LRMP Management Area 2 as well as the Northwest Forest Plan and Late Successional Reserves would continue to apply until the LRMP is revised.

Proposed Action

The Proposed Action would establish approximately 333 acres on the Deschutes National Forest as the Headwaters of the Cultus River RNA.

Boundary

The Proposed Action would modify the RNA boundary from what is shown in the 1990 LRMP to one that can be better described and identified. It would follow Forest Service Road 4631-200 for the western portion of the northern boundary, then follow a straight line east to County Road 46 for the eastern portion of the northern boundary (Figure 2). The actual boundary will be 100 feet from the centerline of the Forest Service system road that is shown as the boundary. This allows for hazard tree removal and permits the maintenance of a fuel break if needed to protect the RNA or adjacent forest. The proposed boundary would result in a net reduction of 8 acres in Management Area 8 - General Forest and 10 acres in Management Area 3 - Bald Eagle, and a net increase of 18 acres in Management Area 2 - Research Natural Areas. The RNA lies within the Cultus Late Successional Reserve under the Northwest Forest Plan (NWFP).

Management Direction

The RNA would be managed according to MA-2 in the 1990 Deschutes LRMP (LRMP 4-92 to 4-93). There would be no change from the existing standards and guidelines as listed here:

Standards and Guidelines in Deschutes LRMP adopted for Headwaters Cultus River RNA:

Recreation

M2-1: No physical improvements for recreation purposes such as campgrounds or buildings will be permitted.

M2-1: Picnicking, camping, collecting plants, gathering cones and herbs, picking berries, and other public uses will be allowed, though not encouraged, as long as they do not modify the area to the extent that such uses threaten impairment of research or educational values.

M2-3: The area will be closed to all off-highway motorized vehicle use if use of these vehicles

threatens natural conditions.[1]

Timber

M2-4: Timber harvest is not allowed in an RNA. No control of insect or disease should be instituted (see M2-22).

M2-5: Firewood cutting is not permitted.

M2-6: Timber harvesting will not be allowed in catastrophic situations.

Range

M2-7: Grazing is only allowed when authorized to preserve some representation of the vegetation for which the RNA was created.

M2-8: Where RNAs are located adjacent to or within grazing allotments, the boundaries will be marked and physical barriers constructed around the area to prohibit livestock entry if needed. [Note: there are no grazing allotments within or near the proposed RNA].

M2-9: Vegetation manipulation will not be allowed in catastrophic situations.

Wildlife

M2-10: Management practices may be authorized to control excessive non-game animal populations and only in cases where these populations threaten the preservation of some representation of vegetation for which the RNA was originally created.

Minerals

M2-11: Areas are to be withdrawn for mineral entry for mining claims.

M2-12: Geothermal leases will be issued with No Surface occupancy Stipulations. Leases must be approved by the Experiment Station Director.

M2-13: Pits and quarries will require approval of the Research Station Director and the Forest Supervisor.

Visual

M2-14: Management activities and research facilities should meet the visual quality level on the Visual Quality Objective Map. [Note: the Visual Quality Objective Map shows a visual quality level of Partial Retention].

Transportation

M2-15: No new roads or trails will be permitted within these areas, except those considered essential to research, protection, or educational uses.

M2-16: Any transportation facilities such as roads and trails provided for in this MA will have minimum impacts on the area ecosystems and must be located and managed to best fulfill the area's management objectives. Management of the transportation facilities could include closing facilities to all but the designated research personnel. Helispots and special uses such as telephone lines are not allowed.

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[1] Travel management regulations have since prohibited off-highway motorized vehicle use except on designated routes or areas. No such routes or areas exist in the RNA.

Wildfire

M2-17: Unless plans approved by the Station Director provide for letting natural fires burn, aggressive containment using low impact methods should be used. High impact methods will be used only to prevent a total loss of the RNA. Mop up should be minimized with natural burnout being the preferred method.

Prescribed Fire

M2-18: Prescribed fire will be used only as specified in approved RNA management goals.

Fuel Loading

M2-19: Fuels will be allowed to accumulate at natural rates.

Special Uses

M2-20: Special uses will be allowed if they support the management objectives of the area and are approved by the Research Station Director and the Forest Supervisor.

Forest Health

M2-21: Monitor the area to detect pest problems which could destroy the RNA or cause damage to adjacent lands. Reintroduction of fire should be considered to reduce possible insect epidemic conditions.

M2-22: Action should be taken when the damage has the potential to modify ecological processes to the point that the area has little value for observation and research.

M2-23: Follow Forest-wide standards/guidelines for forest health.

Northwest Forest Plan

The proposed RNA area falls within the Cultus Mountain Late Successional Reserve (LSR). An LSR Assessment was completed in 1996 (USDA Forest Service 1996). Considered in the context of the larger Cultus and Sheridan LSR landscape, the management strategy for the proposed RNA is consistent with the Deschutes LRMP standards and guidelines listed above. The management strategy recommended for the area of the Headwaters Cultus River proposed RNA (area "G" in the LSRA) consists of using prescribed fire where necessary and restoration of meadow habitat. No such activities would be undertaken in the RNA without project-level NEPA and approval by the Station Director. Additionally, Riparian Reserves are present along lake edges, along streams, and around any wetlands. Riparian Reserve direction would apply to any management actions in those areas. Specific standards and guides that apply to research activities are: RS-1 and RS-2 (research activities must not cause significant risk to watershed values and ongoing research activities were to be reviewed by the Regional Ecosystem Office; C-38).

Comparison of the Alternatives

Table 1: Comparison of the Alternatives

	No Action Alternative (Remains Proposed RNA)	**Proposed Action (Establish RNA)**
Acres of Proposed RNA at Headwaters of the Cultus River	315	0
Acres of Established RNA at Headwaters of the Cultus River	0	333
Short-term Management (< 10 years)	Continue Management Direction of proposed RNA under LRMP MA-2 S&Gs until Forest Plan revision.	Continue Management Direction of established RNA with existing LRMP S&Gs for MA-2.
Long-term Management (> 10 years)	To be determined during forest plan revision.	

Chapter 3: Environmental Consequences

This chapter discusses the potential effects on the human environment resulting from the implementation of the no action or proposed action alternatives. This analysis tiers to the Deschutes National Forest Land and Resource Management Plan Final Environmental Impact Statement and Record of Decision (USDA Forest Service 1990b).

Management Allocations

The proposed RNA boundary modifications will not have a measurable effect on Forest Plan goals, objectives, or outputs when considered in context of the Deschutes National Forest. The RNA would total 333 acres which is less than one of half of one percent of the Forest.

The proposed boundary modification would result in a net reduction of 8 acres in Management Area 8 General Forest and 10 acres in Management Area 3 Bald Eagle, and a net increase of 18 acres in Management Area 2 Research Natural Areas (Figure 2). This modification would change the potential management actions that could be undertaken in these areas including timber harvest, fire management and suppression, and recreation. The impact of such actions in an area of this size would be minimal when considered on a landscape level. The boundary modification is in response to the need for a boundary that can be better described.

Headwaters of the Cultus River RNA is located within a Late Successional Reserve under the Northwest Forest Plan. LSRs focus on providing habitat for species associated with late and old structure forest conditions. The proposed boundary modification will not change the LSR allocation; there will be no change in acreage to any Northwest Forest Plan allocations.

Forest Plan Amendment – Assessment of Significance

Forest Service Manual (FSM) 1926.51, the following items describe non-significant amendments:

- Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management;
- Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management;
- Minor changes in standards and guidelines; and/or
- Opportunities for additional projects or activities that will contribute to achievement of the management prescriptions.

The conversion from a proposed RNA to an established RNA would not alter the currently described goals for the area, the boundary modifications are minor, no standards and guidelines will change, and the area will permanently be subject to the management prescriptions for RNAs.

Threatened, Endangered, and Sensitive Fish Species

A Biological Evaluation (BE) was prepared in compliance with the requirements of Forest Service Manual 2630.3, FSM 2670-2671, FSM W.O. Amendments 2600-95-7, and the Endangered Species Act of 1973.

For aquatics, there are no threatened or endangered species or designated critical habitat within the proposed RNA; therefore, the proposed action will have no effect on any aquatic threatened or endangered species.

Species classified as sensitive by the Forest Service are to be considered by conducting biological evaluations (BE) to determine potential effects of all programs and activities on these species (FSM 2670.32). The BE is a documented review of Forest Service activities in sufficient detail to determine how a proposed action may impact sensitive aquatic species, and to comply with the requirements of the Endangered Species Act.

The Forest Service Region 6 Sensitive Species List (USDA 2011b) was reviewed for species that may be present on the Deschutes National Forest. In addition, redband trout, that had been on the list were removed except in the Oregon closed basins area in south east Oregon. There is currently an effort to place redband, range wide in Region 6, back on the list. After a review of records, habitat requirements, and existing habitat components, it was determined the following sensitive aquatic species currently on the list, or likely to be placed back on the list, have habitat or are known to occur in the project area and will be included in this analysis:

Table 2: Sensitive Aquatic Species Summary for the Deschutes National Forest.

Species	Status	Habitat	Habitat/Species Present
Redband trout (*Onchorhynchus mykiss*)	Regional Forester Sensitive (2014)	Streams and lakes – in the RNA Cultus River is spawning and rearing habitat for redband trout.	Yes

Summary of Conclusions for Sensitive Species

1. The No Action Alternative serves as a baseline for all sensitive species.
2. Implementation of the Proposed Action will have **"No Impact"** to the redband trout and its habitats for the Deschutes National Forest.

Environmental Consequences

Direct and Indirect Effects

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to redband trout or redband trout habitat.

Cumulative Effects

Implementation of proposed action for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the redband trout and its habitat.

Determination

The proposed action is programmatic in nature and there will be no change from the existing condition. Therefore, implementation of the proposed action will have a "No Impact" to redband trout and their habitat.

Consistency

Implementation of the Designation of the Headwaters of the Cultus River RNA is consistent with the Deschutes Land and Resource Management Plan and the Northwest Forest Plan. There are no ground disturbing activities associated with this designation therefore it is consistent with the Aquatic Conservation Strategy Objectives and maintains the existing conditions for aquatic habitats.

Threatened, Endangered, and Sensitive Plant Species

A Biological Evaluation has been prepared to determine potential effects from the proposed action on threatened, endangered, and sensitive plants in compliance with direction in the FSM 2672.4. Species considered are those on the on the current Regional Forester's Sensitive Species List (USDA Forest Service 2011) that are documented or suspected to occur on the Deschutes National Forest (see Appendix A of the Plant BE).

Summary

There are no federally listed Proposed, Threatened or Endangered plant species or their habitat in the Headwaters of the Cultus RNA on the Deschutes National Forest. Therefore, there are no effects, beneficial or negative, to these species.

No Sensitive plants are known to occur in the Headwaters of the Cultus RNA. If Sensitive plants are found in the future, the establishment of Headwaters of the Cultus RNA would be a beneficial effect to those species and their habitat.

Existing Condition

There are no federally listed Proposed Threatened or Endangered plant species or their habitat within the Headwaters of the Cultus RNA on the Deschutes National Forest.

The U.S. Forest Service Regional Forester lists 69 Sensitive plant species as suspected or documented to occur on the Deschutes National Forest Sensitive (Appendix A): 36 vascular plants (18 documented to occur), 26 bryophytes (11 documented), 2 lichens (1 documented) and 5 fungi (4 documented).

A pre-field review was completed to determine if any of the 69 Sensitive plant species occur within the RNA. The following sources were used in this review:

1. U.S. Forest Service NRIS-TESP-Invasives Database which is where U.S. Forest Service Sensitive plant locations are entered and tracked. There are no Sensitive plant locations within the proposed Headwaters of the Cultus RNA;
2. Headwaters of the Cultus RNA Plant Species List (USDA Forest Service 2010).
3. Vascular plant list provided by the Carex Working Group (2008).

Botanical surveys of the proposed Headwaters of the Cultus River RNA were completed in 1996, 1998, and 2008. There are no known populations of Sensitive plant species within the

Headwaters of the Cultus RNA. However, these surveys focused on vascular plant species and did not survey for bryophytes (mosses and liverworts), lichens, and fungi; the presence of these species is unknown.

Environmental Consequences

Under both the No Action and Proposed Action, the Headwaters of the Cultus RNA would continue to be managed as a Research Natural Area. Research Natural Areas are part of a national network of ecological areas designated for research, monitoring, education, and to maintain biological diversity (USDA Forest Service Manual 4063). RNAs are managed to allow natural processes to occur and to minimize human disturbance (USDA Forest Service Manual 4063.3).

The Proposed Action would guarantee that the RNA be managed to maintain biological diversity into perpetuity. Management of RNAs is beneficial to plants and their habitats.

Direct and Indirect Effects

There are no direct or indirect effects to Sensitive plants from the proposed action. No Sensitive plants are known to occur in the RNA. If Sensitive plants were found, establishment of the RNA would be beneficial to plants and plant habitats.

Cumulative Effects

Implementation of the proposed action for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and, therefore, will not result in any cumulative effects to sensitive plants.

Threatened, Endangered, and Sensitive Wildlife

A Biological Evaluation has been prepared in compliance with the requirements of Forest Service Manual (FSM) 2630.3., FSM 2670-2671, FSM W.O. Amendments 2600-95-7, and the Endangered Species Act (ESA) of 1973. A Biological Assessment (BA) will be prepared in compliance with the requirements of Forest Service Manual (FSM) 2630.3, FSM 2672.4 and the Endangered Species Act of 1973 (Subpart B: 402.12, Section 7 Consultation, as amended) on actions and programs authorized, funded, or carried out by the Forest Service to assess their potential for effect on threatened and endangered species and species proposed for federal listing (FSM 2670.1). This EA includes a summary of the BE.

Those species thought to occur presently or historically on the Deschutes National Forest and analyzed in this document include the northern spotted owl (*Strix occidentalis*), gray wolf, Oregon spotted frog, northern spotted owl critical habitat, and Oregon spotted frog critical habitat.

Table 3: Threatened and Endangered Species Summary

Species	Status	Habitat	Presence
Northern Spotted Owl	Federal Threatened, MIS	Old Growth Mixed Conifer Forests	Yes
Gray Wolf	Federal Endangered	Generalist	Yes
Oregon Spotted Frog	Federal Threatened, Regional Forester Sensitive	Stream, Marsh	Yes
Northern Spotted Owl Critical Habitat			Yes
Oregon Spotted Frog Proposed Critical Habitat			No

Table 4: Summary of Effects to Threatened, Endangered, Candidate and Proposed Species.

Species/Habitat	Action Alternatives
Northern Spotted Owl	"No Effect"
Gray Wolf	"No Effect"
Oregon Spotted Frog	"No Effect"
Northern Spotted Owl Critical Habitat	"No Effect"
Oregon Spotted Frog Proposed Critical Habitat	"N/A"

Summary of Conclusions for T&E Species

1. The Proposed Action will have "**No Effect**" on the northern spotted owl, Oregon spotted frog, or gray wolf and their habitats. Consultation is not required.

2. The Proposed Action will have "**No Effect**" on designated critical habitat for the northern spotted owl or proposed critical habitat for the Oregon spotted frog. Consultation is not required.

Northern Spotted Owl, Federal Threatened, MIS

The BE includes a thorough description of the habitat and prey needs for the northern spotted owl and its critical habitat on the Deschutes National Forest. The Headwaters Cultus River RNA includes approximately 45 acres of nesting, roosting, and foraging (NRF) habitat.

Environmental Consequences

Proposed Action

Direct and Indirect Effects

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to suitable spotted owl habitat, dispersal habitat, known home ranges, or designated Critical Habitat.

Cumulative Effects

Implementation of proposed action for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the spotted owl and its habitat.

Determination

The proposed action is programmatic in nature and there will be no change from the existing condition. Therefore, implementation of the proposed action will have a "No Effect" to spotted owls and their habitat.

Critical Habitat Units

The proposed action is programmatic in nature and there will be no change from the existing condition. Therefore, implementation of the proposed action will have a "No Effect" to spotted owls critical habitat.

Communication with U.S. Fish and Wildlife Service

This project is not covered under the current FY2014 Programmatic Biological Assessment. Further communication with U.S. Fish and Wildlife Service is not recommended.

Consistency

Implementation of the Designation of the Headwaters of the Cultus River RNA is consistent with the Deschutes Land and Resource Management Plan, the Deschutes National Forest Late-Successional Reserve Assessments, and the 2011 Critical Habitat Rule.

Gray Wolf, Federal Endangered

The BE includes a thorough description of the habitat needs and existing habitat on the Deschutes National Forest.

Environmental Consequences

Proposed Action

Direct and Indirect Effects

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to gray wolf habitat.

Cumulative Effects

Implementation of proposed action for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the gray wolf and its habitat.

Determination

The proposed action is programmatic in nature and there will be no change from the existing condition. Therefore, implementation of the proposed action will have a "No Effect" to gray wolves and their habitat.

Communication with U.S. Fish and Wildlife Service

This project is not covered under the current FY2014 Programmatic Biological Assessment. Further communication with U.S. Fish and Wildlife Service is not recommended.

Consistency

Implementation of the Designation of the Headwaters of the Cultus River RNA is consistent with the Deschutes Land and Resource Management Plan and the Deschutes National Forest Late-Successional Reserve Assessments.

Oregon Spotted Frog, Federal Threatened

The BE includes a thorough description of the Oregon spotted frogs and their habitat requirements. Oregon spotted frog inhabits emergent wetland habitats in forested landscapes, although it is not typically found under forest canopy. This is the most aquatic native frog species in the Pacific Northwest, as all other species have a terrestrial life stage. It is almost always found in or near a perennial body of water, such as a spring, pond, lake sluggish stream, irrigation canal, or roadside ditch (Engler 1999, pers. comm.). Breeding habitats occur in the Upper Deschutes River sub-basin.

The Proposed Rule for the designation of critical habitat for the Oregon spotted frog was published in the Federal Register on August 29, 2013 (50 CFR Part 17). Proposed critical habitat occurs on the Deschutes National Forest but there is no proposed critical habitat within the Headwaters of the Cultus River RNA.

Environmental Consequences

Implementation of proposed designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore will not result in any cumulative effects for the Oregon spotted frog.

Implementation of the proposed action will have a "No Effect" to Oregon spotted frog and their habitat.

Regional Forester's Sensitive Species

Species classified as sensitive by the Forest Service are to be considered by conducting biological evaluations (BE) to determine potential effects of all programs and activities on these species (FSM 2670.32). The BE is a documented review of Forest Service activities in sufficient detail to determine how a proposed action may impact sensitive wildlife species, and to comply

with the requirements of the Endangered Species Act.

The Forest Service Region 6 Sensitive Species List (USDA 2011) was reviewed for species that may be present on the Deschutes National Forest. After a review of records, habitat requirements, and existing habitat components, it was determined the following sensitive animal species have habitat or are known to occur in the project area and will be included in this analysis:

Table 5: Sensitive Species Summary for the Deschutes National Forest.

Species	Status	Habitat	Habitat/Species Present
Northern Bald Eagle (*Haliaeetus leucocephalus*)	Regional Forester Sensitive, MIS	Lakeside with Large Trees	Yes
Bufflehead (*Bucephala albeola*)	Regional Forester Sensitive	Lakes, Snags	No
Harlequin Duck (*Histrionicus histrionicus*)	Regional Forester Sensitive	Rapid Streams, Large Trees	No
Tricolored Blackbird (*Agelaius tricolor*)	Regional Forester Sensitive	Lakeside, Bullrush	No
Yellow Rail (*Coturnicops noveboracensis*)	Regional Forester Sensitive	Marsh	No
Greater (Western) Sage Grouse (*Centrocercus urophasianus phaeios*)	Federal Candidate, Regional Forester Sensitive	Sagebrush Flats	No
American Peregrine Falcon (*Falco peregrinus anatum*)	Regional Forester Sensitive, MIS	Riparian, Cliffs	No
Lewis' Woodpecker (*Melanerpes lewis*)	Regional Forester Sensitive, MIS	Large, open ponderosa pine and burned forests	Yes
White-headed Woodpecker (*Picoides albolarvatus*)	Regional Forester Sensitive, MIS	Large, open ponderosa pine	Yes
Northern Waterthrush (*Seiurus noveboracensis*)	Regional Forester Sensitive	Riparian vegetation including willows and alder	No
Horned Grebe (*Podiceps auritus*)	Regional Forester Sensitive, MIS	Lakes	No
Tule White-fronted Goose (*Anser albifrons elgasi*)	Regional Forester Sensitive, MIS	Large rivers, marsh/lakeshore habitat with emergent vegetation	No
Pacific Fisher (*Martes pennanti*)	Federal Candidate, Regional Forester	Mixed, Complex	Yes

	Sensitive		
North American Wolverine (*Gulo gulo luscus*)	Regional Forester Sensitive, MIS	Mix, High Elevation	No
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	Regional Forester Sensitive, MIS	Caves	No
Pallid Bat (*Antrozous pallidus*)	Regional Forester Sensitive	Canyons, cliffs, caves, and buildings	No
Spotted Bat (*Euderma maculatum*)	Regional Forester Sensitive	Canyons, cliffs, caves, and buildings	No
Fringed Myotis (*Myotis thysanodes*)	Regional Forester Sensitive	Canyons, cliffs, caves, buildings, and large snags	Yes
Columbia Spotted Frog (*Rana luteiventris)*	Federal Candidate, Regional Forester Sensitive	Stream, Marsh	No
Crater Lake Tightcoil (*Pristiloma arcticum crateris*)	Regional Forester Sensitive	Riparian, Perennially Wet	Yes
Evening Field Slug (*Deroceras hesperium*)	Regional Forester Sensitive	Perennially wet meadows	Yes
Silver-bordered Fritillary (*Boloria selene atrocostalis*)	Regional Forester Sensitive	Open riparian bogs and marshes	Yes
Johnson's Hairstreak (*Mitoura johnsonii*) (*Callophrys johnsonii*)	Regional Forester Sensitive	Coniferous forests with mistletoe	Yes
Western Bumblebee (*Bombus occidentalis*)	Regional Forester Sensitive	Meadows with floral resources	Yes

Summary of Conclusions for Sensitive Species

1. The No Action Alternative serves as a baseline for all sensitive species.
2. Implementation of the Proposed Action will have **"No Impact"** to the bald eagle, Lewis' woodpecker, white-headed woodpecker, Pacific fisher, fringed myotis, Crater Lake tightcoil, evening field slug, silver-bordered fritillary, Johnson's hairstreak, and western bumble bee and their habitats for the Deschutes National Forest.
3. There is no habitat in the Proposed RNA for the bufflehead, harlequin duck, tri-colored blackbird, yellow rail, greater sage grouse, American peregrine falcon, northern waterthrush, horned grebe, Tule white-fronted goose, North American wolverine, Townsend's big-eared bat, pallid bat, spotted bat, and Columbia spotted frog and their habitats for the Deschutes National Forest.

After a review of records, habitat requirements, and existing habitat components, it was determined the remaining sensitive species do not occur and have no habitat in the project area

and will not be included in any further analysis: bufflehead, harlequin duck, tricolored blackbird, yellow rail, greater sage grouse, peregrine falcon, northern waterthrush, horned grebe, North American wolverine, Townsend's big-eared bat, pallid bat, spotted bat, and Columbia spotted frog. The rationale for that determination is found in the BE.

Table 6 displays those Region 6 Sensitive Species that are known to occur or have habitat within the Headwaters of Cultus River RNA. The Oregon spotted frog is previously discussed in the TE section above.

Table 6: Summary of Conclusion of Impacts, Region 6 Sensitive Species for the Designation of the Headwaters of the Cultus River RNA.

Species	Action Alternative
Northern Bald Eagle	NI
Lewis' Woodpecker	NI
White-headed Woodpecker	NI
Pacific Fisher	NI
Fringed Myotis	NI
Crater Lake Tightcoil	NI
Evening Field Slug	NI
Silver-bordered Fritillary	NI
Johnson's Hairstreak	NI
Western Bumblebee	NI

NI = No Impact
MIIH = May impact individuals or habitat, but will not likely contribute a trend toward federal listing or loss of viability to the population or species
BI = Beneficial Impact

Bald Eagle, Federal Threatened, MIS

Existing Condition/No Action

The bald eagle, formerly a threatened species in the lower 48 states under the Endangered Species Act, has been delisted (August 8, 2007) because it has recovered from being at risk of extinction (Fed Reg 2007). It will continue to be protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is now designated a Regional Forester Sensitive Species. The FWS has issued National Bald Eagle Management Guidelines (USFWS 2007b) intended to minimize activities that could interfere with the eagle's ability to forage, nest, roost, breed, or raise young. Such impacts to bald eagles, where they may constitute "disturbance", are prohibited by the Eagle Act. The guidelines identify management practices that can be used for added benefit to bald eagles.

On the Deschutes National Forest, ponderosa pine and Douglas-fir trees averaging 32 inch+ dbh with live large, open limb structure are preferred for nesting. Nests consist of bulky stick platforms built in the super-canopy of such trees, or less frequently on cliffs. They are typically constructed within one mile of appropriate foraging habitat, which includes rivers and large lakes and reservoirs. Bald eagles are sit-and-wait predators, which predominantly capture prey from

perches over water; ideal perches are large trees and snags within 330 ft. (100 m) of water (Anthony et al. 1995). Prey items include fish, waterfowl and other birds, small mammals, and carrion (Stalmaster 1987).

There are 881 acres of potential bald eagle habitat within the proposed Headwaters of the Cultus River RNA. However, there are no known bald eagle territories found in this proposed RNA.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to bald eagle.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the bald eagle and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable bald eagle habitat. Therefore, the Action Alternative will have "No Impact" to bald eagles or their habitat.

Lewis' Woodpecker, Region 6 Sensitive and MIS

Existing Condition/No Action

Formerly widespread, this species is common year-round only in the white oak ponderosa pine belt east of Mt. Hood. Habitat for the Lewis' woodpecker, a migrant in this part of its range, includes old-forest, single-storied ponderosa pine. Burned ponderosa pine forests created by stand-replacing fires provide highly productive habitats as compared to unburned pine (Wisdom et al. 2000). Lewis' woodpeckers feed on flying insects and are not strong cavity excavators. They require large snags in an advanced state of decay that are easy to excavate, or they use old cavities created by other woodpeckers. Nest trees generally average 17 to 44 inches (Saab and Dudley 1998, Wisdom et al. 2000). Known breeding has been documented in low numbers along Why-chus Creek (Marshall et al. 2003) and in recent burned areas across the Deschutes.

In evaluating landscape predictor variables for the Lewis's woodpecker, Saab et al. (2002) found a negative relation to burned ponderosa pine/Douglas-fir stands with high crown closure (>70%) but was positively associated with low snag densities overall. However, although it selects for more open stands, this species selected nest sites with higher densities of large snags (>20"dbh) (Saab and Dudley 1998). Lewis' woodpeckers are different than other woodpeckers. They are aerial insectivores during the breeding season and use lower densities of smaller snags but rely more heavily on large snags (Saab and Dudley 1998). Habitat for Lewis' woodpecker will increase 5-10 years after in fire areas as smaller snags fall.

The Lewis' woodpecker is declining throughout its range. Threats to this species include the loss

of suitable habitat, competition for nest trees, and effects of pesticides on insects.

Habitat for the Lewis' woodpecker occurs sparingly throughout the Deschutes National Forest in the following plant associations –ponderosa pine dry and xeric ponderosa pine and in other habitat types where ponderosa pine was the dominant species in the early and mid seral stages with a minimum dbh of 15". No acres of potential habitat were mapped for this proposed RNA.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to Lewis' woodpecker habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the Lewis' woodpecker and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable Lewis' woodpecker habitat. Therefore, the Action Alternative will have "No Impact" to Lewis' woodpeckers or their habitat.

White-headed Woodpecker, Region 6 Sensitive and MIS

Existing Condition/No Action

White-headed woodpeckers are uncommon permanent residents in forests east of the Cascades. They use habitat with large open ponderosa pine, low shrub levels and large snags. Dixon (1995) found white-headed woodpecker densities increased with increasing old-growth ponderosa pine trees and showed a positive association with large ponderosa pine. The white-headed woodpecker is a primary cavity excavator of soft snags. This woodpecker is the only woodpecker species to rely heavily on seeds of ponderosa pine for food (Marshall et al. 2003 p. 364).

A long term study on the white-headed woodpecker occurred on the Deschutes and Winema National Forests from 1997-2004 with several Deschutes study sites occurring in the Metolius Basin area. Frenzel (2000) calculated the mean diameter for white-headed woodpecker nest trees to be 26.2"dbh while Dixon (1995) found similar results (mean diameter of 25.6"dbh). Frenzel (2003) found nests at sites with a high density of large diameter trees had a higher survival rate than nests in recently harvested sites. Unharvested sites or sites with greater than 12 trees per acre >21"dbh had a success rate of 63.1% while nests at previously harvested sites or lower densities of large trees had a success rate of 39.8%. Therefore, white-headed woodpeckers were positively associated with higher densities of large trees. On the Winema National Forest, white-headed woodpeckers were found to be using small-diameter trees, logs in a slash pile and upturned roots (6-13"dbh) where large snags were uncommon (Frenzel 2002).

Threats to this species include increased stand densities in ponderosa pine due to fire suppression, loss of large, old ponderosa pine trees and snags, wildfire, and increased shrub densities. Increased shrub densities may be factors leading to increased mammalian nest predation and increased risk of avian predation on adults (Frenzel 2000).

Habitat for the white-headed woodpecker occurs sparingly throughout the Deschutes National Forest in ponderosa pine forests, primarily the ponderosa pine PAGs and other PAGs where ponderosa pine dominates in the early and mid seral stages in open stands where average tree size is 10"dbh or greater. Less than 1 acre of potential habitat was mapped for this proposed RNA.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to white-headed woodpecker habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the white-headed woodpecker and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable white-headed woodpecker habitat. Therefore, the Action Alternative will have "No Impact" to white-headed woodpeckers or their habitat.

Pacific Fisher, Federal Candidate, Region 6 Sensitive

Existing Condition/No Action

Fisher populations are considered to be extremely low in Oregon, Washington, and parts of the Rocky Mountains. They occur in landscapes dominated by late-successional and mature forests. Fishers have been found to use riparian areas disproportionately to what exists. On the Westside of the Cascades, fishers tend to be associated with low to mid-elevational forests dominated by late-successional and old growth Douglas-fir and western hemlock. However, on the eastside of the Cascades, they occur at higher elevations in association with true firs and mixed conifer forests. They tend to prefer areas with high canopy closure and late-successional forests with relatively low snow accumulations. Critical features of fisher habitat include physical structure of the forest and prey associated with forest structure. Structure includes vertical and horizontal complexity created by a diversity of tree sizes and shapes, light gaps, down woody material, and layers of overhead cover. Major prey species include small to medium sized mammals, birds, and carrion. Porcupine are the best known prey species but fisher will also prey on snowshoe hare, squirrels, mice and shrews. (Powell and Zielinski 1994)

Large forest openings, open hardwood forests, and recent clearcuts were found to be infrequently used by fishers in the West (Ruggerio et. al 1994). Fishers have shown an aversion to open areas

and this has affected local distributions and can limit population expansion and colonization of unoccupied areas (Coulter 1966, Earle 1978). However, Kelly (1977) found that fishers tended to use recently harvested areas when brush and saplings provided some low overhead cover but these areas were avoided during the winter.

Habitat for the Pacific fisher occurs in very minor amounts on the Deschutes National Forest in the following plant associations – lodgepole pine wet, white fir, Shasta red fir, western hemlock, silver fir, and mountain hemlock in closed stands where average tree size is 20”dbh or greater.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to Pacific fisher habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the Pacific fisher and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable Pacific fisher habitat. Therefore, the Action Alternative will have “No Impact” to the Pacific fisher or their habitat.

Fringed Myotis, Region 6 Sensitive

Existing Condition/No Action

Fringed myotis are migratory to Oregon. They are a small, insectivorous bat that roosts in caves, mines, rock crevices, buildings, and other protected sites (NatureServe 2013, Harvey et. al 1999). Nursery colonies are established in caves, mines, and buildings (NatureServe 2013). Beetles and moths are common prey items and they glean insects from the ground or near thick or thorny vegetation. These bats are known to forage close to vegetative canopy and have relatively slow and highly maneuverable flight (Harvey et al. 1999). Females give birth to one young (pup) in June or July. For Oregon, NatureServe (2014) ranks the fringed myotis as S2, Imperiled. They report the greatest threat to the species is human disturbance of roost sites, especially maternity colonies, through recreational caving and mine exploration. Other threats include closure of abandoned mines, renewed mining at historic sites, toxic material impoundments, pesticide spraying, vegetation conversion, livestock grazing, timber harvest, and destruction of buildings and bridges used as roosts.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to fringed myotis habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the fringed myotis and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable fringed myotis habitat. Therefore, the Action Alternative will have "No Impact" to the fringed myotis or their habitat.

Crater Lake Tightcoil, Region 6 Sensitive

Existing Condition/No Action

"The Crater Lake Tightcoil may be found in perennially wet situations in mature conifer forests, among rushes, mosses and other surface vegetation or under rocks and woody debris within 10 m. of open water in wetlands, springs, seeps and riparian areas, generally in areas which remain under snow for long periods during the winter. Riparian habitats in the Eastern Oregon Cascades may be limited to the extent of permanent surface moisture, which is often less than 10 m. from open water" (Duncan et al. 2003).

Threats to the species include activities that compact soils, reduce litter and/or vegetative cover, or impact potential food sources (i.e. livestock grazing, heavy equipment use, ORV's, and camping on occupied habitats). Fluctuations from removal of ground vegetation on ground temperature and humidity may be less extreme at higher elevations and on wetter sites, but no studies have been conducted to evaluate such a theory. These snails appear to occur on wetter sites than general forest conditions, so activities that would lower the water table or reduce soil moisture would degrade habitat (Burke et al. 1999).

Intense fire that burns through the litter and duff layers is devastating to most gastropods, and even light burns during seasons when these animals are active can be expected to have more serious impacts than burns during their dormant periods. Snowmobiling or skiing would impact these snails if snow, over their occupied habitats, is compacted losing its insulative properties and allowing the litter or ground to freeze (Burke et al. 1999).

Habitat for the Crater Lake tightcoil includes Class 1, 2, 3, and 4 streams and lake and wetland buffers. Suitable habitat specific to the Crater Lake tightcoil has not been mapped at this time as assessments are generally conducted at a project level.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to Crater Lake tightcoil habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the Crater Lake tightcoil and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable Crater Lake tightcoil habitat. Therefore, the Action Alternative will have "No Impact" to the Crater Lake tightcoil or their habitat.

Evening Field Slug, Region 6 Sensitive

Existing Condition/No Action

Scattered sites have been documented for the Evening field slug in several provinces in Oregon, including both sides of the Oregon Cascades from Hood River to the Klamath River basin in Jackson County; and from the Elliot State Forest north in the northern Coast Range. The majority of currently documented sites occur on the eastern slopes of the Oregon Cascades. The type locality was in Oswego, OR, the paratype locality in Hood River. The range extends through western Washington and on to Vancouver Island, B.C.

The Evening field slug is associated with perennially wet meadows in forested habitats; microsites include a variety of low vegetation, litter and debris; rocks may also be used as refugia. Little detail is known about exact habitat requirements for the species, due to the limited number of verified sites. However, this species appears to have high moisture requirements and is almost always found in or near herbaceous vegetation at the interface between soil and water, or under litter and other cover in wet situations where the soil and vegetation remain constantly saturated. Because of the apparent need for stable environments that remain wet throughout the year, suitable habitat may be considered to be limited to moist surface vegetation and cover objects within 30 m. (98 ft.) of perennial wetlands, springs, seeps and riparian areas. Areas with coastal fog may allow the species to occupy habitats farther from open water. Down wood may provide refugia sites for the species that remain more stable during drier periods of the year than the general habitat.

Primary threats to this species are habitat loss from draining and conversion of wet meadows for agricultural, urbanization, grazing, forest management and other uses; and from fire. Natural threats may include ingrowth of conifer or hardwood tree and shrub species in historically herbaceous habitats, changes in hydrology that reduce the availability of water in wetlands, and exposure to vertebrate and invertebrate predators (i.e., predatory snails and beetles), especially in locally restricted areas.

A study conducted by Guralnick and Roth (2013) on the Fremont Winema NF found that *Deroceras hesperium* is likely an anatomical variant of *Deroceras laeve*, a more common and widespread species.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to evening field slug habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the evening field slug and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable evening field slug habitat. Therefore, the Action Alternative will have "No Impact" to the evening field slug or their habitat.

Silver-bordered Fritillary, Region 6 Sensitive

Existing Condition/No Action

The silver-bordered fritillary is a holarctic species ranging from the Appalachians, Midwest, Rockies, and the Cascades. This species is known from three locations in Oregon – Big Summit Prairie (Crook Co.), the Strawberry Mountains (Grant Co.), and the southern Wallowa range north of Halfway (Baker Co.) (Pyle 2002, Warren 2005). They are associated with open riparian areas, bogs, and marshes dominated by *Salix* and larval foodplants (marsh violet, bog violet). The adults nectar on various composites, mints, and *Verbena*. Populations from Crook and Grant counties fly from early June to mid-August, in what is apparently a single annual brood. Threats include small populations that are stressed by habitat succession and drying (Pyle 2002).

Habitat for the silver-bordered fritillary includes wetlands. Wetlands include both the wetland and the associated buffer. Suitable habitat specific to the silver-bordered fritillary has not been mapped at this time as assessments are generally conducted at a project level.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to silver-bordered fritillary habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River

RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the silver-bordered fritillary and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable silver-bordered fritillary habitat. Therefore, the Action Alternative will have "No Impact" to the silver-bordered fritillary or their habitat.

Johnson's Hairstreak, Region 6 Sensitive

Existing Condition/No Action

The Johnson's hairstreak is an uncommon butterfly with a distribution limited to the Pacific Northwest (USFS 2008b). It has been documented from Salem, Eugene, Coos Bay and Medford BLM districts and from the Willamette, Deschutes, Umpqua, Rouge-River/Siskiyou, Fremont-Winema, Umatilla and Wallowa-Whitman National Forests. Most Oregon records (n=52) are from 2000' elevation or greater with the majority from 3500' or more to 5-6000' elevation. They are thought to be late-successional associated because of its dependence upon dwarf mistletoe. Dwarf mistletoes generally increase in incidence and intensity in older stands, however both young and maturing stands host this as well (USFS 2008b).

Larvae feed exclusively on the aerial shoots of dwarf mistletoes (USFS 2008b). Adults sip nectar at available flowers of several species (Actostaphylos, Ceanothus, Cornus, dandelion, Fragaria, Rorippa, and Spraguea) and nearby water and mud puddles (USFS 2008b). There are several closely related species with overlapping ranges making identification difficult. The Thicket Hairstreak larvae are undistinguishable with those of the Johnson's Hairstreak. Since this species spends so much time in the top of the forest canopy this may limit detection.

Threats to this species includes timber harvest in mistletoe infested areas, large stand replacement fires, Btk (insecticide) use, herbicide use on forage species, and possible hybridization with the Thicket Hairstreak (USFS 2008b).

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects Johnson's hairstreak habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the Johnson's hairstreak and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable Johnson's hairstreak habitat. Therefore, the Action Alternative will have "No

Impact" to the Johnson's hairstreak or their habitat.

Western Bumble Bee, Region 6 Sensitive

Existing Condition/No Action

The western bumblebee was once widespread and common throughout the western United States and western Canada before 1998. Since 1998 populations of this bumblebee species have declined drastically throughout parts of its former range. Populations in central California, Oregon, Washington and southern British Columbia have mostly disappeared. NatureServe (2013) reported this species has declined about 70-100% since the late 1990s in many places, especially from British Columbia to California. For Oregon, NatureServe (2014) lists them as S1, Critically Imperiled and S2N, Imperiled. It is difficult to accurately assess the magnitude of these declines since most of this species' historic range has not been sampled systematically (Xerces Society 2012, Andrews 2010). Western bumble bees have been documented on the Deschutes National Forest near Sparks Lake and in the Sunriver vicinity.

The Xerces Society website (Xerces Society 2012) stated there are a number of threats facing bumblebees, any of which may be leading to the decline of *Bombus occidentalis*. The major threats to bumble bees include: spread of pests and diseases by the commercial bumble bee industry, other pests and diseases, habitat destruction or alteration, pesticides, invasive species, natural pest or predator population cycles, and climate change. Commercial bumblebee rearing is thought to be the greatest threat to the western bumblebee. Bumblebee expert, Dr. Robbin Thorp (Univ. of California, Davis) has hypothesized western bumblebee queens shipped to Europe to produce new colonies and then shipped back to the United States may have acquired a disease (mircosporidium *Nosema bombi*) from a European bumblebee at the same rearing facility. The western bumblebee would have had no prior resistance to this pathogen. While this hypothesis needs validation, the timing, speed, and severity of the population crashes strongly supports the idea that an introduced disease caused the decline of bees (Xerces Society 2012).

An unpublished document prepared by the Xerces Society (Xerces Society 2013) stated the primary threats to the western bumblebee at the sites where it currently exists in Oregon and Washington include: pathogens from commercial bumble bees and other sources, impacts from reduced genetic diversity, and habitat alterations including conifer encroachment (resulting from fire suppression), grazing, and logging. Other threats include pesticide use, fire, agricultural intensification, urban development and climate change. Indirect effects of logging (such as increased siltation in runoff) and recreation (such as off-road vehicle use) also have the potential to alter meadow ecosystems and disrupt habitat. Additional habitat alterations, such as conifer encroachment resulting from fire suppression, fire, agricultural intensification, urban, and climate may threaten the western bumblebee. (Xerces Society 2013).

Management consideration for the western bumblebee mentioned by the Xerces Society in protecting all known and potential sites from practices, such as livestock grazing, and threats such as conifer encroachment, that can interfere with the habitat requirements of this species (availability of nectar and pollen throughout the colony season and availability of underground nest sites and hibernacula).

Most common management activities should not directly affect underground nests; however, bumble bees above ground in grasses would be vulnerable to fire and to mowing if the blade is

low enough to destroy them. Hibernating queens and workers could be very vulnerable to prescribed burns if they are above ground in dry microhabitats. Thinning and prescribed burning may have positive or negative effects: direct mortality to the pollinators and change in vegetation composition and structure (NatureServe 2013). Long term, these treatments would benefit bumblebees by reducing encroaching conifers and maintain an open meadow/brush habitat. Maintaining a diverse assemblage of primarily native flora such that flowers would be constantly available throughout the active season of April to September would benefit bumble bees (NatureServe 2013).

Native bees including bumblebees are adapted to local weather conditions and can forage during cold, rainy periods. Bumble bees are generalist foragers, meaning they gather pollen and nectar from a wide variety of flowering plants and need a constant supply of flowers in bloom from spring to autumn (Evans et al. 2008). The western bumblebee visits a wide variety of wildflowers including Aster spp., Gaultheria shallon (salal), Pedicularis (Elephant's Head), Penstemon, Phacelia, Prunus spp. (cherry), Rhododendron spp., Solidago spp. (Goldenrod), Symphoricarpos spp. (snowberry), Trifolium spp. (clovers), Salix (willow) plus many others. Commercially reared colonies of western bumblebees have been used extensively for pollination of greenhouse tomatoes and field berry crops in the western United States (Evans et al. 2008). Wild colonies of western bumblebees have also been significant pollinators of cranberry farms. The species is also used to pollinate alfalfa, apples, cherries, blackberries and blueberries.

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to western bumble bee habitat.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the western bumble bee and its habitat.

Determination

Implementation of the Designation of the Headwaters of the Cultus River RNA will result in no change to suitable western bumble bee habitat. Therefore, the Action Alternative will have "No Impact" to the western bumble bee or their habitat.

Wildlife other than Federally Listed and Sensitive

The Wildlife Report documents the review of activities and projects to meet the requirements of the Forest Service Manual (2634.03-.2), the National Forest Management Act, the Land and Resource Management Plan (LRMP) for the Deschutes National Forest, the Northwest Forest Plan (NWFP), and the Decision Notice for the Continuation of Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (i.e. "Eastside

Screens"), and the Landbird Strategies. The Wildlife Report is summarized in this EA; the full report is located in the project file.

Species and Habitats

The following wildlife/habitats have been reviewed to determine if the project/activity will have any negative effects on them including LRMP Management Indicator Species (MIS), NWFP Survey and Manage (S&M) species, and landbirds.

The Deschutes National Forest Land and Resource Management Plan (LRMP) (USDA 1990) identified a group of wildlife species as management indicator species (MIS). These species were selected because they represent other species with similar habitat requirements. Management indicator species can be used to assess the impacts of management activities for a wide range of wildlife species with similar habitat needs (FSM 2620.5).

In addition to the above mentioned MIS species there have been a number of wildlife species deemed "species of concern" either through the Northwest Forest Plan (e.g. bats; pg C-43) or through other directives (e.g., landbirds).

Table 7: Deschutes NF Management Indicator Species Summary

Species	Habitat	Habitat in Project Area
Northern Goshawk (*Accipiter gentiles*)	Mature and old-growth forests; especially high canopy closure and large trees	Yes
Cooper's Hawk (*Accipiter cooperi*)	Similar to goshawk, can also use mature forests with high canopy closure/tree density	Yes
Sharp-shinned Hawk (*Accipiter striatus*)	Similar to goshawk in addition to young, dense, even-aged stands	Yes
Great Gray Owl (*Strix nebulosa*)	Mature and old growth forests associated with openings and meadows	Yes
Great Blue Heron (*Ardea herodias*)	Riparian edge habitats including lakes, streams, marshes and estuaries	Yes
Golden Eagle (*Aquila chrysaetos*)	Large open areas with cliffs and rock outcrops	No
Waterfowl	Lakes, ponds, streams	Yes
Woodpeckers (Cavity Nesters)	Snags, Mature Conifers, Hardwoods, etc.	Yes
Red-tailed Hawk (*Buteo jamaicensis*)	Large snags, open country interspersed with forests	Yes
Osprey (*Pandion haliaetus*)	Large snags associated with fish bearing water bodies	Yes
Townsend's Big-eared Bat	Caves and dwellings	No
American Marten (*Martes americana*)	Mixed Conifer or High Elevation late successional forests with abundant	Yes

	down woody material	
Elk (*Cervus elephas*)	Mixed habitats	Yes
Mule Deer (*Odocoileus hemionus*)	Mixed habitats	Yes
Snags and Down Wood Associated Species and Habitat	Snags and down woody material	Yes

The following table displays the acres of potential habitat mapped within the proposed Headwaters of the Cultus River RNA.

Table 8: Acres of potential habitat for species within the proposed Headwaters of the Cultus River RNA.

Species	Acres of Potential Habitat	Percent of Proposed RNA
Northern Goshawk	41 acres	5%
Coopers Hawk	8 acres	<1%
Sharp-shinned Hawk	10 acres	1%
Great Gray Owl	279 acres	32%
Great Blue Heron	643 acres	73%
Golden Eagle	0	
Waterfowl	15 acres	2%
Black-backed Woodpecker	5 acres	<1%
Hairy Woodpecker	3 acres	<1%
Northern Flicker	1 acre	<1%
Pileated Woodpecker	568 acres	64%
Three-toed Woodpecker	58 acres	7%
Williamson's Sapsucker	17 acres	2%
Red-tailed Hawk	17 acres	2%
Osprey	881 acres	100%
Townsend's Big-eared Bat	0	
American Marten	585 acres	66%
Elk Hiding Cover	194 acres	62%
Elk Thermal Cover	121 acres	38%
Mule Deer Hiding Cover	713 acres	81%
Mule Deer Thermal Cover	0	

Environmental Consequences

Proposed Action

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to the above management indicator species.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the above mentioned management indicator species and their habitats.

Determination

This project will not affect the above mentioned management indicator species in the project area. Therefore, the designation of the Headwaters of the Cultus River RNA project will not contribute to a negative trend in viability on the Deschutes National Forest for the above mentioned management indicator species.

Conservation Strategy for Eastslope of the Cascade Mountains

Landbird Strategic Plan

The Forest Service has prepared a Landbird Strategic Plan (January 2000) to maintain, restore, and protect habitats necessary to sustain healthy migratory and resident bird populations to achieve biological objectives. The primary purpose of the strategic plan is to provide guidance for the Landbird Conservation Program and to focus efforts in a common direction. On a more local level, individuals from multiple agencies and organizations with the Oregon-Washington Chapter of Partners in Flight participated in developing a publication for conserving landbirds in this region. A Conservation Strategy for Landbirds of the East-Slope of the Cascade Mountains in Oregon and Washington was published in June 2000 (Altman 2000). This document outlines conservation measures, goals and objectives for specific habitat types found on the east-slope of the Cascades and the focal species associated with each habitat type. See Table 3 for specific habitat types highlighted in that document, the habitat features needing conservation focus and the focal bird species for each.

Table 9: East-slope Cascade Mountain landbirds.

Habitat	Habitat Feature	Focal Species for Central Oregon
Ponderosa Pine	Large patches of old forest with large snags	White-headed woodpecker
	Large trees	Pygmy nuthatch
	Open understory with regenerating pines	Chipping sparrow
	Patches of burned old forest	Lewis' woodpecker
Mixed Conifer (Late-Successional)	Large trees	Brown creeper
	Large snags	Williamson's sapsucker
	Interspersion grassy openings and dense thickets	Flammulated owl
	Multi-layered/dense canopy	Hermit thrush
	Edges and openings created by wildfire	Olive-sided flycatcher
Lodgepole Pine	Old growth	Black-backed woodpecker
Whitebark Pine	Old-growth	Clark's nutcracker
Meadows	Wet/dry	Sandhill Crane
Aspen	Large trees with regeneration	Red-naped sapsucker

Subalpine fir	Patchy presence	Blue Grouse

Birds of Conservation Concern

In January 2001, President Clinton issued an executive order on migratory birds directing federal agencies to avoid or minimize the negative impact of their actions on migratory birds, and to take active steps to protect birds and their habitats. Federal agencies were required within two years to develop a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service to conserve migratory birds including taking steps to restore and enhance planning processes whenever possible. To meet this goal in part the U.S. Fish and Wildlife Service developed the Birds of Conservation Concern released in December 2002 (USFWS 2002) and an update to the original list was released in 2008 (USFWS 2008).

The "Birds of Conservation Concern 2008" (BCC) identifies species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973. Bird species considered for inclusion on lists in this report include non-game birds, gamebirds without hunting seasons, subsistence-hunted non-game species in Alaska, landbirds, shorebirds, waterbirds, and Endangered Species Act candidate, proposed endangered or threatened, and recently delisted species. While all of the bird species included in BCC are priorities for conservation action, the list makes no finding with regard to whether they warrant consideration for ESA listing. The goal is to conserve avian diversity in North America and includes preventing or removing the need for additional ESA bird listings by implementing proactive management and conservations actions (USFWS 2008). The 2008 lists were derived from three major bird conservation plans: the Partners in Flight North American Landbird Conservation Plan, the United States Shorebird Conservation Plan, and the North American Waterbird Conservation Plan. Conservation concerns stem from population declines, naturally or human-caused small ranges or population sizes, threats to habitat, or other factors.

Bird Conservation Regions (BCRs) were developed based on similar geographic parameters and are the basic units within which all bird conservation efforts should be planned and evaluated (USFWS 2008). One BCR encompasses the Designation of the Headwaters of the Cultus River RNA Project Area – BCR 9, Great Basin. See Table 4 for a list of the bird species of concern for the area, the preferred habitat for each species, and whether there is potential habitat for each species within the Headwaters of the Cultus River project area.

Table 10: BCR 9 (Great Basin) BCC 2008 list.

Bird Species	Preferred Habitat	Habitat within the Project Area (Y or N)
Greater Sage Grouse (Columbia Basin DPS)	Sagebrush dominated Rangelands	N
Eared Grebe (non-breeding)	Open water intermixed with emergent vegetation	N
Bald Eagle	Lakeside with large trees	Y
Ferruginous Hawk	Elevated Nest Sites in Open Country	N
Golden Eagle	Elevated Nest Sites in Open Country	N
Peregrine Falcon	Cliffs	Y

Bird Species	Preferred Habitat	Habitat within the Project Area (Y or N)
Yellow Rail	Dense Marsh Habitat	N
Snowy Plover	Dry Sandy Beaches	N
Long-billed Curlew	Meadow/Marsh	Y
Marbled Godwit	Marsh/Wet Meadows	N
Yellow-billed Cuckoo	Dense riparian/cottonwoods	N
Flammulated Owl	Ponderosa pine forests	Y
Black Swift	Cliffs associated with waterfalls	N
Calliope Hummingbird	Open mountain meadows, open forests, meadow edges, and riparian areas	N
Lewis's Woodpecker	Ponderosa pine forests	Y
Williamson's Sapsucker	Ponderosa pine forests	Y
White-headed Woodpecker	Ponderosa pine forests	Y
Loggerhead Shrike	Open country with scattered trees or shrubs	N
Pinyon Jay	Juniper, juniper-ponderosa pine transition, and ponderosa pine edges	N
Sage Thrasher	Sagebrush	N
Virginia's Warbler	Scrubby vegetation within arid montane woodlands	N
Green-tailed Towhee	Open ponderosa pine with dense brush	N
Brewer's Sparrow	Sagebrush clearings in coniferous forests/bitterbrush	N
Black-chinned Sparrow	Ceanothus and oak covered hillsides	N
Sage Sparrow	Unfragmented patches of sagebrush	N
Tricolored Blackbird	Cattails or Tules	N
Black Rosy Finch	Rock outcroppings and snowfields	N

Environmental Consequences

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to the above landbirds or Birds of Conservation Concern.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the above mentioned landbirds or birds of conservation concern and their habitats.

Survey and Manage

Terrestrial species thought to occur on the Deschutes National Forest included the Crater Lake

Tightcoil (*Pristiloma arcticum crateris*) and the Great Gray Owl (*Strix nebulosa*). The Crater Lake tightcoil was included in a group of eight mollusk species where equivalent-effort pre-disturbance surveys were required even though it was considered a Category B species (species are considered rare, where pre-disturbance surveys are not practical) based on direction in the 2001 Record of Decision. In the subsequent 2002 Annual Species Review Memorandum (USDA and USDI 2003), the Crater Lake Tightcoil was changed from a Category B to a Category A species, where species are considered rare and pre-disturbance surveys are considered practical. The great gray owl was a Category C species which were species considered uncommon and where pre-disturbance surveys are practical. The status of the great gray owl has not changed during subsequent reviews. The Crater Lake tightcoil is included in the Sensitive Species update in the biological evaluation while the great gray owl is analyzed under the management indicator species section in the wildlife report.

On December 2009, the District Court for the Western District of Washington issued an order on partial summary judgment in favor of the Plaintiffs finding inadequacies in the NEPA analysis supporting the *Record of Decision to Remove the Survey and Manage Mitigation Measure Standards and Guidelines from Bureau of Land Management Resource Management Plans Within the Range of the Northern Spotted Owl* (FS et al. 2007)(2007 ROD). The District Court did not issue a remedy or injunction at that time.

Plaintiffs and Defendants entered into settlement negotiations that resulted in the 2011 Survey and Manage Consent Decree, adopted by the District Court on July 6, 2011.

The Defendant-Intervenor subsequently appealed the 2011 Consent Decree to the Ninth Circuit Court of Appeals. The April 25, 2013 ruling in favor of Defendant-Intervener remanded the case back to the District Court.

On February 18, 2014, the District Court vacated the 2007 RODs. Vacatur of the 2007 RODs has the result of returning the Forest Service to the status quo in existence prior to the 2007 RODs.

The District Court and all parties agreed that projects begun in reliance on the Settlement Agreement should not be halted. The District Court order allowed for the Forest Service and BLM to continue developing and implementing projects that met the 2011 Settlement Agreement exemptions or species list, for three categories of projects. These categories include:

1) Projects in which any Survey and Manage pre-disturbance survey(s) has been initiated (defined as at least one occurrence of actual in-the-field surveying undertaken according to applicable protocol) in reliance upon the Settlement Agreement on or before April 25, 2013;
2) Projects, at any stage of project planning, in which any known site(s) (as defined by the 2001 Record of Decision) has been identified and has had known site-management recommendations for that particular species applied to the project in reliance upon the Settlement Agreement on or before April 25, 2013; and
3) Projects, at any stage of project planning, that the Agencies designed to be consistent with one or more of the new exemptions contained in the Settlement Agreement on or before April 25, 2013.

Environmental Consequences

Direct and Indirect Impacts

There will be no change from the existing condition with the implementation of the proposed action. This is an administrative change from a proposed RNA to an established RNA. There will be no activities authorized other than the establishing the RNA. Therefore, there will be no direct or indirect effects to the Crater Lake tightcoil or the great gray owl.

Cumulative Effects

Implementation of action alternative for the Designation of the Headwaters of the Cultus River RNA will not result in any direct or indirect adverse effects and therefore, will not result in any cumulative effects for the Crater Lake tightcoil or the great gray owl and their habitats.

Cultural Resources

No cultural resource sites or historic sites have been documented within the RNA (USDA Forest Service 2011). Establishing the RNA will have no impact to cultural resources and will not alter or limit existing Native American treaty rights. As per Section 106 of the National Historic Preservation Act, no ground disturbing activities will occur within the RNA without a cultural resources inventory.

Recreation

There is light recreation use within the RNA along both sides of the Cultus River by anglers and hikers. The Recreation Opportunity Spectrum for the area is Roaded Natural.

Recreational use levels and resulting impacts on the RNA are expected to remain minimal. Designation of the RNA will not impact existing opportunities for light recreation as long as use does not threaten the research value of the area. Management direction does not allow for any recreation improvements to be added.

Transportation

One closed and undriveable spur road (Forest Service Road 4631-208) is located in the north part of the RNA. No other roads are present within the area and there are no plans to construct any roads or trails in the area. Establishment of the RNA would not have any impact on the existing transportation system. Travel Management regulations do not allow off-road motorized vehicle use in the area, and the Deschutes did not designate any trails for off-road vehicle use in the area. Under standards and guidelines for MA-2 no new trails would be allowed unless necessary for research purposes.

Invasive Plants

At present one noxious weed population is known to occur adjacent to the RNA: a population of spotted knapweed is located at the southeast corner of the RNA along Forest Service Road 4630. It is unknown whether the population extends within the RNA boundary.

Treatment of invasive plants was addressed in the Deschutes-Ochoco Invasive Plant Treatment Final EIS and Record of Decision (USDA Forest Service 2012).

Establishment of the RNA does not preclude continuation of treatment of existing invasive plant

occurrences, nor would it prevent the practice of Early Detection Rapid Response (EDRR) to other invasive species, if detected within the RNA in the future. For these reasons, establishment of the RNA is not anticipated to cause an increase in establishment or spread of invasive species.

Other Required Disclosures

Effects on Prime Farmland, Rangeland, and Forestland

There is no prime farmland, rangeland, or forestland in the proposed Headwaters Cultus River RNA area.

Floodplains and Wetlands

Executive Order 11988 sets the direction of federal actions to avoid adverse impacts associated with the occupancy and modification of floodplains. Executive Order 11990 sets the direction of federal actions to avoid adverse impacts associated with destruction or modification of wetlands. The designation of the area as RNA is not expected to have any adverse impacts to floodplains or wetlands.

Potential or Unusual Expenditures of Energy

There would be no unusual expenditures of energy with this designation. The project does not involve any forms of energy expenditure.

Conflicts with Plans, Policies, or other Jurisdictions

There would be no conflicts with plans, policies, or other jurisdictions with either alternative. All overlapping plans and policies have been evaluated for consistency. The proposal to establish an RNA in this location was developed under consultation with regulatory agencies including the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, Oregon Department of Fish and Wildlife, and the State Historic Preservation Officer (See Chapter 4).

Environmental Justice

The proposed designation does not appear to have a disproportionately high or adverse effect on minority or low-income populations, or Native American tribes. No mitigation measures to offset or ameliorate adverse effects to these populations have been identified. All interested and affected parties would continue to be involved with the comment and decision-making process.

Consumers, Civil Rights, Minority Groups, and Women

The proposed designation does not appear to have a disproportionately high or adverse effect on consumers, minorities, or women. The project would not have any effect on civil rights of any human being.

Consistency with Deschutes LRMP, as Amended

Formally designating the RNA would require amending the Deschutes LRMP. The designation is consistent with all other Forest Plan standards and guidelines. The management direction listed in Chapter 2 lists the management area categories for the Forest Plan and Northwest Forest Plan.

Chapter 4: Agencies and Persons Consulted

U.S. Fish and Wildlife Service

It was determined that there would be no effect to any Federally-listed wildlife species, therefore no consultation with the U.S. Fish and Wildlife Service was required.

State Historic Preservation Officer

Designating The Headwaters of the Cultus River as an RNA would not affect any historic or pre-historic artifacts; therefore no consultation with the Oregon State Historic Preservation Officer is required.

On March 12, 2009 a scoping letter was sent to a mailing list of interested parties maintained in the project file at the Deschutes National Forest Supervisor's Office. The following list of individuals, organizations, and agencies are receiving notice of the availability of this environmental assessment for comment:

Individuals, Agencies, and Organizations

Luann Danforth
Dave Lynn
Chuck Tolboe
Matt Mahoney
Vera Riser
Steven J. McNulty, Gas Transmission NW Corp.
Ken Roadman
Wally Buckman
Lee Fischer
Gary Pankey
Larry McGlocklin
Flip Houston, Scott Logging Inc.
Scott Odgers, Central Oregon Flyfishers
Pat Schatz, Mickey Finn Guide Service
Craig Vaage, Bigfoot Guide Service
David Nissen, Wanderlust Tours
Larry Ulrich
Ed Duffy, Deschutes County 4-Wheelers
David H. Tjomsland
Robert Speik
Susan Jane Brown
Brad Chalfant, Deschutes Basin Land Trust
Jim King
Michael Krochta
Josh Laughlin, Cascadia Wildlands Project
Karen Coulter, Blue Mountains Biodiversity Project
Doug Heiken, Oregon Wild
Glen Ardt
Marilyn Miller
Stuart Garrett, MD
Scott Silver, Wild Wilderness
Matt Kern
Mike Morris
Libby Johnson, Bonneville Power Administration
Keenen Howard
Senator Ron Wyden
Sunriver Owners Association
Dick Artley
John Pindar
Dennis Krakow, Woodside Ranch Owners Association
Arlie Holm
Fred Tanis
Chuck Burley, Interfor
Gerald Keck, D.R. Johnson Lumber Co.
John Morgan, Ochoco Lumber
Shawn Gerdes, Arnold Irrigation District
Bend Metro Parks & Recreation
Dylan Darling, The Bulletin
Billy Toman
Rick Bozarth, Bozarth's Offroad Service Specialties
Gordon Baker
Bodie Dowding, Interfor
Peggy Spieger, Oregon State Snowmobile Association
Corey Heath, Oregon Department of Fish and Wildlife

Stuart Otto, Oregon Department of Forestry
John McKenzie, Sunriver Owners Association
Mark Dunaway, Pine Mountain Observatory, Univ. of Oregon
Dyarle Sharkey
Patti Gentiluomo
Wade N. Foss
Bruce Cunningham
Moon Country Snowmobilers
Scott O'Neill
June Ramey
Mark Davis
Scott McCaulou, Deschutes River Conservancy
Ryan Houston, Upper Deschutes Watershed Council
Lynne Breese, Eastern Oregon Forest Protection Association
Greg McClarren
Rick Williams, ODOT Region 4
Kate Lighthall, Project Wildfire
SROA
Northwest Environmental Defense Center
Vicki McConnell, Department of Geology and Mineral Industries
Andy Ingram
Dean Richardson
Vic Russell
Ed Keith, Deschutes County Forester
Patricia Moore
Jim Lowrie
Jim Wilson, JTS Animal Bedding
Pieter & Diane Van Gelderen
L. Ulven
Steve Johnson, Central Oregon Irrigation District
Jim Anderson
Loren Smith
Jim Larson, Upper Deschutes River Coalition
Gail Carbiener
Margie Gregory
David Pitts
Central Oregon Climate Alliance
Kreg Lindberg
Peter Geiser
Senator Jeff Merkley
Larry Pennington, Oregon Chapter, Sierra Club
Judy Meredith, East Cascades Audubon Society
Paul Bannick, Conservation Northwest
Don Franks
Lowell Franks
Matt Bales, Mule Deer Foundation
Rod Adams, Oregon Hunter's Association
Jeff Trant
Kenna Hoyser, Central Oregon Chapter, Oregon Equestrian Trails
John Zachem
Scott Walley
Lisa Clark, Central Oregon Fire Management Service
Congressman Greg Walden
George Wuerthner
Steve Bigby
Sarah Peters, Wildlands CPR
Meriel Darzen, Oregon Ch., Sierra Club, Juniper Group
Paul Dewey, Central Oregon Landwatch
Confederated Tribes of the Warm Springs
Burns Paiute Tribe
The Klamath Tribes
USDI Fish & Wildlife Service

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Appendix A – Consideration of Public Comments

During the public comment period (October 17, 2014 – November 17, 2014), three responses were received from the following individuals or organizations: George Wuerthner, Doug Heiken (Oregon Wild), Karen Coulter (Blue Mountains Biodiversity Project). Some comments are specific to just one of the RNAs, but some comments apply to all of them. This appendix incorporates all of the comments and responses regardless of whether or not they applied to just one of the RNAs.

All comments have been considered during the decision-making process for the RNA Establishment Project. Although not a requirement for environmental assessments, the responses provided here are intended to briefly discuss all major points of view and to document if comments resulted in any changes to the environmental assessment. Statements may have been summarized or paraphrased to reduce paperwork. Full text of the comment letters are on file at the Bend/Ft. Rock Ranger District.

Comment: I strongly approve of creation of these RNAs. My only comment has to do with the Many Lakes proposed NRA. It is not clear to me why the northern boundary does not extend past Deer Lake to the Three Sisters Wilderness boundary. It would seem to me to make a more logical boundary and expansion of the NRA to include Deer Lake and the surrounding area would provide more protection to the NRA and its purposes....trying to make it as large as possible because I like to have "buffers" around these areas, and it seemed somewhat logical to just go north to the Wilderness boundary. (G. Wuerthner)

Response: Boundary modifications that are included in the EAs are for the purpose of making the boundaries more easily recognized and described. The changes result in a net increase of 157 acres in the Many Lakes RNA. The Forest did not see a need to expand the Many Lakes RNA boundary further as the existing area incorporates the ecological area to be represented (Many Lakes EA pp 4-5); the purpose and need does not include making the RNAs as large as possible. Additionally, the area between the proposed boundary and the Wilderness is within the Dispersed Recreation management allocation in the Forest Plan (Many Lakes EA Figure 2, p. 7). Existing recreation sites and uses in that area may not be consistent with the direction for RNAs.

Comment: I'm very supportive of the designation. The EAs should have discussed the long-term benefits for focal species due to the preservation of habitat. (K. Coulter)

Response: The EAs describe which species may be present or have habitat within each RNA. Because there is no expected change to any existing habitat from officially designating the RNAs, the effects analysis concludes that there will be no effect to species or their habitat. The long-term objectives of the RNAs are to provide sites for study of natural processes in undisturbed ecosystems that can be compared to similar environments where human activities occur and to provide gene pool preserves for plant and animal species.

Comment: Oregon Wild supports conservation of these four RNAs. We encourage the Forest Service to go further and protect more of the landscape within which these special natural areas are embedded.

The proposed Cultus River RNA could be expanded to include sections 16 and 17 between roads 46 and 4623. This would help maintain more intact forest and protect more of the watershed of the Cultus River headwaters. (D. Heiken)

Response: The Forest did not see a need to expand the Headwaters Cultus River RNA boundary further as the existing area incorporates the ecological area to be represented (HW Cultus EA pp 4-5). This RNA falls within the Cultus Late Successional Reserve (LSR). The LSR is intended to provide habitat for species that rely on late-successional habitat and any activities must be consistent with the direction in the LSR Assessment and Northwest Forest Plan. Much of the areas outside the RNA in Sections 16 and 17 are roaded and have been managed in the past, including timber harvest.

Comment: The proposed Katsuk Butte RNA could be expanded to include the similar and connected biophysical setting including all of Section 22 and most of section 27 (south of Katsuk Butte and west of Sparks Lake and extending west to the amazing spring complex at Quinn Meadows in the southeast portion of section 21. The proposed Many Lanes RNA could be expanded northward to include sections 26 and 21 thereby encompassing Deer Lake and the small lake west of Deer Lake. (D. Heiken)

Response: The original RNA boundaries were the result of extensive surveys to identify areas that met the needs of the Research Station to represent specific forest type or plant community. The Forest did not identify a need to enlarge the proposed RNA, only to modify the boundary to make it easier to identify and describe. The result is a net increase of 226 acres over the proposed Katsuk Butte RNA. The entire Katsuk Butte RNA and most of the surrounding area fall within an Inventoried Roadless Area where timber harvest and road building are not allowed.

Comment: The proposed Wechee Butte RNA is in a heavily managed part of the forest and should be expanded to include all contiguous native forest, such as in the extreme NW corner of section 28. The FS might even consider adding the adjacent butte in section 28 and doing appropriate restoration and recovery efforts to that contributes to RNA values. (D. Heiken)

Response: The Oregon Natural Heritage Plan identified a need for representation in an "undisturbed forested cinder cone at mid-elevation with ponderosa pine-lodgepole pine climax." The focus area proposed for designation is almost entirely free of disturbance, which fits the purpose of providing a site where the study of natural processes can occur and be compared against areas where human activities are occurring. The establishment of the Wechee Butte RNA does not affect the potential to conduct restoration in areas surrounding the RNA.

Comment: There appears to be a small OHV play area on the border between section 28 and 29 that needs to be closed so that OHVs do not intrude any further into the Wechee Butte RNA. (D. Heiken)

Response: This information has been provided to Central Oregon's Combined off Highway Vehicle Operations (COHVOPS), which manages OHV use on the Deschutes National Forest. There is no designated trail or play area in this area, so the use is not in compliance with the Travel Management Rule.

Comment: The cover of the Wechee Butte RNA EA says it's located in section 27, but it's in section 29. (D. Heiken)

Response: This is corrected in the Final EA.

Comment: We strongly support standards for all RNAs that allow natural processes to function without significant intervention. As such, road building and logging must be prohibited. Native insects and disease and other natural disturbance processes are a natural and integral part of the ecosystem and should be allowed to play out. Forest health logging and salvage logging should

not be practiced. Fire should be reintroduced in appropriate forest types to maintain stands.

Some of the proposed standards & guidelines include following the Deschutes LRMP standards for "forest health." This would be inappropriate because these standards are outdated. They label native insects "pests" and they focus too much on tree "vigor" when (from an ecological standpoint) mortality processes are just as important. (LRMP p 4-36). We recommend dropping this proposed standard "M2-23: Follow Forest-wide standards/guidelines for forest health." (D. Heiken)

Response: The system of RNAs was established with the goal of preserving natural features and plant communities for research and education purposes (Cultus Headwaters EA p. 4). Therefore timber harvest, including salvage harvest is not allowed (S&Gs M2-4, M2-5, M2-6). The S&Gs do allow for the use of fire where appropriate and prescribed fire has been used in established RNAs such as the Pringle Falls RNA (see http://www.fsl.orst.edu/rna/sites/Pringle_Falls.html for a photo of burning in the Pringle Falls RNA). This web site also provides information on all RNAs in the system across the country, including the research that has been conducted.

Comment: The designation of these RNAs should not trump the protective standards that may already be in place, such as for riparian reserves, Late Successional Reserves and inventoried roadless areas. (D. Heiken)

Response: Three of the new RNAs fall within the Northwest Forest Plan, and overlapping layers of protective management direction are in place. Headwaters Cultus River and Many Lakes RNAs fall within an LSR (see Headwaters Cultus EA p. 10), and Katsuk Butte and Many Lakes RNAs fall within Inventoried Roadless Areas (also page 10 of each of those EAs). Standards and guidelines that are consistent with those for RNAs (e.g. timber harvest is not allowed in the RNAs, regardless of direction for silviculture in LSRs under the Northwest Forest Plan) are applicable, including Riparian Reserve standards and guidelines. This has been clarified within Chapter 2 of the EAs and the map of management allocations has been updated to display NWFP allocations.